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# MONITORING REPORTS

DATE:

2007 - Present



# **2006 GROUNDWATER REMEDIATION AND MONITORING ANNUAL REPORT**



**SAN JUAN REFINING COMPANY  
GIANT – BLOOMFIELD REFINERY  
SUBMITTED: APRIL 2007**





April 13, 2007

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New Mexico Oil Conservation Division  
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Santa Fe, New Mexico 87505

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**RE: Corrective Measures Study and Corrective Measures  
Implementation (Site Investigation and Abatement Plan)  
Groundwater Remediation and Monitoring Annual Report  
Giant Refining Company, Bloomfield Refinery  
EPA ID# NMD089416416  
GW - 001**

Dear Wayne and Hope:

Giant Refining Company, Bloomfield Refinery submits the 2006 Annual Groundwater Report as required by NMED and OCD directives. This report summarizes all soil and groundwater monitoring activities that occurred in 2006.

Due to unforeseen circumstances with Giant's map contractor, maps depicting August 2006 groundwater elevation, flow direction, and product thickness as well as April 2006 and August 2006 dissolved phase constituent maps are not yet available for this report. Upon Giant's receipt of the maps they will be forwarded on to the respective agencies. This is anticipated to occur by May 15, 2007.

If you have questions or would like to discuss any aspect of the report, please contact me at (505) 632-4171.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Schmaltz", is written over a horizontal line.

James R. Schmaltz  
Environmental Manager  
San Juan Refining Company  
Giant - Bloomfield Refinery

cc: Robert Wilkinson, EPA Region VI  
Brandon Powell, NMOCD Aztec District Office  
Ed Riege, Environmental Superintendent - Giant Refinery

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87413



## CONTENTS

| Section | Title |
|---------|-------|
|---------|-------|

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### **Appendix A**

- |      |                                                                                                   |
|------|---------------------------------------------------------------------------------------------------|
| 1.0  | Executive Summary                                                                                 |
| 2.0  | Introduction                                                                                      |
| 3.0  | Scope of Services                                                                                 |
| 4.0  | Regulatory Criteria / Groundwater Cleanup Standards/<br>State of New Mexico Soil Screening Levels |
| 5.0  | Groundwater Monitoring Results                                                                    |
| 6.0  | Groundwater Chemical Analytical Data                                                              |
| 7.0  | Remediation System Monitoring                                                                     |
| 8.0  | Summary                                                                                           |
| 9.0  | List of Tables                                                                                    |
| 10.0 | List of Figures                                                                                   |
| 11.0 | BTEX & MTBE Concentration vs Time                                                                 |
| 12.0 | Field Methods                                                                                     |
| 13.0 | Waste Disposition                                                                                 |
| 14.0 | Below Grade Testing                                                                               |
| 15.0 | North Boundary Barrier Wall                                                                       |

### **Appendix B**

- |      |                             |
|------|-----------------------------|
| 16.0 | Chemical Analytical Program |
| 17.0 | Chemical Analytical Reports |



## **Section 1.0    Executive Summary**



## Executive Summary

Bloomfield Refinery  
#50 Road 4990  
Bloomfield, New Mexico  
87413

US EPA ID: NMD089416416

The North Boundary Barrier Wall and Collection System were completed in late April 2005. The primary purpose of the wall and collection system was to prevent the flow of hydrocarbon-impacted groundwater to the San Juan River. The wall and the collection wells were designed to accumulate fluids in the depressions or troughs of the Nacimiento Formation.

Currently, monitoring results along the barrier wall show groundwater levels have reached a steady state. The presence of separate phase hydrocarbon in collection wells has decreased behind the barrier and in observation wells immediately down gradient of the barrier wall. Areas where seepage of fuel hydrocarbon impacted water was present have been reduced or eliminated. The data suggests the barrier has been effective.

Fluid monitoring along the barrier wall will continue on a bimonthly schedule. Trends in SPH detection, absence, thickness, and fluid build up on both sides of the barrier will be assessed.

The River Terrace Bioventing System was put on-line in January 2006. Monitoring data from that project is submitted in a separate report to the regulatory agencies.

The San Juan River was sampled on a quarterly basis throughout 2006. Analytical results indicate that contaminated groundwater from the refinery has not impacted the river. Quarterly sampling will continue.

Tank #33 effluent was sampled on a quarterly basis in 2006. Quarterly sampling will continue.

Semi-annual monitoring occurred in April 2006. Samples were collected from all wells with the exception of wells that contain separate phase hydrocarbon or wells that were dry or did not contain enough water to pull a sample. Annual sampling started the week of August 15, 2006. Giant followed NMED guidelines from the Corrective Measures Study and Corrective Measures Implementation

letter dated January 6, 2003. In conjunction, OCD guidance was followed per the Site Investigation and Abatement Plan letter dated December 30, 2002.

Future monitoring and remedial action will be addressed by the current OCD Administrative Compliance Order in conjunction with the pending New Mexico Environmental Department Draft Order. An updated monitoring plan will be utilized after resolutions are reached with both agencies. Until a settlement is accepted, Giant Refinery – Bloomfield will continue to follow NMED guidelines from the Corrective Measures Study and Corrective Measures Implementation letter dated January 6, 2003 and OCD guidance per the Site Investigation and Abatement Plan letter dated December 30, 2002.

## Section 2.0 Introduction

# INTRODUCTION

## 2006 Groundwater Remediation and Monitoring Annual Report

Owner: San Juan Refining Company (parent corporation)  
23733 North Scottsdale Road  
Scottsdale, Arizona 85255

Operator: Giant Refining Company (postal address)  
P.O. Box 159  
Bloomfield, New Mexico 87413

Giant Refining Company (physical address)  
#50 Rd 4990  
Bloomfield, New Mexico 87413

Facility Name: Bloomfield Refinery: (physical address)  
#50 Rd 4990  
Bloomfield, New Mexico 87413

Facility Status Corrective Action/Compliance

US EPA ID NMD089416416

SIC Code 2911

Submittal Date: April 2007

Purpose of Groundwater Monitoring: To evaluate present contamination

Type of Groundwater Monitoring: Semi-annual, Annual, and Investigative



## BACKGROUND INFORMATION

### SITE LOCATION AND DESCRIPTION

The Bloomfield Refinery is a crude oil refining facility with a crude capacity of 18,000 barrels per day. It is located approximately 1 mile south of Bloomfield, New Mexico, in San Juan County, latitude N36 41' 87", longitude W107 58' 70". It is further located approximately ½ mile east of State Route 550 on Count Road 4990 (a.k.a. Sullivan Road).

The refinery is located on a bluff 120 feet above the south side of the San Juan River. The top of the bluff is relatively flat and is at an elevation of 5,540 feet above sea level. The geological units that comprise the site include, in order of increasing depth, San Juan River Alluvium, Quaternary apron deposits, Aeolian sand and silt, Jackson Lake Terrace, and the Tertiary Nacimiento Formation. An unnamed arroyo flows toward the San Juan River on the southern and western edges of the site. East of the site, a well-defined arroyo cuts a small canyon from the bluff to the San Juan River. Hammond Ditch lies on the bluff between the limit of the Jackson Lake Terrace and the refinery.

Refinery offices are on the western end of the facility, along with warehouse space, maintenance areas, and a storage yard containing used material (e.g., pipes, valves). Petroleum processing units, located in the northwest portion of the refinery, include the crude unit, fluidized cracking unit, catalytic polymerization unit, and hydrodesulfurization unit. The API Separator is located in the northwestern portion of the site. The aeration lagoons are located in the north central section of the refinery.

In the central portion of the site, aboveground storage tanks (AST's) occupy a large percentage of refinery property. South of the refinery and across Sullivan Road are terminals for loading product and off-loading crude, as well as gas storage and hazardous waste storage.

The Refinery owner is San Juan Refining Company (SJRC) and is operated by Giant Refining Company. The historical and current activities conducted at the refinery are petroleum processing, crude and product storage, crude unloading and product loading, waste management (closed and existing facilities), and offices and non-petroleum material storage

## **HISTORY OF FACILITY MODIFICATIONS AND IMPROVEMENTS**

### **Previous Owner's Activities**

Local entrepreneur, Kimball Campbell, constructed the crude topping unit that eventually became the GRC facility in the late 1950s. O.L. Garretson bought the facility in the early 1960s, renamed it Plateau, Inc. and sold it in 1964 to Suburban Propane of New Jersey.

Operationally, the facility has steadily evolved through a series of improvements, modifications and expansions. Suburban upgraded the facility in 1966, increasing the Crude Unit throughput to 4,100 bpcd and adding 1,850 bpcd Reformer and Naphtha Hydrotreater. In 1975, the Crude Unit was expanded to 8,400 bpcd.

In 1979, the Crude Unit was expanded again to 16,800 bpcd (later demonstrated to have a hydraulic capacity in excess of 18,000 bpcd). A Fluidized Catalytic Cracker (FCC) with a nominal capacity of 6,000 bpcd, an Unsaturated Gas Plant and a Treater Unit were also added at that time. The capacity of the Reformer / Hydrotreater was increased to 2,250 bpcd. The FCC was upgraded in 1982 to conform to State and Federal air quality standards.

### **Bloomfield Refining Activities**

Bloomfield Refining Company (BRC) acquired the facility from Suburban Propane (Plateau) on October 31, 1984. BRC made many improvements to facility operations and equipment. These improvements are summarized below.

#### **1986**

Relocated the spent caustic tank onto a concrete pad with retaining walls.

#### **1987**

Upgraded the Reformer and increased its capacity to 3,600 bpcd, modified the Laboratory and Treater Unit and increased tank storage capacity.

Cleaned up the North and South bone yards.

Decommissioned and dismantled old tanks 6 and 7.



Relocated the API recoverd oil tanks 8 & 9 to concrete pads with concrete retaining walls.

Established a systematic inspection, maintenance and repair program for tanks.

## **1988**

Added a 2,000 bpcd Catalytic Polymerization Unit. Removed the facility's two underground storage tanks and replaced them with aboveground storage tanks.

Completed installation of cathodic protection system for the tank farm and underground piping.

Rebuilt the process area sewer system and added curbed, concrete paving to the unpaved process areas.

## **1989**

Increased Reformer throughput to 4,000 bpcd.

Activated the groundwater hydrocarbon recovery system.



Constructed the first double-lined Evaporation Pond as part of discharge plan improvements.

## **1990**

Constructed the second double-lined Evaporation Pond as part of discharge plan improvements.

Constructed a drum storage shed and converted to bulk chemical usage where possible in order to minimize the use of drummed chemicals.

## **1991**

Revamped the burner fuel sales rack with concrete paving and curbing.

Submitted the permit application for a Class 1 disposal well.

Upgraded the groundwater hydrocarbon recovery system.



## **1992**

Submitted an air quality permit application proposing the installation of a Diesel Hydrodesulfurization (HDS) Unit and a Sulfur Recovery Unit (SRU) to comply with new EPA low-sulfur diesel regulations and to decrease air emissions.

## **1993**

Began a program under a consent agreement with the US EPA to conduct interim measures (IM), a RCRA facility investigation (RFI) and a corrective measures study (CMS) addressing groundwater contamination.

Replaced portions of the underground cooling water piping.

Added concrete paving around the API Separator.

Added process units: HDS Unit (2,000 bpcd) and SRU.

Improved (eliminated) storm water runoff to the North.

## **1994**

Completed the Class 1 injection well.

Retrofitted the Aeration Lagoons with two additional liners.

Installed a floating cover for the API Separator.

Closed the clay-lined evaporation ponds and spray evaporation area.

## **Giant Activities**

In 1995, San Juan Refining Company, a wholly owned subsidiary of Giant Industries Arizona, Inc., purchased the Bloomfield Refinery from BRC.

## **1995**

Improved the diking South of the Refinery to further reduce storm water runoff.

Began implementation of additional corrective measures for groundwater cleanup as determined from the CMS.

## **1998**

Converted the former evaporation ponds on the East side of the Refinery to raw water storage ponds.

## **1999**

Installed sheet piling and a bentonite slurry wall adjacent to the San Juan River, North of the process units, in order to intercept a small hydrocarbon seep that had been detected in the area.

## **2001**

Began a program to inoculate the Aeration Lagoons with sludge-consuming micro-organisms.

## **2002**

A concrete liner was installed on the Hammond Ditch. At that time, Giant constructed the Hammond Ditch French Drain Recovery System to address contamination under the ditch.

## **2003**

Several monitoring wells were converted into recovery wells to further enhance the continuing ground water remediation efforts. MW #45, #46 & #47 were installed to replace unreliable seeps. East Outfall #1 Recovery System was set up to return impacted water back to the refinery.

## **2004**

MW #48 & MW #49 and 8 temporary piezometers were installed to launch a River Terrace Investigation. Several temporary piezometers were drilled on the north side of Hammond Ditch to chart the Nacimiento Formation. Initiated the development of a slurry wall that will be constructed on the north side of Hammond Ditch to prevent the spread of hydrocarbons to the San Juan River. Construction will begin in 2005.

Lined containments were constructed in the draws north of Hammond Ditch in order to prevent migration of contaminated groundwater toward the San Juan River.

Sewer lines were replaced in the Treater and FCC.

## **2005**

The North Boundary Barrier Wall installation was completed March 2005. Fourteen observation wells were installed on the north side of the slurry wall and fifteen collection wells were installed on the south side of the slurry wall in April 2005.

As a matter of preventive maintenance, the lined containments in the draws north of the slurry wall were upgraded periodically.

In April, five more temporary piezometers were installed at the River Terrace. Dewatering Wells #1 and #2 and thirteen bioventing wells were drilled in August at the River Terrace. Construction of the River Terrace Bioventing Project was initiated in August. The system was put on-line in January 2006.

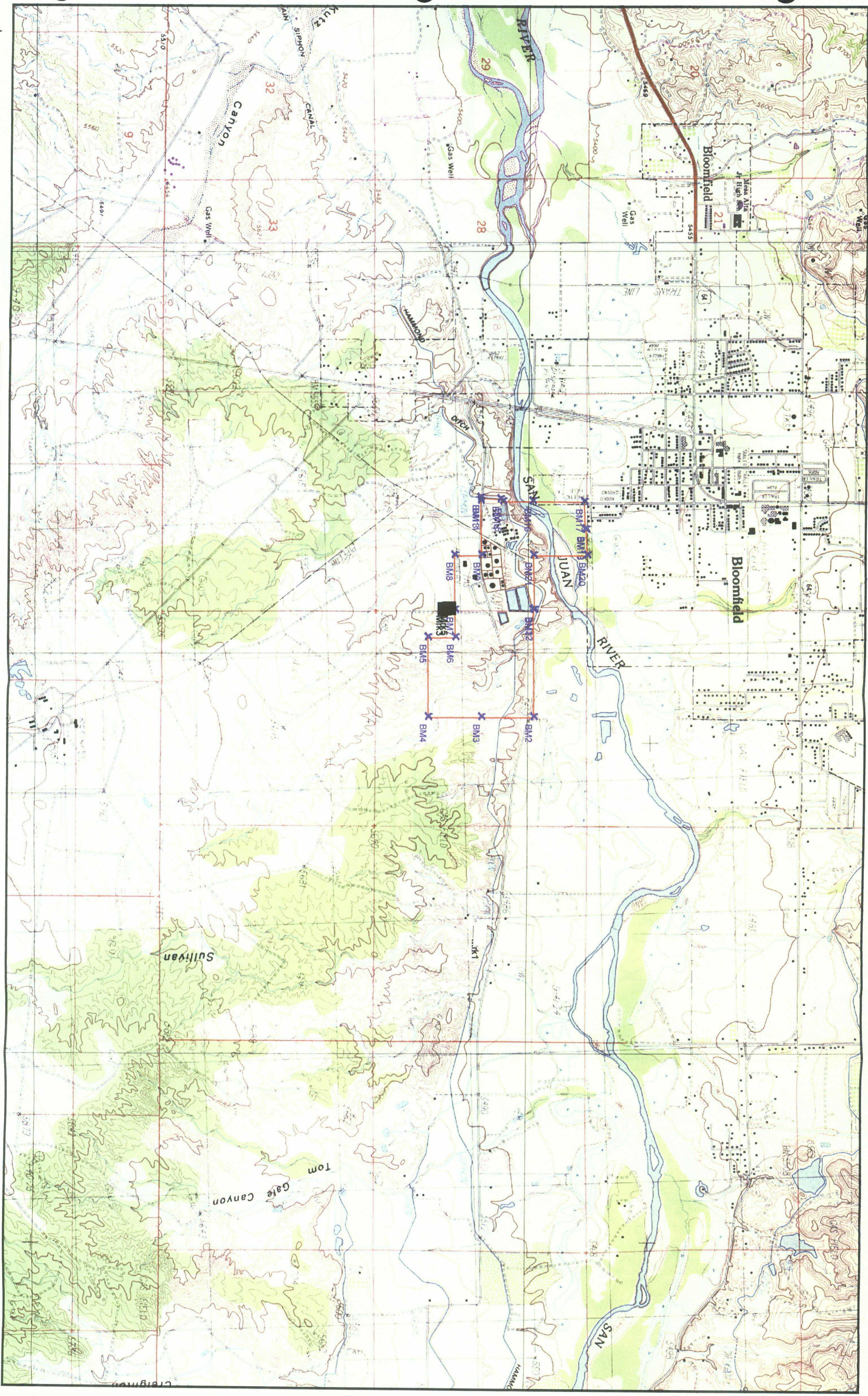
## **2006**

The River Terrace Bioventing System was put on-line in January 2006. Monitoring data from that project is submitted in a separate report to the regulatory agencies.

During the week of February 13, 2006 seven sump wells were installed along the bluff north of the barrier wall. These wells were drilled in accordance with the North Barrier Wall Work Plan which was submitted to OCD February 7, 2006. Fluids extraction from the observation and collection wells, the north draws, and the sump wells continued throughout 2006.

As a matter of preventive maintenance, the lined containments in the draws north of the slurry wall were upgraded periodically.





Scale: 1 inch equals 2000 feet





## **Section 3.0    Scope of Activities**

## **Scope of Activities**

### **North Boundary Barrier Wall**

Installation of the North Boundary Barrier Wall and Collection System was completed by late April 2005. Subsequent water elevation measurement and groundwater sampling events from May 2005 through May 2006 are chronicled in the System Start-Up Six Month Report of the North Boundary Barrier Collection System Phase II (submitted January 5, 2006) and the Annual Report of the North Boundary Barrier Collection System Phase II May 2005 to May 2006 (submitted June 28, 2006) respectively.

A bi-weekly fluid measurement scheme was established on August 23, 2005 and continues at this time monitoring all observation and collection wells as well as MW #11, MW #12, MW #20, MW #21, MW #39, MW #45, MW #46, and MW #47. RW #1, RW #9, RW #22, and RW #28 are active recovery wells and were not measured. MW #24 was designed for air sparging and does not accommodate monitoring. Measured depth to groundwater data from May 2006 to December 2006 is located in Section 15.0.

Using a vacuum truck, fluids have been removed from the collection and observation wells on a 3X per week basis throughout 2006.

Semi-Annual sample collection occurred during the week of April 3, 2006.

Samples were analyzed for benzene, toluene, ethylbenzene, xylene (BTEX), and MTBE using EPA Method 8021B as well as Diesel Range Organics (DRO) using EPA Method 8015B. Field measurements of pH, temperature, and conductivity were also taken.

Annual sampling occurred the week of August 21, 2006. As directed by NMED, only observation wells were sampled and analyzed for BTEX, MTBE, and DRO. Field measurements of pH, temperature, and conductivity were also taken.

BTEX, MTBE, DRO, and field measurements for the sampling events are summarized in Section 15.0, Tabs 17, 18, and 19.

### **Sump Wells**

During the week of February 13, 2006 seven sump wells were installed along the bluff north of the barrier wall. These wells were drilled in accordance with the North Barrier Wall Work Plan which was submitted to OCD February 7, 2006.

Initial fluid measurement occurred the week of February 22, 2006 and continued on a weekly basis throughout March 2006. Beginning in April 2006, the sump wells were included in the bi-weekly fluid measurement scheme established for the North Boundary Barrier Collection System. Groundwater Elevation and Depth to Water tables from May 2006 to December 2006 can be found in Section 15.0. Boring logs, installation diagrams, and analytical data are presented in the Annual Report of the North Boundary Barrier Collection System Phase II May 2005 to May 2006 (submitted June 28, 2006).

Fluids in the sump wells were extracted on a weekly basis using a vacuum truck starting in May 2006 and continuing today.

### **Groundwater Monitoring**

The facility-wide semi-annual monitoring event occurred during the first week of April 2006. Groundwater samples were collected from all monitoring wells, recovery wells, collection wells, and observation wells with the exception of wells that contain separate phase hydrocarbon or wells that were dry or did not contain enough water to pull a sample. East Outfall #2, and East Outfall #3 were sampled. Outfall #1 flows into Tank #38 and was not sampled. Wells that are included in the River Terrace Voluntary Corrective Measures Work Plan were not incorporated into the semi-annual sampling event as that project is following a quarterly sampling schedule and is documented in a separate report.

Monitoring wells were sampled and analyzed for BTEX and MTBE using EPA Method 8021B. Semi-annual results are summarized in Section 9.0. Field measurements (EC, pH, and Temperature) can be found in Section 9.0.

Groundwater elevation was measured during the sampling event. Results are in Section 9.0.

Annual sampling started the week of August 14, 2006. Giant followed NMED guidelines from the Corrective Measures Study and Corrective Measures Implementation letter dated January 6, 2003. In conjunction, OCD guidance was followed per the Site Investigation and Abatement plan letter dated December 30, 2002.

MW #24 was not sampled as the construction design of this well does not accommodate monitoring. MW #48 and MW #49 replaced P-#4 and P-#5 in the guidelines. However, MW #48 and MW #49 are active in the River Terrace Voluntary Corrective Measures Work Plan and were not incorporated into the annual sampling event. MW #3 did not yield enough water to sample. East Outfall #2 was dry and was not sampled.

The following wells were sampled; MW #1, MW #8, MW #11, MW #12, MW #13, MW #26, MW #27, MW #32, MW #33, MW #34, MW #35, MW #36, MW #37, MW #38, RW #15, O/F #3. The samples were analyzed for BTEX and MTBE using EPA Method 8260B, Total Lead and Chromium using EPA Methods 6010, WQCC Dissolved Metals using EPA Method 6010C, Cations, Anions, and Carbon Dioxide using EPA Methods 300.0, 160.1, 120.1, and 310.1. Results are summarized in Section 9.0.

All wells were measured for groundwater elevation during the sampling event. Results are in Section 9.0.

### **San Juan River**

The San Juan River was sampled on a quarterly basis throughout 2006. Samples were analyzed for BTEX/MTBE (8021B), TPH (8015B), WQCC metals(6010C), semi-volatile organics (8270), and general chemistry. Analysis is summarized in Section 9.0.

### **Tank #33**

In January 2006, at the request of NMED, Tank #33 sampling was modified to a quarterly basis. The sample was analyzed for BTEX (EPA Method 8021B). Summary tables are in Section 9.

## **Field Data Collection**

All facility monitoring wells, recovery wells, observation and collection wells were measured for groundwater elevation in April and August. Measurement of water and product levels was taken 48 hours after any extraction of fluids from the wells. Recovery well pumps were shut off and removed 48 hours prior to water elevation measurements.

All water/product levels were measured to an accuracy of 0.01 foot using a Geotech Interface Probe. After determining water levels, well volumes were calculated.

At least three well volumes were purged from each well prior to sampling. Electrical conductance, pH, and temperature were monitored during purging using an Ultrameter 6P. The wells were considered satisfactorily purged when the pH, E.C., and temperature values did not vary by more than 10 percent for at least three measurements.

Field data and well elevations can be found in Section 9.0.

All purged water was collected in a fifty-five gallon drum and disposed of through the refinery wastewater system.

**Section 4.0     Regulatory Criteria / Groundwater Cleanup Standards/  
State of New Mexico Soil Screening Levels**

# TABLE OF NEW MEXICO AND THE U. S. EPA'S GROUNDWATER STANDARDS

| PARAMETER                                 | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm) | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|-------------------------------------------|---------------------|------------------|-------------------|-----------------|
| General Properties                        |                     |                  |                   |                 |
| non-aqueous phase liquid (NAPL)           | NP                  |                  |                   |                 |
| petroleum                                 |                     |                  |                   |                 |
| floating product                          | NP                  |                  |                   |                 |
| undesirable odor ( a )                    | NP                  |                  |                   |                 |
| pH (units) ( a )                          | 6 - 9               | 6.5 - 8.5        |                   |                 |
| total dissolved solids (TDS) ( a )        | 1000                | 500              |                   |                 |
| turbidity                                 |                     | ti               |                   |                 |
| Biological Contaminants                   |                     |                  |                   |                 |
| giardia lamblia                           | ti                  | Zero             |                   |                 |
| legionella                                | ti                  | Zero             |                   |                 |
| total coliform                            | <5%+                | Zero             |                   |                 |
| viruses                                   | ti                  | Zero             |                   |                 |
| Inorganic Contaminants                    |                     |                  |                   |                 |
| aluminum                                  | 5.0 ( i )           | 0.05 - 0.2 ( a ) |                   |                 |
| ammonia                                   |                     |                  |                   | 30              |
| antimony                                  |                     | 0.006            | 0.006             |                 |
| arsenic                                   | 0.1                 | 0.05             | 0.05              |                 |
| asbestos-fibers/liter (longer than 10 um) |                     | 7 million        | 7 million         |                 |
| barium                                    | 1.0                 | 2                | 2                 |                 |
| beryllium                                 |                     | 0.004            | 0.004             |                 |
| boron                                     | 0.75 ( i )          |                  |                   | 0.06            |
| bromate                                   |                     | 0.01 ( p )       | Zero ( p )        |                 |
| cadmium                                   | 0.01                | 0.005            | 0.005             |                 |
| chlorate                                  |                     |                  |                   | 0.01            |

| PARAMETER                                 | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm)      | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|-------------------------------------------|---------------------|-----------------------|-------------------|-----------------|
| chloride ( a )                            | 250                 | 250                   |                   | 0.01            |
| chlorine                                  |                     |                       |                   | 1               |
| chlorine dioxide                          |                     |                       |                   | 0.08            |
| chlorite                                  |                     | 1.0 ( p )             | 0.08 ( p )        |                 |
| chromium                                  | 0.05                | 0.1                   | 0.1               |                 |
| cobalt ( i )                              | 0.05                |                       |                   |                 |
| copper                                    |                     | 1.3 ( al )            | 1.3               |                 |
| cyanide                                   | 0.2                 | 0.2                   | 0.2               |                 |
| fluoride                                  | 1.6                 | 4.0                   |                   |                 |
| fluoride ( a )                            |                     | 2                     |                   |                 |
| iron ( a )                                | 1.0                 | 0.3                   |                   |                 |
| lead                                      | 0.05                | 0.015 ( al )          | Zero              |                 |
| manganese ( a )                           | 0.2                 | 0.05                  |                   |                 |
| mercury                                   | 0.002               | 0.002                 | 0.002             |                 |
| molybdenum                                | 1.0 ( i )           |                       |                   | 0.05            |
| nickel                                    | 0.2 ( i )           | 0.1                   | 0.1               |                 |
| nitrate - N                               | 10                  | 10                    | 10                |                 |
| nitrite - N                               |                     | 1                     | 1                 |                 |
| nitrate + nitrite ( as N )                |                     | 10                    | 10                |                 |
| selenium                                  | 0.05                | 0.05                  | 0.05              |                 |
| silver                                    | 0.05                | 0.05                  | 0.05              |                 |
| silver ( a )                              |                     | 0.1                   |                   |                 |
| sodium                                    |                     |                       |                   | 20              |
| strontium                                 |                     |                       |                   | 17              |
| sulfate                                   | 600 ( a )           | 250 ( a ) / 400 ( p ) | 400               |                 |
| thallium                                  |                     | 0.002                 | 0.0005            |                 |
| vanadium                                  |                     |                       |                   | 0.02            |
| zinc ( a )                                | 10.0                | 5                     |                   |                 |
| <b>Radioactive Contaminants</b>           |                     |                       |                   |                 |
| Gross alpha (pCi/L) *                     |                     | 15                    | Zero              |                 |
| Gross beta & photon emitters (mrem/yr) ** |                     | 4                     | Zero              |                 |



| PARAMETER                          | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm)             | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|------------------------------------|---------------------|------------------------------|-------------------|-----------------|
| radium 226 (pCi/L)                 |                     | 20 ( p )                     | Zero              |                 |
| radium 228 (pCi/L)                 |                     | 20 ( p )                     | Zero              |                 |
| radium 226 + 228 (pCi/L)           | 30                  | 5                            | Zero              |                 |
| radon 222 (pCi/L)                  |                     | 300 ( p )                    | Zero              |                 |
| uranium                            | 5                   | 0.02 ( p )                   | Zero              |                 |
| Benzenes                           |                     |                              |                   |                 |
| benzene                            | 0.01                | 0.005                        | Zero              |                 |
| Alkyl Benzenes                     |                     |                              |                   |                 |
| methylbenzene (toluene)            | 0.75                | 1 ( p ) / 0.04 ( a )         | 1                 |                 |
| ethylbenzene                       | 0.75                | 0.7 ( p ) / 0.03 ( a )       | 0.7               |                 |
| dimethyl benzene isomers (xylenes) | 0.62                | 10 ( p ) / 0.02 ( a )        | 10                |                 |
| vinylbenzene (styrene)             |                     | 0.1                          | 0.1               |                 |
| trimethyl benzene isomers          |                     |                              |                   |                 |
| propyl benzene isomers             |                     |                              |                   |                 |
| butyl benzene isomers              |                     |                              |                   |                 |
| Chlorinated Benzenes               |                     |                              |                   |                 |
| chlorobenzene                      | tox                 | 0.1                          | 0.1               |                 |
| o-dichlorobenzene                  | tox                 | 0.6                          | 0.6               |                 |
| m-dichlorobenzene                  | tox                 |                              |                   |                 |
| p-dichlorobenzene                  | tox                 | 0.075 ( p ) /<br>0.005 ( a ) | 0.075             |                 |
| 1,2,4-trichlorobenzene             |                     | 0.07                         | 0.07              |                 |
| 1,3,5-trichlorobenzene             |                     |                              |                   | 0.04            |
| 1,2,4,5-tetrachlorobenzene         | tox                 |                              |                   |                 |
| pentachlorobenzene                 | tox                 |                              |                   |                 |
| hexachlorobenzene                  | tox                 | 0.001                        | Zero              |                 |
| Toluenes                           |                     |                              |                   |                 |
| o-chlorotoluene                    |                     |                              |                   | 0.1             |
| p-chlorotoluene                    |                     |                              |                   | 0.1             |
| 2,4-dinitrotoluene (2,4-DNT)       | tox                 |                              |                   |                 |

| PARAMETER                   | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm)        | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|-----------------------------|---------------------|-------------------------|-------------------|-----------------|
| 2,4,6-trinitrotoluene (TNT) |                     |                         |                   | 0.002           |
| isopropyltoluene            |                     |                         |                   |                 |
| Nitrogenated Benzenes       |                     |                         |                   |                 |
| aminobenzene (aniline)      |                     |                         |                   |                 |
| nitrobenzene                | tox                 |                         |                   |                 |
| 1,3-dinitrobenzene          |                     |                         |                   | 0.001           |
| Phenols (hydroxybenzenes)   | 0.005 (a)           |                         |                   |                 |
| phenol (carboic acid)       | tox                 |                         |                   | 4               |
| 2-chlorophenol              |                     |                         |                   | 0.04            |
| 2,4-dichlorophenol          | tox                 |                         |                   | 0.02            |
| 2,4-dinitro-o-cresol        | tox                 |                         |                   |                 |
| 2,4-dimethylphenol          |                     |                         |                   |                 |
| 2-methylphenol              |                     |                         |                   |                 |
| 4-methylphenol              |                     |                         |                   |                 |
| 2-nitrophenol               |                     |                         |                   |                 |
| dinitrophenols              | tox                 |                         |                   |                 |
| 2,4,5-trichlorophenol       | tox                 |                         |                   |                 |
| 2,4,6-trichlorophenol       | tox                 |                         |                   |                 |
| 2,4,6-trichlorophenol       | tox                 |                         |                   |                 |
| pentachlorophenol           | tox                 | 0.001 (p) / 0.03<br>(a) | Zero              |                 |
| p-cresol                    |                     |                         |                   |                 |
| Polycyclics                 |                     |                         |                   |                 |
| acenaphthene                |                     |                         |                   |                 |
| anthracene                  | tox                 |                         |                   |                 |
| benz(a)anthracene           |                     | 0.0001 (p)              | Zero              |                 |
| benzo(a)pyrene              | 0.0007              | 0.0002                  | Zero              |                 |
| benzo(b)fluoranthene        |                     | 0.0002 (p)              | Zero              |                 |
| benzo(k)fluoranthene        | tox                 | 0.0002 (p)              | Zero              |                 |
| chrysene                    |                     | 0.0002 (p)              | Zero              |                 |
| dibenz(a)anthracene         |                     | 0.0003 (p)              | Zero              |                 |
| diphenylhydrazine           | tox                 |                         |                   |                 |

| PARAMETER                                     | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm) | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|-----------------------------------------------|---------------------|------------------|-------------------|-----------------|
| fluoranthene                                  | tox                 |                  |                   |                 |
| fluorene                                      | tox                 |                  |                   |                 |
| indeno(1,2,3-c,d)pyrene                       |                     | 0.0004 (p)       | Zero              |                 |
| naphthalene                                   | tox                 |                  |                   | 0.5             |
| naphthalenes ****                             | 0.05                |                  |                   |                 |
| phenanthrene                                  | tox                 |                  |                   |                 |
| polychlorinated biphenyls (PCBs)              | 0.001               |                  |                   |                 |
| PCBs as decachlorobiphenyl                    |                     | 0.0005           | Zero              |                 |
| pyrene                                        | tox                 |                  |                   |                 |
| Methanes                                      |                     |                  |                   |                 |
| chloromethane (methyl chloride)               | tox                 |                  |                   | 0.003           |
| dichloromethane (methylene chloride)          | 0.1                 | 0.005            | Zero              |                 |
| trichloromethane (chloroform)                 | 0.1                 |                  | Zero (p)          |                 |
| tetrachloromethane (carbon tetrachloride)     | 0.01                | 0.005            | Zero              |                 |
| bromomethane (methyl bromide)                 | tox                 |                  |                   | 0.01            |
| bromochloromethane                            |                     |                  |                   | 0.09            |
| bromodichloromethane                          | tox                 |                  | Zero (p)          |                 |
| chlorodibromomethane                          |                     |                  | Zero (p)          | 0.1             |
| tribromomethane (bromoform)                   | tox                 |                  | Zero (p)          |                 |
| trihalomethanes (THMs) ***                    |                     | 0.1/0.08 (p)     | Zero              |                 |
| fluorotrichloromethane (Freon 11)             | tox                 |                  |                   | 2               |
| dichlorodifluoromethane (Freon 12)            | tox                 |                  |                   | 1               |
| Ethanes                                       |                     |                  |                   |                 |
| 1,2-dibromoethane (ethylene dibromide, EDB)   | 0.0001              | 0.00005          | Zero              |                 |
| 1,1-dichloroethane                            | 0.025               |                  |                   |                 |
| 1,2-dichloroethane (ethylene dichloride, EDC) | 0.01                | 0.005            | Zero              |                 |
| 1,1,1-trichloroethane (TCA)                   | 0.06                | 0.2              | 0.2               |                 |
| 1,1,2-trichloroethane                         | 0.01                | 0.005            | 0.005             |                 |
| 1,1,1,2-tetrachloroethane                     |                     |                  |                   | 0.07            |

| PARAMETER                                       | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm) | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|-------------------------------------------------|---------------------|------------------|-------------------|-----------------|
| 1,1,2,2-tetrachloroethane                       | 0.01                |                  |                   |                 |
| hexachloroethane                                | tox                 |                  |                   |                 |
| Ethenes (Ethylenes)                             |                     |                  |                   |                 |
| chloroethane (vinyl chloride)                   | 0.001               | 0.002            | Zero              |                 |
| 1,1-dichloroethene                              | 0.005               | 0.007            | 0.007             |                 |
| cis-1,2-dichloroethene                          | tox                 | 0.07             | 0.07              |                 |
| trans-1,2-dichloroethene                        | tox                 | 0.1              | 0.1               |                 |
| trichloroethene (TCE)                           | 0.1                 | 0.005            | Zero              |                 |
| tetrachloroethene (perchloroethylene, PCE)      | 0.02                | 0.005            | Zero              |                 |
| Propanes & Propenes                             |                     |                  |                   |                 |
| 1,2-dichloropropane (propylene dichloride, PDC) |                     | 0.005            | Zero              |                 |
| 1,2,3-trichloropropane                          |                     |                  |                   | 0.04            |
| 1,2-dibromo-3-chloropropane (DBCP)              |                     | 0.0002           | Zero              |                 |
| dichloropropenes                                | tox                 |                  |                   |                 |
| 1,3-dichloropropene                             | tox                 |                  |                   | 0.01            |
| Aldehydes, Ethers, Furans, & Ketones            |                     |                  |                   |                 |
| acetone                                         |                     |                  |                   |                 |
| bis (2-chloroethyl) ether                       | tox                 |                  |                   |                 |
| bis (2-chloroisopropyl) ether                   | tox                 |                  |                   | 0.3             |
| bis (chloromethyl) ether                        | tox                 |                  |                   |                 |
| dibenzofuran                                    |                     |                  |                   |                 |
| p-dioxane (diethylene dioxide)                  |                     |                  |                   | 0.568           |
| formaldehyde (methanal)                         |                     |                  |                   | 1               |
| isophorone                                      | tox                 |                  |                   | 0.1             |
| methyl ethyl ketone (MEK, 2-butanone)           |                     |                  |                   | 0.1             |
| methyl tertiary butyl ether (MTBE)              | 0.1 ( a )           |                  |                   | 0.04            |
| tetrahydrofuran                                 |                     |                  |                   |                 |

| PARAMETER                                 | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm) | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|-------------------------------------------|---------------------|------------------|-------------------|-----------------|
| Nitrosamines                              |                     |                  |                   |                 |
| N-nitrosodiethylamine                     | tox                 |                  |                   |                 |
| N-nitrosodimethylamine (NDMA)             | tox                 |                  |                   |                 |
| N-nitrosodibutylamine                     | tox                 |                  |                   |                 |
| N-nitrosodiphenylamine                    | tox                 |                  |                   |                 |
| N-nitrosopyrrolidine                      | tox                 |                  |                   |                 |
| Phthalate Esters                          |                     |                  |                   |                 |
| dibutyl phthalate                         | tox                 |                  |                   |                 |
| di-2-ethylhexyl phthalate                 | tox                 | 0.006            | Zero              |                 |
| diethyl phthalate                         | tox                 |                  |                   |                 |
| dimethyl phthalate                        | tox                 |                  |                   |                 |
| Explosives                                |                     |                  |                   |                 |
| dinitrophenols                            | tox                 |                  |                   |                 |
| 2,4-dinitrotoluene (2,4-DNT)              | tox                 |                  |                   |                 |
| hexahydro-1,3,5-trinitro-s-triazine (RDX) |                     |                  |                   | 0.002           |
| HMX                                       |                     |                  |                   | 0.4             |
| nitroglycerin (glycerol trinitrate)       |                     |                  |                   | 0.005           |
| nitroguanidine                            |                     |                  |                   | 0.7             |
| 2,4,6-trinitrotoluene (TNT)               |                     |                  |                   | 0.002           |
| Other Organics                            |                     |                  |                   |                 |
| acrolein                                  | tox                 |                  |                   |                 |
| acrylamide                                |                     | ti               | Zero              |                 |
| acrylonitrile                             | tox                 |                  |                   | 0.004           |
| benzidine                                 | tox                 |                  |                   |                 |
| chloral hydrate                           |                     | ti (p)           | 0.04 (p)          |                 |
| chloramine                                |                     |                  |                   | 0.3             |



| PARAMETER                                      | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm)            | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|------------------------------------------------|---------------------|-----------------------------|-------------------|-----------------|
| dibromoacetonitrile                            |                     |                             |                   | 0.02            |
| dichloroacetic acid                            |                     |                             |                   | 0.005           |
| dichloroacetonitrile                           |                     |                             |                   | 0.006           |
| dichlorobenzidine                              | tox                 |                             |                   |                 |
| di(2-ethylhexyl)adipate                        |                     | 0.4                         | 0.4               |                 |
| diisopropyl methylphosphonate                  |                     |                             |                   | 0.6             |
| epichlorohydrin (1-chlor-2,3-<br>epoxypropane) |                     | n                           | Zero              |                 |
| ethylene glycol (1,2-ethanediol)               |                     |                             |                   | 7               |
| Haloacetic Acids ****                          |                     | 0.06 ( p )                  |                   |                 |
| dichloroacetic acid                            |                     |                             | Zero ( p )        |                 |
| trichloroacetic acid                           |                     |                             | 0.3 ( p )         |                 |
| hexachlorobutadiene                            | tox                 |                             |                   | 0.001           |
| hexachlorocyclopentadiene                      | tox                 | 0.05 ( p ) / 0.008<br>( a ) | 0.05              |                 |
| n-hexane                                       |                     |                             |                   | 4.0             |
| Other Pesticides                               |                     |                             |                   |                 |
| acifluorfen                                    |                     |                             |                   | 0.1             |
| alachlor                                       |                     | 0.002                       | Zero              |                 |
| aldicarb                                       |                     | 0.003 ( p )                 | 0.001             |                 |
| aldicarb sulfone                               |                     | 0.002 ( p )                 | 0.001             |                 |
| aldicarb sulfoxide                             |                     | 0.004 ( p )                 | 0.001             |                 |
| aldrin                                         | tox                 |                             |                   | 0.001           |
| ametryn                                        |                     |                             |                   | 0.06            |
| ammonium sulfamate                             |                     |                             |                   | 2               |
| arsenal (imazapyr)                             |                     |                             |                   |                 |
| atrazine                                       |                     | 0.003                       | 0.003             |                 |
| baygon                                         |                     |                             |                   | 0.003           |
| bentazon                                       |                     |                             |                   | 0.02            |
| bromacil                                       |                     |                             |                   | 0.09            |
| butylate                                       |                     |                             |                   | 0.35            |
| carbaryl                                       |                     |                             |                   | 0.7             |
| carbofuran                                     |                     | 0.04                        | 0.04              |                 |

| PARAMETER                               | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm) | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|-----------------------------------------|---------------------|------------------|-------------------|-----------------|
| carboxin                                |                     |                  |                   | 0.7             |
| chloramben                              |                     |                  |                   | 0.1             |
| chlordane                               | tox                 | 0.002            | Zero              |                 |
| chlorothalonil                          |                     |                  |                   | 0.5             |
| chlorpyrifos                            |                     |                  |                   | 0.02            |
| cyanazine                               |                     |                  |                   | 0.01            |
| 2,4-D (2,4-dichlorophenoxyacetic acid)  |                     | 0.07             | 0.07              |                 |
| dacthal                                 |                     |                  |                   | 4               |
| dalapon                                 |                     | 0.2              | 0.2               |                 |
| DDT (dichloro diphenyl trichloroethane) | tox                 |                  |                   |                 |
| 4,4'-DDD                                |                     |                  |                   |                 |
| 4,4'-DDE                                |                     |                  |                   |                 |
| diazinon                                |                     |                  |                   | 0.0006          |
| dicamba                                 |                     |                  |                   | 0.2             |
| dieldrin                                | tox                 |                  |                   | 0.002           |
| dimethrin                               |                     |                  |                   | 2               |
| dinoseb                                 |                     | 0.007            | 0.007             |                 |
| dioxin                                  |                     | 0.00000005       | Zero              |                 |
| diphenamid                              |                     |                  |                   | 0.2             |
| diquat                                  |                     | 0.02             | 0.02              |                 |
| disulfoton                              |                     |                  |                   | 0.0003          |
| diuron                                  |                     |                  |                   | 0.01            |
| endosulfan                              | tox                 |                  |                   |                 |
| endothall                               |                     | 0.1              | 0.1               |                 |
| endrin                                  | tox                 | 0.002            | 0.002             |                 |
| ethylene thiourea                       |                     |                  |                   | 0.001           |
| fenamiphos                              |                     |                  |                   | 0.002           |
| fluometuron                             |                     |                  |                   | 0.09            |
| fonofos                                 |                     |                  |                   | 0.01            |
| glyphosate                              |                     | 0.7              | 0.7               |                 |
| heptachlor                              | tox                 | 0.0004           | Zero              |                 |
| heptachlor epoxide                      |                     | 0.0002           | Zero              |                 |
| hexazinone                              |                     |                  |                   | 0.2             |
| lindane (gamma-BHC)                     | tox                 | 0.0002           | 0.0002            |                 |

| PARAMETER                                   | NEW MEXICO<br>(ppm) | EPA MCL<br>(ppm) | EPA MCLG<br>(ppm) | EPA HA<br>(ppm) |
|---------------------------------------------|---------------------|------------------|-------------------|-----------------|
| alpha-BHC                                   | tox                 |                  |                   |                 |
| beta-BHC                                    | tox                 |                  |                   |                 |
| delta-BHC                                   |                     |                  |                   |                 |
| malathion                                   |                     |                  |                   | 0.2             |
| maleic hydrazide                            |                     |                  |                   | 4               |
| methomyl                                    |                     |                  |                   | 0.2             |
| methoxychlor                                |                     | 0.04             | 0.04              |                 |
| methyl chlorophenoxyacetic acid (MCPA)      |                     |                  |                   | 0.011           |
| methyl parathion                            |                     |                  |                   | 0.002           |
| metolachlor                                 |                     |                  |                   | 0.1             |
| metribuzin                                  |                     |                  |                   | 0.2             |
| oxamyl (vydate)                             |                     | 0.2              | 0.2               |                 |
| paraquat                                    |                     |                  |                   | 0.03            |
| picloram                                    |                     | 0.5              | 0.5               |                 |
| prometon                                    |                     |                  |                   | 0.1             |
| pronamide                                   |                     |                  |                   | 0.05            |
| propachlor                                  |                     |                  |                   | 0.09            |
| propazine                                   |                     |                  |                   | 0.01            |
| propham                                     |                     |                  |                   | 0.1             |
| simazine                                    |                     | 0.004            | 0.004             |                 |
| 2,4,5-T (2,4,5-trichlorophenoxyacetic acid) |                     |                  |                   | 0.07            |
| tebuthiuron                                 |                     |                  |                   | 0.5             |
| terbacil                                    |                     |                  |                   | 0.09            |
| terbufos                                    |                     |                  |                   | 0.0009          |
| toxaphene                                   | tox                 | 0.003            | Zero              |                 |
| 2,4,5-TP (silvex)                           |                     | 0.05             | 0.05              |                 |
| trifluralin                                 |                     |                  |                   | 0.005           |

### Abbreviations

al Action Level that, if exceeded, requires water treatment  
 BHC benzene hexachloride, also called hexachlorocyclohexane  
 DDD 1,1'-(2,2-dichloroethylidene) -bis/4-chlorobenzene

DDT 1,1'-(2,2-dichloroetheneylidene)-bis/4-chlorobenzene

HA Health Advisory

HMX octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

MCL Maximum Contaminant Level

MCLG Maximum Contaminant Level Goal

mg/L milligrams per liter

mrem/yr millirem per year

mrem ede/yr dose committed over a 50-year period to a "reference man" from an annual intake rate of 2 liters drinking water per day

MTBE methyl tertiary butyl ether, a synonym for 2-methoxy-2-methyl propane (the standard includes other ether-based gasoline additives)

NP the contaminant shall Not be Present

pCi/L picocuries per liter

tox a numerical standard has not been established, but the contaminant is listed in a narrative standard of "toxic pollutant" defined in WQCC regulations

2,4,5-TP 2,4,5-trichlorophenoxpropionic acid

tt Treatment Technique that public water system operators must adhere to instead of a numerical standard

um micrometer

U.S. EPA United States Environmental Protection Agency

WQCC New Mexico Water Quality Control Commission

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#### Footnotes

\* The proposed standard excludes radon 222, radium 226 and uranium activity

\*\* This standard excludes radium 228 activity. Units for the existing standard are mrem/yr. U.S. EPA has proposed to change the units to mrem ede/yr.

\*\*\* The "THMs" standard applies to the sum of chloroform, dichlorobromomethane, dibromochloromethane, and bromoform.

\*\*\*\* This standard applies to the sum of naphthalene and monomethylnaphthalene isomers.

\*\*\*\*\* This standard applies to the sum of mono-, di-, and trichloroacetic acids, and mono- and dibromoacetic acids.

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#### Use and Applicability of Standards

All New Mexico standards are adopted by the WQCC except for the MTBE and petroleum (floating product and undesirable odor) standards, which are adopted by the New Mexico Environmental Improvement Board.

U.S. EPA's MCLGs are set at levels that would result in no known or anticipated adverse health effects with an adequate margin of safety. MCLGs do not take treatment costs into consideration and are not enforceable. Health-based proposed MCLs and final enforceable MCLs are set as close to MCLGs as feasible with use of best technology, treatment techniques and other means.

U.S. EPA's HAs serve as informal technical guidance to assist Federal, State and Local officials responsible for protecting public health when emergency spills or contamination situations occur. They are not to be construed as legally enforceable Federal standards and are subject to change as new information becomes available. All HAs listed are for lifetime exposures except for p-dioxane (10 day) and n-hexane (7 year).

**APPENDIX A**



## Appendix A

### State of New Mexico Soil Screening Levels

Table A-1 provides State of New Mexico Soil Screening Levels (SSLs), as developed by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB) and the Ground Water Quality Bureau Voluntary Remediation Program for 208 chemicals most commonly associated with environmental releases within the state. These NMED SSLs are derived using default exposure parameter values (as presented in Table A-2) and chemical- and State of New Mexico-specific physical parameters (as presented in Table B-1 of Appendix B). These default values are assumed to be appropriately conservative in the face of uncertainty and are likely to be protective for the majority of site conditions relevant to soil exposures within New Mexico.

However, the NMED SSLs are not necessarily protective of all known human exposure pathways, reasonable land uses or ecological threats. Thus, before applying NMED SSLs at a site, it is extremely important to compare the conceptual site model (CSM) with the assumptions upon which the NMED SSLs are predicated to ensure that the site conditions and exposure pathways match those used to develop the NMED SSLs. If this comparison indicates that the site at issue is more complex than the corresponding SSL scenarios, or that there are significant exposure pathways not accounted for by the NMED SSLs, then the NMED SSLs are insufficient for use in a defensible assessment of the site. A more detailed site-specific approach will be necessary to evaluate the additional pathways or site conditions.

Table A-1

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Column 1:               | The first column in Table A-1 presents the names of the chemicals for which NMED has developed SSLs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Column 2:               | The second column presents NMED SSLs predicated on residential soil exposures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Column 3, 5, 7, and 10: | These columns present indicator categories for the NMED SSL residential, industrial, construction, and tap water basis, whether predicated on carcinogenic effects (ca), noncarcinogenic effects (nc), soil saturation limits (sat) or a non-risk based "max" determination. NMED SSLs predicated on a carcinogenic endpoint reflect age-adjusted child-to-adult exposures. NMED SSLs predicated on a noncarcinogenic endpoint reflect child-only exposures. Detected concentrations above the "sat" value may indicate the presence of nonaqueous phase liquid (NAPL). For certain inorganic and semivolatile organic compounds (SVOCs) that exhibit relatively low toxicity, a non risk-based maximum concentration of 10 <sup>5</sup> mg/kg is given when the risk-based SSL exceeds that level. These are noted as "max" in the tables. |
| Columns 4 and 6:        | The fourth and sixth columns present NMED SSLs analogous to Column 1, with the exception that these values correspond to Industrial/Occupational and Construction worker (adult-only) exposures, respectively.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Columns 5 and 7:        | The fifth and seventh columns present endpoint bases analogous to Column 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

for the Industrial/Occupational and Construction worker receptor populations, respectively. Unlike the Residential population, noncarcinogenic endpoint notes for these receptor populations are predicated on adult-only exposures.

Column 8: The eighth column notes which chemicals are considered VOCs (for inhalation considerations). Those chemicals not considered VOCs are evaluated within the SSLs relative to inhalation of particulate emissions.

Column 9: Presents the tap water SSL for the residential scenario.

Columns 11 and 12: The ninth column presents NMED SSLs for the migration to groundwater pathway developed using a default dilution attenuation factor (DAF) of 1, which assumes no effective dilution or attenuation. These values can be considered at sites where little or no dilution or attenuation of soil leachate concentrations is expected (e.g., shallow water tables, karst topography). Column 10 presents NMED SSLs for the migration to groundwater pathway developed using a DAF of 20 to account for natural processes that reduce contaminant concentrations in the subsurface.

As noted above, separate NMED SSLs are presented for use in evaluating three discrete potential receptor populations: Residential, Industrial/Occupational, and Construction. Each NMED SSL considers incidental ingestion of soil, inhalation of volatiles (limited to those chemicals noted as volatile organic compounds [VOCs] within Table A-1) or particulate emissions from impacted soil, and dermal contact with soil.

Generally, if a contaminant is detected at a level in soil exceeding the most relevant NMED SSL, and the site-specific CSM is in general agreement with the underlying assumptions upon which the NMED SSLs are predicated, this result indicates the potential for adverse human health effects to occur. Conversely, if no contaminants are detected above the most relevant NMED SSL, this tends to indicate to the user that environmental conditions may not necessitate remedial action of the surface soil or the vadose zone.

A detection above an NMED SSL does not indicate that unacceptable exposures are, in fact, occurring. The NMED SSLs are predicated on relatively conservative exposure assumptions and an exceedance only tends to indicate the potential for adverse effects. The NMED SSLs do not account for additive exposures, whether for carcinogenic or noncarcinogenic endpoints. Section 5 of Part A addresses a methodology by which an environmental manager may determine whether further site-evaluation is warranted, however, this methodology does not replace the need for defensible risk assessment where indicated.

The NMED SSLs address a basic subset of exposures fundamental to the widest array of environmentally-impacted sites within the State of New Mexico. The NMED SSLs cannot address all relevant exposure pathways associated with all sites. The utility of the NMED SSLs depends heavily upon the understanding of site conditions as accurately reflected in the CSM and nature and extent of contamination determinations. Consideration of the NMED SSLs does not preclude the need for site-specific risk assessment in all instances.

Table A-1: NMED Soil Screening Levels

| Chemical                     | Residential Soil (mg/kg) | End-point | Industrial/ Occupational Soil (mg/kg) | End-point | Construction Worker Soil (mg/kg) | End-point | VOC | Tap Water (ug/L) | End-point | DAF 1 (mg/kg) | DAF 20 (mg/kg) |
|------------------------------|--------------------------|-----------|---------------------------------------|-----------|----------------------------------|-----------|-----|------------------|-----------|---------------|----------------|
| Acenaphthene                 | 3.73E+03                 | nc        | 3.35E+04                              | nc        | 1.41E+04                         | nc        | x   | 3.65E+02         | nc        | 2.75E+00      | 5.49E+01       |
| Acetaldehyde                 | 1.06E+02                 | nc        | 3.84E+02                              | nc        | 3.45E+02                         | nc        | x   | 1.72E+01         | ca        |               |                |
| Acetone                      | 2.81E+04                 | nc        | 1.00E+05                              | max       | 9.85E+04                         | nc        | x   | 5.48E+03         | nc        | 9.55E-01      | 1.91E+01       |
| Acrylonitrile                | 4.27E+00                 | ca        | 1.26E+01                              | ca        | 5.75E+01                         | nc        | x   | 3.81E-01         | ca        | 6.68E-05      | 1.34E-03       |
| Acetophenone                 | 1.48E+03                 | sal       | 1.48E+03                              | sal       | 1.48E+03                         | sal       | x   | 6.08E+02         | nc        | 1.48E-01      | 2.95E+00       |
| Acrolein                     | 2.06E-01                 | nc        | 7.52E-01                              | nc        | 6.75E-01                         | nc        | x   | 4.16E-02         | nc        | 8.55E-06      | 1.71E-04       |
| Aldrin                       | 2.84E-01                 | ca        | 1.12E+00                              | ca        | 6.99E+00                         | nc        |     | 3.87E-02         | ca        | 1.42E-01      | 2.84E+00       |
| Aluminum                     | 7.78E+04                 | nc        | 1.00E+05                              | max       | 1.44E+04                         | nc        |     | 3.65E+04         | nc        | 5.48E+04      | 1.10E+06       |
| Anthracene                   | 2.20E+04                 | nc        | 1.00E+05                              | max       | 8.60E+04                         | nc        | x   | 1.83E+03         | nc        | 8.11E+01      | 1.62E+03       |
| Antimony                     | 3.13E+01                 | nc        | 4.54E+02                              | nc        | 1.24E+02                         | nc        |     | 1.46E+01         | nc        | 6.61E-01      | 1.32E+01       |
| Arsenic                      | 3.90E+00                 | ca        | 1.77E+01                              | ca        | 8.52E+01                         | nc        |     | 4.42E-01         | ca        | 1.45E-02      | 2.90E-01       |
| Barium                       | 1.56E+04                 | nc        | 1.00E+05                              | max       | 6.02E+04                         | nc        |     | 7.30E+03         | nc        | 3.01E+02      | 6.03E+03       |
| Benzene                      | 1.03E+01                 | ca        | 2.58E+01                              | ca        | 1.74E+02                         | nc        | x   | 3.49E+00         | ca        | 1.00E-03      | 2.01E-02       |
| Benzidine                    | 2.11E-02                 | ca        | 8.33E-02                              | ca        | 7.09E-01                         | ca        |     | 2.89E-03         | ca        | 1.24E-05      | 2.47E-04       |
| Benzo(a)anthracene           | 6.21E+00                 | ca        | 2.34E+01                              | ca        | 2.12E+02                         | ca        |     | 9.09E-01         | ca        | 5.43E-01      | 1.09E+01       |
| Benzo(a)pyrene               | 6.21E-01                 | ca        | 2.34E+00                              | ca        | 2.12E+01                         | ca        |     | 9.09E-02         | ca        | 1.39E-01      | 2.78E+00       |
| Benzo(b)fluoranthene         | 6.21E+00                 | ca        | 2.34E+01                              | ca        | 2.12E+02                         | ca        |     | 9.09E-01         | ca        | 1.68E+00      | 3.35E+01       |
| Benzo(k)fluoranthene         | 6.21E+01                 | ca        | 2.34E+02                              | ca        | 2.12E+03                         | ca        |     | 9.09E+00         | ca        | 1.68E+01      | 3.35E+02       |
| Beryllium                    | 1.56E+02                 | nc        | 2.25E+03                              | nc        | 5.62E+01                         | nc        |     | 7.30E+01         | nc        | 5.77E+01      | 1.15E+03       |
| a-BHC (HCH)                  | 9.02E-01                 | ca        | 3.99E+00                              | ca        | 3.00E+01                         | ca        |     | 1.05E-01         | ca        | 2.13E-04      | 4.25E-03       |
| b-BHC (HCH)                  | 3.16E+00                 | ca        | 1.40E+01                              | ca        | 5.39E+01                         | nc        |     | 3.69E-01         | ca        | 7.61E-04      | 1.52E-02       |
| g-BHC                        | 4.37E+00                 | ca        | 1.93E+01                              | ca        | 8.09E+01                         | nc        |     | 5.10E-01         | ca        | 9.08E-04      | 1.82E-02       |
| 1,1-Biphenyl                 | 3.08E+03                 | nc        | 2.73E+04                              | nc        | 1.17E+04                         | nc        | x   | 3.04E+02         | nc        | 3.61E+00      | 7.22E+01       |
| Bis(2-chloroethyl) ether     | 2.44E+00                 | ca        | 7.45E+00                              | ca        | 1.05E+02                         | ca        | x   | 9.65E-02         | ca        | 2.77E-05      | 5.55E-04       |
| Bis(2-chloroisopropyl) ether | 3.87E+01                 | ca        | 1.19E+02                              | ca        | 4.53E+02                         | sal       | x   | 2.71E+00         | ca        | 7.21E-04      | 1.44E-02       |
| Bis(2-ethylhexyl) phthalate  | 3.47E+02                 | ca        | 1.37E+03                              | ca        | 4.66E+03                         | nc        |     | 4.74E+01         | ca        | 1.07E+03      | 2.15E+04       |
| Bis(chloromethyl) ether      | 4.72E-03                 | ca        | 1.23E-02                              | ca        | 2.32E-01                         | ca        | x   | 5.09E-04         | ca        | 8.95E-08      | 1.79E-06       |
| Boron                        | 1.56E+04                 | nc        | 1.00E+05                              | max       | 3.09E+04                         | nc        |     | 7.30E+03         | nc        | 2.40E+01      | 4.80E+02       |
| Bromobenzene                 | 3.70E+01                 | nc        | 1.37E+02                              | nc        | 1.21E+02                         | nc        | x   | 2.06E+01         | nc        | 1.07E-02      | 2.14E-01       |
| Bromodichloromethane         | 1.44E+01                 | ca        | 3.72E+01                              | ca        | 7.17E+02                         | ca        | x   | 1.78E+00         | ca        | 5.90E-04      | 1.18E-02       |

| Chemical                       | Residential<br>Soil (mg/kg) | End-<br>point | Industrial/<br>Occupational<br>Soil (mg/kg) | End-<br>point | Construction<br>Worker Soil<br>(mg/kg) | End-<br>point | VOC | Tap<br>Water<br>(ug/L) | End-<br>point | DAF 1<br>(mg/kg) | DAF 20<br>(mg/kg) |
|--------------------------------|-----------------------------|---------------|---------------------------------------------|---------------|----------------------------------------|---------------|-----|------------------------|---------------|------------------|-------------------|
| Bromomethane                   | 8.51E+00                    | nc            | 3.28E+01                                    | nc            | 2.82E+01                               | nc            | x   | 8.66E+00               | nc            | 1.87E-03         | 3.74E-02          |
| 1,3-Butadiene                  | 9.93E-01                    | ca            | 2.38E+00                                    | ca            | 4.59E+00                               | nc            | x   | 1.26E+00               | ca            |                  |                   |
| 2-Butanone (MEK)               | 3.18E+04                    | nc            | 4.87E+04                                    | sat           | 4.87E+04                               | sat           | x   | 7.06E+03               | nc            | 1.27E+00         | 2.55E+01          |
| tert-Butyl methyl ether (MTBE) | 3.88E+02                    | ca            | 9.84E+02                                    | ca            | 1.96E+04                               | ca            | x   | 6.14E+01               | ca            |                  |                   |
| n-Butylbenzene                 | 6.21E+01                    | sat           | 6.21E+01                                    | sat           | 6.21E+01                               | sat           | x   | 6.08E+01               | nc            | 2.70E-01         | 5.40E+00          |
| sec-Butylbenzene               | 6.06E+01                    | sat           | 6.06E+01                                    | sat           | 6.06E+01                               | sat           | x   | 6.08E+01               | nc            | 2.17E-01         | 4.33E+00          |
| tert-Butylbenzene              | 1.06E+02                    | sat           | 1.06E+02                                    | sat           | 1.06E+02                               | sat           | x   | 6.08E+01               | nc            | 2.15E-01         | 4.30E+00          |
| Cadmium                        | 3.90E+01                    | nc            | 5.64E+02                                    | nc            | 1.54E+02                               | nc            |     | 1.83E+01               | nc            | 1.37E+00         | 2.75E+01          |
| Carbon disulfide               | 4.60E+02                    | sat           | 4.60E+02                                    | sat           | 4.60E+02                               | sat           | x   | 1.04E+03               | nc            | 3.95E-01         | 7.89E+00          |
| Carbon tetrachloride           | 3.47E+00                    | ca            | 8.64E+00                                    | ca            | 1.80E+02                               | ca            | x   | 1.69E+00               | ca            | 9.74E-04         | 1.95E-02          |
| Chlordane                      | 1.62E+01                    | ca            | 7.19E+01                                    | ca            | 1.30E+02                               | nc            |     | 1.90E+00               | ca            | 3.42E-01         | 6.83E+00          |
| 2-Chloroacetophenone           | 4.25E-02                    | nc            | 1.62E-01                                    | nc            | 1.41E-01                               | nc            | x   | 5.22E-02               | nc            | 4.37E-05         | 8.75E-04          |
| 2-Chloro-1,3-butadiene         | 6.32E+00                    | nc            | 2.30E+01                                    | nc            | 2.06E+01                               | nc            | x   | 1.43E+01               | nc            | 5.66E-03         | 1.13E-01          |
| 1-Chloro-1,1-difluoroethane    | 2.11E+02                    | sat           | 2.11E+02                                    | sat           | 2.11E+02                               | sat           | x   | 8.66E+04               | nc            | 6.28E+01         | 1.26E+03          |
| Chlorobenzene                  | 1.94E+02                    | nc            | 2.45E+02                                    | sat           | 2.45E+02                               | sat           | x   | 1.06E+02               | nc            | 5.50E-02         | 1.10E+00          |
| 1-Chlorobutane                 | 1.22E+02                    | nc            | 2.99E+02                                    | sat           | 2.99E+02                               | sat           | x   | 2.43E+02               | nc            | 9.63E-02         | 1.93E+00          |
| Chlorodifluoromethane          | 2.11E+02                    | sat           | 2.11E+02                                    | sat           | 2.11E+02                               | sat           | x   | 9.75E+04               | nc            | 7.07E+01         | 1.41E+03          |
| Chloroethane                   | 6.33E+01                    | ca            | 1.54E+02                                    | ca            | 1.42E+03                               | sat           | x   | 3.81E+01               | ca            | 9.41E-03         | 1.89E-01          |
| Chloroform                     | 4.00E+00                    | ca            | 9.59E+00                                    | ca            | 2.16E+02                               | ca            | x   | 1.65E+00               | ca            | 4.12E-04         | 8.25E-03          |
| Chloromethane                  | 2.18E+01                    | ca            | 5.34E+01                                    | ca            | 2.84E+02                               | nc            | x   | 1.49E+01               | ca            | 5.02E-03         | 1.00E-01          |
| b-Chloronaphthalene            | 3.99E+03                    | nc            | 2.78E+04                                    | nc            | 1.47E+04                               | nc            | x   | 4.87E+02               | nc            | 1.25E+00         | 2.51E+01          |
| o-Chloronitrobenzene           | 1.49E+00                    | nc            | 5.48E+00                                    | nc            | 4.88E+00                               | nc            | x   | 1.45E-01               | nc            | 3.94E-05         | 7.89E-04          |
| p-Chloronitrobenzene           | 1.05E+01                    | nc            | 4.23E+01                                    | nc            | 3.51E+01                               | nc            | x   | 1.20E+00               | nc            | 3.25E-04         | 6.51E-03          |
| 2-Chlorophenol                 | 1.66E+02                    | nc            | 8.85E+02                                    | nc            | 5.86E+02                               | nc            | x   | 3.04E+01               | nc            | 2.36E-02         | 4.72E-01          |
| 2-Chloropropane                | 2.83E+02                    | nc            | 7.05E+02                                    | nc            | 7.05E+02                               | sat           | x   | 1.76E+02               | nc            | 4.60E-02         | 9.19E-01          |
| o-Chlorotoluene                | 2.02E+02                    | sat           | 2.02E+02                                    | sat           | 2.02E+02                               | sat           | x   | 1.22E+02               | nc            | 5.22E-02         | 1.04E+00          |
| Chromium III                   | 1.00E+05                    | max           | 1.00E+05                                    | max           | 1.00E+05                               | max           |     | 5.48E+04               | nc            | 9.86E+07         | 1.97E+09          |
| Chromium VI                    | 2.34E+02                    | nc            | 3.40E+03                                    | nc            | 2.61E+01                               | ca            |     | 1.10E+02               | nc            | 2.10E+00         | 4.20E+01          |
| Chrysene                       | 6.15E+02                    | ca            | 2.31E+03                                    | ca            | 2.12E+04                               | ca            | x   | 2.91E+01               | ca            | 1.74E+01         | 3.48E+02          |
| Cobalt                         | 1.52E+03                    | nc            | 2.05E+04                                    | nc            | 6.10E+01                               | nc            |     | 7.30E+02               | nc            | 3.31E+01         | 6.61E+02          |
| Copper                         | 3.13E+03                    | nc            | 4.54E+04                                    | nc            | 1.24E+04                               | nc            |     | 1.46E+03               | nc            | 5.15E+01         | 1.03E+03          |
| Crotonaldehyde                 | 7.01E-02                    | ca            | 1.70E-01                                    | ca            | 3.73E+00                               | ca            | x   | 5.82E-02               | ca            | 1.49E-04         | 2.99E-03          |

| Chemical                    | Residential Soil (mg/kg) | End-point | Industrial/ Occupational Soil (mg/kg) | End-point | Construction Worker Soil (mg/kg) | End-point | VOC | Tap Water (ug/L) | End-point | DAF 1 (mg/kg) | DAF 20 (mg/kg) |
|-----------------------------|--------------------------|-----------|---------------------------------------|-----------|----------------------------------|-----------|-----|------------------|-----------|---------------|----------------|
| Cumene (isopropylbenzene)   | 2.71E+02                 | nc        | 3.89E+02                              | sat       | 3.89E+02                         | sat       | x   | 6.78E+02         | nc        | 4.10E+00      | 8.21E+01       |
| Cyanide                     | 1.22E+03                 | nc        | 1.37E+04                              | nc        | 4.76E+03                         | nc        |     | 7.30E+02         | nc        | 7.35E+00      | 1.47E+02       |
| Cyanogen                    | 1.71E+03                 | sat       | 1.71E+03                              | sat       | 1.71E+03                         | sat       | x   | 1.46E+03         | nc        | 2.91E-01      | 5.82E+00       |
| Cyanogen bromide            | 2.02E+03                 | sat       | 2.02E+03                              | sat       | 2.02E+03                         | sat       | x   | 3.29E+03         | nc        | 7.76E-01      | 1.55E+01       |
| Cyanogen chloride           | 2.02E+03                 | sat       | 2.02E+03                              | sat       | 2.02E+03                         | sat       | x   | 1.83E+03         | nc        | 4.31E-01      | 8.62E+00       |
| DDD                         | 2.44E+01                 | ca        | 1.11E+02                              | ca        | 8.07E+02                         | ca        |     | 2.77E+00         | ca        | 4.15E+00      | 8.30E+01       |
| DDE                         | 1.72E+01                 | ca        | 7.81E+01                              | ca        | 5.70E+02                         | ca        |     | 1.95E+00         | ca        | 1.31E+01      | 2.62E+02       |
| DDT                         | 1.72E+01                 | ca        | 7.81E+01                              | ca        | 1.38E+02                         | nc        |     | 1.95E+00         | ca        | 7.70E+00      | 1.54E+02       |
| Dibenz(a,h)anthracene       | 6.21E-01                 | ca        | 2.34E+00                              | ca        | 2.12E+01                         | ca        |     | 9.09E-02         | ca        | 5.18E-01      | 1.04E+01       |
| Dibenzofuran                | 1.42E+02                 | nc        | 1.62E+03                              | nc        | 5.52E+02                         | nc        | x   | 1.22E+01         | nc        | 1.44E-01      | 2.87E+00       |
| 1,2-Dibromo-3-chloropropane | 1.84E+00                 | nc        | 9.68E+00                              | nc        | 6.48E+00                         | nc        | x   | 3.47E-01         | nc        | 1.49E-04      | 2.98E-03       |
| Dibromochloromethane        | 1.48E+01                 | ca        | 3.95E+01                              | ca        | 7.16E+02                         | ca        | x   | 1.32E+00         | ca        | 3.58E-04      | 7.16E-03       |
| 1,2-Dibromoethane           | 5.04E-01                 | ca        | 1.31E+00                              | ca        | 2.48E+01                         | ca        | x   | 5.53E-02         | ca        | 1.20E-05      | 2.40E-04       |
| 1,4-Dichloro-2-butene       | 1.22E-01                 | ca        | 3.23E-01                              | ca        | 5.97E+00                         | ca        | x   | 1.19E-02         | ca        | 2.93E-06      | 5.87E-05       |
| 1,2-Dichlorobenzene         | 3.74E+01                 | sat       | 3.74E+01                              | sat       | 3.74E+01                         | sat       | x   | 4.98E+01         | nc        | 1.19E-02      | 2.37E-01       |
| 1,3-Dichlorobenzene         | 3.26E+01                 | nc        | 3.74E+01                              | sat       | 3.74E+01                         | sat       | x   | 1.83E+01         | nc        | 4.36E-03      | 8.73E-02       |
| 1,4-Dichlorobenzene         | 3.95E+01                 | ca        | 1.03E+02                              | ca        | 1.96E+03                         | ca        | x   | 4.98E+00         | ca        | 5.49E-03      | 1.10E-01       |
| 3,3-Dichlorobenzidine       | 1.08E+01                 | ca        | 4.26E+01                              | ca        | 3.63E+02                         | ca        |     | 1.47E+00         | ca        | 1.86E-03      | 3.71E-02       |
| Dichlorodifluoromethane     | 1.91E+02                 | nc        | 2.11E+02                              | sat       | 2.11E+02                         | sat       | x   | 3.95E+02         | nc        | 2.86E-01      | 5.72E+00       |
| 1,1-Dichloroethane          | 1.40E+03                 | nc        | 1.42E+03                              | sat       | 1.42E+03                         | sat       | x   | 1.22E+03         | nc        | 3.39E-01      | 6.79E+00       |
| 1,2-Dichloroethane          | 6.04E+00                 | ca        | 1.52E+01                              | ca        | 6.42E+01                         | nc        | x   | 1.22E+00         | ca        | 2.85E-04      | 5.71E-03       |
| cis-1,2-Dichloroethene      | 7.65E+01                 | nc        | 3.00E+02                              | nc        | 2.54E+02                         | nc        | x   | 6.08E+01         | nc        | 1.49E-02      | 2.99E-01       |
| trans-1,2-Dichloroethene    | 1.12E+02                 | nc        | 4.29E+02                              | nc        | 3.70E+02                         | nc        | x   | 1.22E+02         | nc        | 3.33E-02      | 6.67E-01       |
| 1,1-Dichloroethene          | 2.06E+02                 | nc        | 7.77E+02                              | nc        | 6.78E+02                         | nc        | x   | 3.39E+02         | nc        | 1.34E-01      | 2.68E+00       |
| 2,4-Dichlorophenol          | 1.83E+02                 | nc        | 2.05E+03                              | nc        | 6.99E+02                         | nc        |     | 1.10E+02         | nc        | 4.31E-02      | 8.63E-01       |
| 1,2-Dichloropropane         | 6.00E+00                 | ca        | 1.49E+01                              | ca        | 3.33E+01                         | nc        | x   | 1.62E+00         | ca        | 4.10E-04      | 8.19E-03       |
| 1,3-Dichloropropene         | 1.20E+01                 | ca        | 3.17E+01                              | ca        | 8.98E+01                         | nc        | x   | 3.90E+00         | ca        | 1.16E-03      | 2.31E-02       |
| Dicyclopentadiene           | 2.21E+01                 | nc        | 8.26E+01                              | nc        | 7.28E+01                         | nc        | x   | 1.39E+01         | nc        | 1.50E-02      | 3.00E-01       |
| Dieldrin                    | 3.04E-01                 | ca        | 1.20E+00                              | ca        | 1.02E+01                         | ca        |     | 4.15E-02         | ca        | 1.34E-03      | 2.68E-02       |
| Diethyl phthalate           | 4.89E+04                 | nc        | 1.00E+05                              | max       | 1.00E+05                         | max       |     | 2.92E+04         | nc        | 1.77E+01      | 3.54E+02       |
| Dimethyl phthalate          | 1.00E+05                 | max       | 1.00E+05                              | max       | 1.00E+05                         | max       |     | 3.65E+05         | nc        | 8.36E+01      | 1.67E+03       |
| Di-n-butyl phthalate        | 6.11E+03                 | nc        | 6.84E+04                              | nc        | 2.33E+04                         | nc        |     | 3.65E+03         | nc        | 1.86E+02      | 3.72E+03       |

| Chemical                  | Residential<br>Soil (mg/kg) | End-<br>point | Industrial/<br>Occupational<br>Soil (mg/kg) | End-<br>point | Construction<br>Worker Soil<br>(mg/kg) | End-<br>point | VOC | Tap<br>Water<br>(ug/L) | End-<br>point | DAF 1<br>(mg/kg) | DAF 20<br>(mg/kg) |
|---------------------------|-----------------------------|---------------|---------------------------------------------|---------------|----------------------------------------|---------------|-----|------------------------|---------------|------------------|-------------------|
| 2,4-Dimethylphenol        | 1.22E+03                    | nc            | 1.37E+04                                    | nc            | 4.66E+03                               | nc            |     | 7.30E+02               | nc            | 3.55E-01         | 7.11E+00          |
| 4,6-Dinitro-o-cresol      | 6.11E+00                    | nc            | 6.84E+01                                    | nc            | 2.33E+01                               | nc            |     | 3.65E+00               | nc            | 3.93E-03         | 7.85E-02          |
| 2,4-Dinitrophenol         | 1.22E+02                    | nc            | 1.37E+03                                    | nc            | 4.66E+02                               | nc            |     | 7.30E+01               | nc            | 5.25E-02         | 1.05E+00          |
| 2,4-Dinitrotoluene        | 1.22E+02                    | nc            | 1.37E+03                                    | nc            | 4.66E+02                               | nc            |     | 7.30E+01               | nc            | 2.31E-02         | 4.62E-01          |
| 1,2-Diphenylhydrazine     | 6.08E+00                    | ca            | 2.39E+01                                    | ca            | 2.04E+02                               | ca            |     | 8.30E-01               | ca            | 4.48E-03         | 8.95E-02          |
| Endosulfan                | 3.67E+02                    | nc            | 4.10E+03                                    | nc            | 1.40E+03                               | nc            |     | 2.19E+02               | nc            | 7.41E-01         | 1.48E+01          |
| Endrin                    | 1.83E+01                    | nc            | 2.05E+02                                    | nc            | 6.99E+01                               | nc            |     | 1.10E+01               | nc            | 2.04E-01         | 4.08E+00          |
| Epichlorohydrin           | 1.66E+01                    | nc            | 6.56E+01                                    | nc            | 5.54E+01                               | nc            | x   | 2.03E+00               | nc            | 3.62E-04         | 7.25E-03          |
| Ethyl acetate             | 2.10E+04                    | sat           | 2.10E+04                                    | sat           | 2.10E+04                               | sat           | x   | 5.48E+03               | nc            | 1.44E+00         | 2.87E+01          |
| Ethyl acrylate            | 2.79E+00                    | ca            | 6.75E+00                                    | ca            | 5.22E+01                               | sat           | x   | 2.30E+00               | ca            | 5.86E-03         | 1.17E-01          |
| Ethyl chloride            | 6.33E+01                    | ca            | 1.54E+02                                    | ca            | 1.42E+03                               | sat           | x   | 3.81E+01               | ca            | 9.41E-03         | 1.88E-01          |
| Ethyl ether               | 1.94E+03                    | sat           | 1.94E+03                                    | sat           | 1.94E+03                               | sat           | x   | 1.22E+03               | nc            | 2.37E-01         | 4.73E+00          |
| Ethyl methacrylate        | 5.27E+01                    | sat           | 5.27E+01                                    | sat           | 5.27E+01                               | sat           | x   | 5.48E+02               | nc            | 1.41E+00         | 2.81E+01          |
| Ethylbenzene              | 1.28E+02                    | sat           | 1.28E+02                                    | sat           | 1.28E+02                               | sat           | x   | 1.34E+03               | nc            | 1.01E+00         | 2.02E+01          |
| Ethylene oxide            | 2.65E+00                    | ca            | 8.07E+00                                    | ca            | 1.15E+02                               | ca            | x   | 2.41E-01               | ca            | 4.27E-05         | 8.54E-04          |
| Fluoranthene              | 2.29E+03                    | nc            | 2.44E+04                                    | nc            | 8.73E+03                               | nc            |     | 1.46E+03               | nc            | 2.35E+02         | 4.69E+03          |
| Fluorene                  | 2.66E+03                    | nc            | 2.95E+04                                    | nc            | 1.02E+04                               | nc            | x   | 2.43E+02               | nc            | 2.93E+00         | 5.85E+01          |
| Fluoride                  | 3.67E+03                    | nc            | 4.10E+04                                    | nc            | 1.43E+04                               | nc            |     | 2.19E+03               | nc            | 3.29E+02         | 6.58E+03          |
| Furan                     | 5.53E+00                    | nc            | 2.12E+01                                    | nc            | 1.83E+01                               | nc            | x   | 6.08E+00               | nc            | 1.32E-03         | 2.63E-02          |
| Heptachlor                | 1.08E+00                    | ca            | 4.26E+00                                    | ca            | 3.63E+01                               | ca            |     | 1.47E-01               | ca            | 3.12E-01         | 6.24E+00          |
| Hexachlorobenzene         | 3.04E+00                    | ca            | 1.20E+01                                    | ca            | 1.02E+02                               | ca            |     | 4.15E-01               | ca            | 3.43E-02         | 6.86E-01          |
| Hexachloro-1,3-butadiene  | 1.22E+01                    | nc            | 1.37E+02                                    | nc            | 4.66E+01                               | nc            |     | 7.30E+00               | nc            | 5.90E-01         | 1.18E+01          |
| Hexachlorocyclopentadiene | 3.66E+02                    | nc            | 4.10E+03                                    | nc            | 4.31E+02                               | nc            |     | 2.19E+02               | nc            | 6.58E+01         | 1.32E+03          |
| Hexachloroethane          | 6.11E+01                    | nc            | 6.84E+02                                    | nc            | 2.33E+02                               | nc            |     | 3.65E+01               | nc            | 1.04E-01         | 2.09E+00          |
| n-Hexane                  | 3.80E+01                    | sat           | 3.80E+01                                    | sat           | 3.80E+01                               | sat           | x   | 4.16E+02               | nc            | 8.64E-01         | 1.73E+01          |
| HMX                       | 3.06E+03                    | nc            | 3.42E+04                                    | nc            | 1.17E+04                               | nc            |     | 1.83E+03               | nc            | 5.39E+00         | 1.08E+02          |
| Hydrogen cyanide          | 2.24E+01                    | nc            | 8.22E+01                                    | nc            | 7.33E+01                               | nc            | x   | 6.20E+00               | nc            | 1.24E-03         | 2.47E-02          |
| Indeno(1,2,3-c,d)pyrene   | 6.21E+00                    | ca            | 2.34E+01                                    | ca            | 2.12E+02                               | ca            |     | 9.09E-01               | ca            | 4.73E+00         | 9.46E+01          |
| Iron                      | 2.35E+04                    | nc            | 1.00E+05                                    | max           | 9.29E+04                               | nc            |     | 1.10E+04               | nc            | 2.77E+02         | 5.54E+03          |
| Isobutanol                | 1.38E+04                    | nc            | 2.26E+04                                    | sat           | 2.26E+04                               | sat           | x   | 1.83E+03               | nc            | 4.86E-01         | 9.72E+00          |
| Isopropylene              | 5.12E+03                    | ca            | 2.02E+04                                    | ca            | 4.66E+04                               | nc            |     | 6.99E+02               | ca            | 1.70E-01         | 3.40E+00          |
| Lead                      | 4.00E+02                    | IEUBK         | 8.00E+02                                    | IEUBK         | 8.00E+02                               | IEUBK         |     |                        |               |                  |                   |

| Chemical                 | Residential<br>Soil (mg/kg) | End-<br>point | Industrial/<br>Occupational<br>Soil (mg/kg) | End-<br>point | Construction<br>Worker Soil<br>(mg/kg) | End-<br>point | VOC | Tap<br>Water<br>(ug/L) | End-<br>point | DAF 1<br>(mg/kg) | DAF 20<br>(mg/kg) |
|--------------------------|-----------------------------|---------------|---------------------------------------------|---------------|----------------------------------------|---------------|-----|------------------------|---------------|------------------|-------------------|
| Lead (tetraethyl-)       | 6.11E-03                    | nc            | 6.84E-02                                    | nc            | 2.38E-02                               | nc            |     | 3.65E-03               | nc            | 6.33E-07         | 1.27E-05          |
| Maleic hydrazide         | 1.61E+03                    | sat           | 1.61E+03                                    | sat           | 1.61E+03                               | sat           | x   | 3.04E+03               | nc            | 8.12E-01         | 1.62E+01          |
| Manganese                | 3.59E+03                    | nc            | 4.84E+04                                    | nc            | 1.50E+02                               | nc            |     | 1.72E+03               | nc            | 1.12E+02         | 2.24E+03          |
| Mercury (elemental)      | 1.00E+05                    | max           | 1.00E+05                                    | max           | 9.27E+02                               | nc            |     |                        |               | 1.05E-01         | 2.09E-03          |
| Mercury (methyl)         | 6.11E+00                    | nc            | 6.84E+01                                    | nc            | 2.38E+01                               | nc            |     | 3.65E+00               | nc            | 8.26E-04         | 1.65E-02          |
| Methacrylonitrile        | 3.84E+00                    | nc            | 2.20E+01                                    | nc            | 1.37E+01                               | nc            | x   | 1.04E+00               | nc            | 1.83E-04         | 3.65E-03          |
| Methomyl                 | 8.44E+01                    | nc            | 3.17E+02                                    | nc            | 2.78E+02                               | nc            | x   | 1.52E+02               | nc            | 5.74E-02         | 1.15E+00          |
| Methyl acetate           | 3.76E+04                    | nc            | 1.00E+05                                    | max           | 1.00E+05                               | max           | x   | 6.08E+03               | nc            | 1.08E+00         | 2.15E+01          |
| Methyl acrylate          | 9.28E+01                    | nc            | 1.57E+02                                    | sat           | 1.57E+02                               | sat           | x   | 1.83E+02               | nc            | 4.64E-01         | 9.29E+00          |
| Methyl isobutyl ketone   | 5.51E+03                    | nc            | 7.01E+03                                    | sat           | 7.01E+03                               | sat           | x   | 1.99E+03               | nc            | 7.35E-01         | 1.47E+01          |
| Methyl methacrylate      | 2.92E+03                    | sat           | 2.92E+03                                    | sat           | 2.92E+03                               | sat           | x   | 1.42E+03               | nc            | 2.76E-01         | 5.52E+00          |
| Methyl styrene (alpha)   | 2.17E+02                    | sat           | 2.17E+02                                    | sat           | 2.17E+02                               | sat           | x   | 4.26E+02               | nc            | 3.08E-01         | 6.17E+00          |
| Methyl styrene (mixture) | 1.39E+02                    | nc            | 2.17E+02                                    | sat           | 2.17E+02                               | sat           | x   | 5.48E+01               | nc            | 3.96E-02         | 7.93E-01          |
| Methylcyclohexane        | 7.89E+01                    | sat           | 7.89E+01                                    | sat           | 7.89E+01                               | sat           | x   | 5.23E+03               | nc            | 2.88E+01         | 5.77E+02          |
| Methylene bromide        | 1.79E+02                    | nc            | 7.85E+02                                    | nc            | 6.09E+02                               | nc            | x   | 6.08E+01               | nc            | 2.72E-02         | 5.44E-01          |
| Methylene chloride       | 1.82E+02                    | ca            | 4.90E+02                                    | ca            | 2.63E+03                               | sat           | x   | 4.22E+01               | ca            | 8.51E-03         | 1.70E-01          |
| Molybdenum               | 3.91E+02                    | nc            | 5.68E+03                                    | nc            | 1.55E+03                               | nc            |     | 1.83E+02               | nc            | 3.70E+00         | 7.40E+01          |
| Naphthalene              | 7.95E+01                    | nc            | 3.00E+02                                    | nc            | 2.62E+02                               | nc            | x   | 6.20E+00               | nc            | 1.97E-02         | 3.94E-01          |
| Nickel                   | 1.58E+03                    | nc            | 2.27E+04                                    | nc            | 6.19E+03                               | nc            |     | 7.30E+02               | nc            | 4.77E+01         | 9.53E+02          |
| Nitrate                  | 1.00E+05                    | max           | 1.00E+05                                    | max           | 1.00E+05                               | max           |     | 5.84E+04               | nc            | 1.67E+01         | 3.35E+02          |
| Nitrite                  | 7.82E+03                    | nc            | 1.00E+05                                    | max           | 3.10E+04                               | nc            |     | 3.65E+03               | nc            | 7.63E-01         | 1.53E+01          |
| Nitrobenzene             | 2.28E+01                    | nc            | 1.47E+02                                    | nc            | 8.28E+01                               | nc            | x   | 3.40E+00               | nc            | 9.18E-04         | 1.84E-02          |
| Nitroglycerin            | 3.47E+02                    | ca            | 1.37E+03                                    | ca            | 1.17E+04                               | ca            |     | 4.74E+01               | ca            | 2.80E-02         | 5.61E-01          |
| N-Nitrosodiethylamine    | 3.24E-02                    | ca            | 1.28E-01                                    | ca            | 1.09E+00                               | ca            |     | 4.42E-03               | ca            | 8.73E-06         | 1.75E-04          |
| N-Nitrosodimethylamine   | 9.54E-02                    | ca            | 3.76E-01                                    | ca            | 1.86E+00                               | nc            |     | 1.30E-02               | ca            | 1.17E-05         | 2.34E-04          |
| N-Nitrosodiphenylamine   | 2.69E-01                    | ca            | 7.28E-01                                    | ca            | 1.24E+01                               | ca            | x   | 1.99E-02               | ca            | 1.12E-05         | 2.24E-04          |
| N-Nitrosodiphenylamine   | 9.93E+02                    | ca            | 3.91E+03                                    | ca            | 4.66E+03                               | nc            |     | 1.35E+02               | ca            | 2.86E-01         | 5.71E+00          |
| N-Nitrosopyrrolidine     | 2.32E+00                    | ca            | 9.12E+00                                    | ca            | 7.77E+01                               | ca            |     | 3.16E-01               | ca            | 1.30E-04         | 2.60E-03          |
| m-Nitrotoluene           | 5.69E+02                    | sat           | 5.69E+02                                    | sat           | 5.69E+02                               | sat           | x   | 1.22E+02               | nc            | 3.30E-02         | 6.59E-01          |
| o-Nitrotoluene           | 1.08E+01                    | ca            | 3.23E+01                                    | ca            | 4.73E+02                               | ca            | x   | 4.81E-01               | ca            | 1.30E-04         | 2.61E-03          |
| p-Nitrotoluene           | 1.46E+02                    | ca            | 4.37E+02                                    | ca            | 1.55E+03                               | nc            | x   | 6.51E+00               | ca            | 1.76E-03         | 3.53E-02          |
| Pentachlorobenzene       | 4.89E+01                    | nc            | 5.47E+02                                    | nc            | 1.86E+02                               | nc            |     | 2.92E+01               | nc            | 9.37E-02         | 1.87E+00          |

| Chemical                              | Residential<br>Soil (mg/kg) | End-<br>point | Industrial/<br>Occupational<br>Soil (mg/kg) | End-<br>point | Construction<br>Worker Soil<br>(mg/kg) | End-<br>point | VOC | Tap<br>Water<br>(ug/L) | End-<br>point | DAF 1<br>(mg/kg) | DAF 20<br>(mg/kg) |
|---------------------------------------|-----------------------------|---------------|---------------------------------------------|---------------|----------------------------------------|---------------|-----|------------------------|---------------|------------------|-------------------|
| Pentachlorophenol                     | 2.98E+01                    | ca            | 1.00E+02                                    | ca            | 1.02E+03                               | ca            |     | 5.53E+00               | ca            | 5.87E-03         | 1.17E-01          |
| Phenanthrene                          | 1.83E+03                    | nc            | 2.05E+04                                    | nc            | 6.99E+03                               | nc            |     | 1.10E+03               | nc            | 2.32E+01         | 4.64E+02          |
| Phenol                                | 1.83E+04                    | nc            | 1.00E+05                                    | max           | 6.99E+04                               | nc            |     | 1.10E+04               | nc            | 2.37E+00         | 4.74E+01          |
| Polychlorinated biphenyls             |                             |               |                                             |               |                                        |               |     |                        |               |                  |                   |
| Aroclor 1016                          | 3.93E+00                    | nc            | 4.13E+01                                    | nc            | 1.50E+01                               | nc            |     | 2.56E+00               | nc            | 1.73E-01         | 3.45E+00          |
| Aroclor 1221                          | 1.12E+00                    | nc            | 8.26E+00                                    | ca            | 4.28E+00                               | nc            |     | 3.32E-01               | ca            | 2.24E-02         | 4.47E-01          |
| Aroclor 1232                          | 1.12E+00                    | nc            | 8.26E+00                                    | ca            | 4.28E+00                               | nc            |     | 3.32E-01               | ca            | 2.24E-02         | 4.47E-01          |
| Aroclor 1242                          | 1.12E+00                    | nc            | 8.26E+00                                    | ca            | 4.28E+00                               | nc            |     | 3.32E-01               | ca            | 2.24E-02         | 4.47E-01          |
| Aroclor 1248                          | 1.12E+00                    | nc            | 8.26E+00                                    | ca            | 4.28E+00                               | nc            |     | 3.32E-01               | ca            | 2.64E-01         | 5.28E+00          |
| Aroclor 1254                          | 1.12E+00                    | nc            | 8.26E+00                                    | ca            | 4.28E+00                               | nc            |     | 3.32E-01               | ca            | 2.64E-01         | 5.28E+00          |
| Aroclor 1260                          | 1.12E+00                    | nc            | 8.26E+00                                    | ca            | 4.28E+00                               | nc            |     | 3.32E-01               | ca            | 2.64E-01         | 5.28E+00          |
| n-Propylbenzene                       | 6.21E+01                    | sat           | 6.21E+01                                    | sat           | 6.21E+01                               | sat           | x   | 6.08E+01               | nc            | 2.70E-01         | 5.40E+00          |
| Propylene oxide                       | 2.22E+01                    | ca            | 9.33E+01                                    | ca            | 7.92E+02                               | nc            | x   | 2.18E+00               | ca            | 4.60E-04         | 9.20E-03          |
| Pyrene                                | 2.29E+03                    | nc            | 3.09E+04                                    | nc            | 9.01E+03                               | nc            | x   | 1.83E+02               | nc            | 1.86E+01         | 3.73E+02          |
| RDX                                   | 4.42E+01                    | ca            | 1.74E+02                                    | ca            | 6.99E+02                               | nc            |     | 6.03E+00               | ca            | 1.68E-03         | 3.36E-02          |
| Selenium                              | 3.91E+02                    | nc            | 5.68E+03                                    | nc            | 1.55E+03                               | nc            |     | 1.83E+02               | nc            | 9.52E-01         | 1.90E+01          |
| Silver                                | 3.91E+02                    | nc            | 5.68E+03                                    | nc            | 1.55E+03                               | nc            |     | 1.83E+02               | nc            | 1.57E+00         | 3.13E+01          |
| Strontium                             | 4.69E+04                    | nc            | 1.00E+05                                    | max           | 1.00E+05                               | max           |     | 2.19E+04               | nc            | 7.73E+02         | 1.55E+04          |
| Styrene                               | 1.00E+02                    | sat           | 1.00E+02                                    | sat           | 1.00E+02                               | sat           | x   | 1.62E+03               | nc            | 5.23E-01         | 1.05E+01          |
| 1,2,4,5-Tetrachlorobenzene            | 1.83E+01                    | nc            | 2.05E+02                                    | nc            | 6.99E+01                               | nc            |     | 1.10E+01               | nc            | 2.14E-02         | 4.29E-01          |
| 1,1,1,2-Tetrachloroethane             | 4.32E+01                    | ca            | 1.14E+02                                    | ca            | 2.11E+03                               | ca            | x   | 4.27E+00               | ca            | 1.25E-03         | 2.50E-02          |
| 1,1,2,2-Tetrachloroethane             | 5.55E+00                    | ca            | 1.46E+01                                    | ca            | 2.71E+02                               | ca            | x   | 5.46E-01               | ca            | 1.60E-04         | 3.21E-03          |
| Tetrachloroethene                     | 1.25E+01                    | ca            | 3.16E+01                                    | ca            | 1.34E+02                               | sat           | x   | 4.32E+00               | ca            | 2.87E-03         | 5.74E-02          |
| Thallium                              | 5.16E+00                    | nc            | 7.49E+01                                    | nc            | 2.04E+01                               | nc            |     | 2.41E+00               | nc            | 1.72E-01         | 3.43E+00          |
| Toluene                               | 2.52E+02                    | sat           | 2.52E+02                                    | sat           | 2.52E+02                               | sat           | x   | 2.27E+03               | nc            | 1.08E+00         | 2.17E+01          |
| Toxaphene                             | 4.42E+00                    | ca            | 1.74E+01                                    | ca            | 1.48E+02                               | ca            |     | 6.03E-01               | ca            | 2.33E-01         | 4.65E+00          |
| Tribromomethane                       | 6.21E+02                    | ca            | 2.46E+03                                    | ca            | 4.44E+03                               | nc            |     | 2.44E+01               | ca            | 1.73E-01         | 3.47E+00          |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.28E+03                    | sat           | 3.28E+03                                    | sat           | 3.28E+03                               | sat           | x   | 5.92E+04               | nc            | 1.68E+02         | 3.36E+03          |
| 1,2,4-Trichlorobenzene                | 6.93E+01                    | nc            | 2.69E+02                                    | nc            | 2.30E+02                               | nc            | x   | 7.16E+00               | nc            | 2.04E-02         | 4.08E-01          |
| 1,1,1-Trichloroethane                 | 5.63E+02                    | sat           | 5.63E+02                                    | sat           | 5.63E+02                               | sat           | x   | 3.17E+03               | nc            | 1.33E+00         | 2.65E+01          |
| 1,1,2-Trichloroethane                 | 1.19E+01                    | ca            | 3.02E+01                                    | ca            | 1.94E+02                               | nc            | x   | 1.97E+00               | ca            | 4.98E-04         | 9.95E-03          |
| Trichloroethylene                     | 6.38E-01                    | ca            | 1.56E+00                                    | ca            | 3.36E+01                               | ca            | x   | 2.77E-01               | ca            | 1.00E-04         | 2.00E-03          |



| Chemical               | Residential<br>Soil (mg/kg) | End-<br>point | Industrial/<br>Occupational<br>Soil (mg/kg) | End-<br>point | Construction<br>Worker Soil<br>(mg/kg) | End-<br>point | VOC | Tap<br>Water<br>(ug/L) | End-<br>point | DAF 1<br>(mg/kg) | DAF 20<br>(mg/kg) |
|------------------------|-----------------------------|---------------|---------------------------------------------|---------------|----------------------------------------|---------------|-----|------------------------|---------------|------------------|-------------------|
| Trichlorofluoromethane | 5.88E+02                    | nc            | 9.83E+02                                    | sat           | 9.83E+02                               | sat           | x   | 1.29E+03               | nc            | 1.12E+00         | 2.23E+01          |
| 2,4,5-Trichlorophenol  | 6.11E+03                    | nc            | 6.84E+04                                    | nc            | 2.33E+04                               | nc            |     | 3.65E+03               | nc            | 7.13E+00         | 1.43E+02          |
| 2,4,6-Trichlorophenol  | 6.11E+00                    | nc            | 6.84E+01                                    | nc            | 2.33E+01                               | nc            |     | 3.65E+00               | nc            | 7.13E-03         | 1.43E-01          |
| 1,1,2-Trichloropropane | 2.53E+01                    | nc            | 9.64E+01                                    | nc            | 8.35E+01                               | nc            | x   | 3.04E+01               | nc            | 1.17E-02         | 2.35E-01          |
| 1,2,3-Trichloropropane | 8.61E-02                    | ca            | 2.09E-01                                    | ca            | 4.57E+00                               | ca            | x   | 5.53E-02               | ca            | 2.07E-05         | 4.14E-04          |
| 1,2,3-Trichloropropene | 1.21E+00                    | nc            | 4.39E+00                                    | nc            | 3.95E+00                               | nc            | x   | 2.10E+00               | nc            | 7.88E-04         | 1.58E-02          |
| Triethylamine          | 4.90E+01                    | nc            | 2.33E+02                                    | nc            | 1.69E+02                               | nc            | x   | 1.21E+01               | nc            | 2.14E-03         | 4.29E-02          |
| 1,2,4-Trimethylbenzene | 5.80E+01                    | nc            | 2.13E+02                                    | nc            | 1.90E+02                               | nc            | x   | 1.23E+01               | nc            | 7.09E-02         | 1.42E+00          |
| 1,3,5-Trimethylbenzene | 2.48E+01                    | nc            | 6.92E+01                                    | sat           | 6.92E+01                               | sat           | x   | 1.23E+01               | nc            | 1.77E-02         | 3.55E-01          |
| 2,4,6-Trinitrotoluene  | 3.06E+01                    | nc            | 3.42E+02                                    | nc            | 1.17E+02                               | nc            |     | 1.83E+01               | nc            | 5.34E-02         | 1.07E+00          |
| Vanadium               | 7.82E+01                    | nc            | 1.14E+03                                    | nc            | 3.10E+02                               | nc            |     | 3.65E+01               | nc            | 3.65E+01         | 7.30E+02          |
| Vinyl acetate          | 1.07E+03                    | nc            | 3.68E+03                                    | sat           | 3.52E+03                               | nc            | x   | 4.12E+02               | nc            | 7.57E-02         | 1.51E+00          |
| Vinyl bromide          | 2.85E+00                    | ca            | 6.84E+00                                    | ca            | 1.93E+01                               | nc            | x   | 1.18E+00               | ca            | 4.71E-04         | 9.41E-03          |
| Vinyl chloride (Child) | 2.25E+00                    | ca            |                                             |               |                                        |               | x   | 4.28E-01               | ca            | 1.40E-04         | 2.80E-03          |
| Vinyl chloride (adult) | 4.37E+00                    | ca            | 1.40E+01                                    | ca            | 1.82E+02                               | ca            | x   | 8.33E-01               | ca            | 2.72E-04         | 5.45E-03          |
| m-Xylene               | 8.20E+01                    | sat           | 8.20E+01                                    | sat           | 8.20E+01                               | sat           | x   | 2.03E+02               | nc            | 1.03E-01         | 2.06E+00          |
| o-Xylene               | 9.95E+01                    | sat           | 9.95E+01                                    | sat           | 9.95E+01                               | sat           | x   | 7.30E+03               | nc            | 4.07E+00         | 8.14E+01          |
| Xylenes                | 8.20E+01                    | sat           | 8.20E+01                                    | sat           | 8.20E+01                               | sat           | x   | 2.03E+02               | nc            | 1.03E-01         | 2.06E+00          |
| Zinc                   | 2.35E+04                    | nc            | 1.00E+05                                    | max           | 9.29E+04                               | nc            |     | 1.10E+04               | nc            | 6.82E+02         | 1.36E+04          |

**Table A-2**

| Default Exposure Factors |                                                           |                 |                                            |
|--------------------------|-----------------------------------------------------------|-----------------|--------------------------------------------|
| Symbol                   | Definition (units)                                        | Default         | Reference                                  |
| CSF <sub>o</sub>         | Cancer slope factor oral (mg/kg-day) <sup>-1</sup>        | Chem.-spec.     | IRIS, HEAST, or NCEA                       |
| CSF <sub>i</sub>         | Cancer slope factor inhaled (mg/kg-day) <sup>-1</sup>     | Chem.-spec.     | IRIS, HEAST, or NCEA                       |
| RfD <sub>o</sub>         | Reference dose oral (mg/kg-day)                           | Chem.-spec.     | IRIS, HEAST, or NCEA                       |
| RfD <sub>i</sub>         | Reference dose inhaled (mg/kg-day)                        | Chem.-spec.     | IRIS, HEAST, or NCEA                       |
| TR                       | Target cancer risk                                        | 1E-05           | NMED-specific value                        |
| THQ                      | Target hazard quotient                                    | 1               | US EPA, 1989                               |
| BW                       | Body weight (kg)                                          |                 |                                            |
|                          | -- adult                                                  | 70              | US EPA, 1989                               |
|                          | -- child                                                  | 15              | US EPA, 1991                               |
| AT                       | Averaging time (days)                                     |                 |                                            |
|                          | -- carcinogens                                            | 25550           | US EPA, 1989                               |
|                          | -- noncarcinogens                                         | ED*365          |                                            |
| SA                       | Exposed surface area for soil/dust (cm <sup>2</sup> /day) |                 | US EPA, 1989                               |
|                          | -- adult resident                                         | 5700            | US EPA, 1996a                              |
|                          | -- adult worker                                           | 3300            | US EPA, 1996a                              |
|                          | -- child                                                  | 2800            | US EPA, 1989                               |
| AF                       | Adherence factor, soils (mg/cm <sup>2</sup> )             |                 | US EPA, 1989                               |
|                          | -- adult resident                                         | 0.07            | US EPA, 1996a                              |
|                          | -- adult worker                                           | 0.2             | US EPA, 1996a                              |
|                          | -- child resident                                         | 0.2             | US EPA, 1989                               |
|                          | -- construction worker                                    | 0.3             | NMED-specific value                        |
| ABS                      | Skin absorption defaults (unitless):                      |                 |                                            |
|                          | -- semi-volatile organics                                 | 0.1             | US EPA, 1989                               |
|                          | -- volatile organics                                      | na              | US EPA, 2003a                              |
|                          | -- inorganics                                             | na              | US EPA, 2000s                              |
| IRA                      | Inhalation rate (m <sup>3</sup> /day)                     |                 |                                            |
|                          | -- adult resident                                         | 20              | US EPA, 1991                               |
|                          | -- adult worker                                           | 20              | US EPA, 2001a                              |
|                          | -- child resident                                         | 10              | Exposure Factors, (US EPA, 1997)           |
| IRW                      | Drinking water ingestion rate (L/day)                     |                 |                                            |
|                          | -- adult                                                  | 2               | US EPA, 2004b                              |
|                          | -- child                                                  | 1               | US EPA, 2004b                              |
| IRS                      | Soil ingestion (mg/day)                                   |                 |                                            |
|                          | -- adult resident                                         | 100             | US EPA, 1991                               |
|                          | -- child resident                                         | 200             | US EPA, 1991                               |
|                          | -- commercial/industrial worker                           | 100             | US EPA, 2001a                              |
|                          | -- construction worker                                    | 330             | US EPA, 1991                               |
| EF                       | Exposure frequency (days/yr)                              |                 |                                            |
|                          | -- residential                                            | 350             | US EPA, 1991                               |
|                          | -- commercial/industrial                                  | 225             | US EPA, 2001a                              |
|                          | -- construction worker                                    | 250             | NMED-specific value                        |
| ED                       | Exposure duration (years)                                 |                 |                                            |
|                          | -- residential                                            | 30 <sup>a</sup> | US EPA, 1991)                              |
|                          | -- child                                                  | 6               | (US EPA, 1991)                             |
|                          | -- commercial/industrial                                  | 25              | (US EPA, 1999)                             |
|                          | -- construction worker                                    | 1               | NMED-specific value                        |
|                          | Age-adjusted factors for carcinogens                      |                 |                                            |
| IFSadj                   | Ingestion factor, soils ([mg-yr]/[kg-day])                | 114             | US EPA, 2001a                              |
| SFSadj                   | Dermal factor, soils ([mg-yr]/[kg-day])                   | 361             | US EPA, 2001a                              |
| InhFadj                  | Inhalation factor, air ([m <sup>3</sup> -yr]/[kg-day])    | 11              | By analogy to RAGS: Part B, (US EPA, 1991) |
| IFWadj                   | Ingestion factor, water ([L-yr]/[kg-day])                 | 1.1             | By analogy to RAGS: Part B, (US EPA, 1991) |
| PEF                      | Particulate emission factor (m <sup>3</sup> /kg)          | Chem.-spec.     | US EPA, 2001a                              |
| VF <sub>s</sub>          | Volatilization factor for soil (m <sup>3</sup> /kg)       | Chem.-spec.     | US EPA, 2001a                              |
| VF <sub>w</sub>          | Volatilization factor for water (L/m <sup>3</sup> )       | 0.5             | US EPA, 1991                               |
| Csat                     | Soil saturation concentration (mg/kg)                     | Chem.-spec.     | US EPA, 2001a                              |

<sup>a</sup>Exposure duration for lifetime residents is assumed to be 30 years total. For carcinogens, exposures are combined for children (6 years) and adults (24 years).

Chem.-spec. - Chemical-specific value

na - not applicable

RAGS - Risk Assessment Guidance for Superfund

IRIS - Integrated Risk Information System, USEPA, 2003b

HEAST - Health Effects Assessment Summary Tables, USEPA, 1997

NCEA - National Center for Environmental Assessment, Office of Research and Development (USEPA, 2003c)

NMED - New Mexico Environment Department

**APPENDIX B**

Table B-1: Physical and Chemical Properties

| Chemical                     | MW<br>(g/mole) | H<br>(atm-<br>m <sup>3</sup> /mole) | H'<br>(dimensionless) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | D <sub>w</sub><br>(cm <sup>2</sup> /s) | K <sub>oc</sub><br>(cm <sup>3</sup> /g) | K <sub>d</sub><br>(cm <sup>3</sup> /g) | S<br>(mg/L-<br>water) | D <sub>A</sub><br>(cm <sup>2</sup> /s) | V <sub>F</sub><br>(m <sup>3</sup> /kg) | SAT<br>(mg/kg) |
|------------------------------|----------------|-------------------------------------|-----------------------|----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|----------------------------------------|----------------------------------------|----------------|
| Acenaphthene                 | 154.21         | 1.6E-04                             | 6.38E-03              | 4.21E-02                               | 7.69E-06                               | 4.90E+03                                | 7.35E+00                               | 4.24E+00              | 4.13E-07                               | 1.93E+05                               | 3.19E+01       |
| Acetaldehyde                 | 44             | 7.8E-05                             | 3.20E-03              | 1.20E-01                               | 1.40E-05                               | 1.80E+01                                | 2.70E-02                               | 1.00E+06              | 2.28E-05                               | 2.60E+04                               | 2.01E+05       |
| Acetone                      | 58             | 3.9E-05                             | 1.60E-03              | 1.20E-01                               | 1.10E-05                               | 5.80E-01                                | 8.70E-04                               | 1.00E+06              | 1.40E-05                               | 3.31E+04                               | 1.74E+05       |
| Acrylonitrile                | 53             | 8.8E-05                             | 3.60E-03              | 1.08E-01                               | 1.34E-05                               | 8.50E-01                                | 1.28E-03                               | 7.90E+04              | 2.64E-05                               | 2.42E+04                               | 1.38E+04       |
| Acetophenone                 | 120            | 1.1E-05                             | 4.51E-04              | 6.00E-02                               | 8.70E-06                               | 4.62E+01                                | 6.93E-02                               | 6.10E+03              | 2.59E-06                               | 7.71E+04                               | 1.48E+03       |
| Acrolein                     | 56             | 1.2E-04                             | 4.90E-03              | 1.05E-01                               | 1.22E-05                               | 2.10E+01                                | 3.15E-02                               | 2.10E+05              | 2.86E-05                               | 2.32E+04                               | 4.31E+04       |
| Aldrin                       | 365            | 1.7E-04                             | 6.97E-03              | 1.32E-02                               | 4.86E-06                               | 2.45E+06                                | 3.68E+03                               | 1.80E-01              |                                        |                                        |                |
| Aluminum                     | 26.98          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 1.50E+03                               |                       |                                        |                                        |                |
| Anthracene                   | 178            | 6.5E-05                             | 2.67E-03              | 3.24E-02                               | 7.74E-06                               | 2.95E+04                                | 4.43E+01                               | 4.34E-02              | 2.73E-08                               | 7.51E+05                               | 1.93E+00       |
| Antimony                     | 121.75         | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 4.50E+01                               |                       |                                        |                                        |                |
| Arsenic                      | 74.92          | 7.7E-01                             | 3.16E+01              |                                        |                                        | 1.43E+01                                | 2.90E+01                               |                       |                                        |                                        |                |
| Barium                       | 137.33         | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 4.10E+01                               |                       |                                        |                                        |                |
| Benzene                      | 78.1           | 5.6E-03                             | 2.28E-01              | 8.80E-02                               | 9.80E-06                               | 5.89E+01                                | 8.84E-02                               | 1.75E+03              | 7.30E-04                               | 4.59E+03                               | 5.06E+02       |
| Benzidine                    | 184.23         | 7.0E-11                             | 2.88E-09              | 3.40E-02                               | 1.50E-05                               | 2.74E+03                                | 4.11E+00                               | 3.22E+02              |                                        |                                        |                |
| Benzo(a)anthracene           | 228            | 3.3E-06                             | 1.37E-04              | 5.10E-02                               | 9.00E-06                               | 3.98E+05                                | 5.97E+02                               | 9.40E-03              |                                        |                                        |                |
| Benzo(a)pyrene               | 250            | 1.1E-06                             | 4.63E-05              | 4.30E-02                               | 9.00E-06                               | 1.02E+06                                | 1.53E+03                               | 1.62E-03              |                                        |                                        |                |
| Benzo(b)fluoranthene         | 252.3          | 1.1E-04                             | 4.55E-03              | 2.26E-02                               | 5.56E-06                               | 1.23E+06                                | 1.85E+03                               | 1.50E-03              |                                        |                                        |                |
| Benzo(k)fluoranthene         | 252.3          | 8.3E-07                             | 3.40E-05              | 2.26E-02                               | 5.56E-06                               | 1.23E+06                                | 1.85E+03                               | 8.00E-04              |                                        |                                        |                |
| Beryllium                    | 9.01           | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 7.90E+02                               |                       |                                        |                                        |                |
| α-BHC                        | 290.85         | 1.1E-05                             | 4.35E-04              | 1.42E-02                               | 7.34E-06                               | 1.23E+03                                | 1.85E+00                               | 2.00E+00              |                                        |                                        |                |
| β-BHC                        | 290.85         | 7.4E-07                             | 3.05E-05              | 1.42E-02                               | 7.34E-06                               | 1.26E+03                                | 1.89E+00                               | 2.40E-01              |                                        |                                        |                |
| γ-BHC                        | 290.85         | 1.4E-05                             | 5.74E-04              | 1.42E-02                               | 7.34E-06                               | 1.07E+03                                | 1.61E+00                               | 6.80E+00              |                                        |                                        |                |
| 1,1-Biphenyl                 | 150            | 2.9E-04                             | 1.20E-02              | 4.00E-02                               | 8.20E-06                               | 7.80E+03                                | 1.17E+01                               | 7.50E+00              | 4.50E-07                               | 1.85E+05                               | 8.91E+01       |
| Bis(2-chloroethyl) ether     | 140            | 1.8E-05                             | 7.38E-04              | 6.92E-02                               | 7.53E-06                               | 7.60E+01                                | 1.14E-01                               | 1.72E+04              | 2.90E-06                               | 7.29E+04                               | 4.94E+03       |
| Bis(2-chloroisopropyl) ether | 170            | 1.1E-04                             | 4.60E-03              | 6.30E-02                               | 6.40E-06                               | 6.17E+01                                | 9.25E-02                               | 1.70E+03              | 1.23E-05                               | 3.53E+04                               | 4.53E+02       |
| Bis(2-ethylhexyl) phthalate  | 390.54         | 1.0E-07                             | 4.18E-06              | 3.51E-02                               | 3.66E-06                               | 1.51E+07                                | 2.27E+04                               | 3.40E-01              |                                        |                                        |                |
| Bis(chloromethyl) ether      | 120            | 2.0E-04                             | 8.20E-03              | 8.90E-02                               | 9.40E-06                               | 1.20E+00                                | 1.80E-03                               | 2.20E+04              | 4.55E-05                               | 1.84E+04                               | 3.87E+03       |
| Boron                        | 10.81          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 3.00E+00                               |                       |                                        |                                        |                |
| Bromobenzene                 | 157.02         | 3.7E-03                             | 1.50E-01              | 7.30E-02                               | 8.70E-06                               | 2.20E+02                                | 3.30E-01                               | 4.70E+02              | 2.21E-04                               | 8.36E+03                               | 2.45E+02       |
| Bromodichloromethane         | 164            | 1.6E-03                             | 6.56E-02              | 2.98E-02                               | 1.06E-05                               | 1.00E+02                                | 1.50E-01                               | 6.74E+03              | 6.31E-05                               | 1.56E+04                               | 2.23E+03       |

| Chemical                       | MW<br>(g/mole) | H<br>(atm-<br>m <sup>3</sup> /mole) | H'<br>(dimensionless) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | D <sub>w</sub><br>(cm <sup>2</sup> /s) | K <sub>oc</sub><br>(cm <sup>3</sup> /g) | K <sub>d</sub><br>(cm <sup>3</sup> /g) | S<br>(mg/L-<br>water) | D <sub>A</sub><br>(cm <sup>2</sup> /s) | VF<br>(m <sup>3</sup> /kg) | SAT<br>(mg/kg) |
|--------------------------------|----------------|-------------------------------------|-----------------------|----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|----------------------------------------|----------------------------|----------------|
| Bromomethane                   | 94.95          | 6.2E-03                             | 2.56E-01              | 7.28E-02                               | 1.21E-05                               | 9.00E+00                                | 1.35E-02                               | 1.52E+04              | 9.03E-04                               | 4.13E+03                   | 3.31E+03       |
| 1,3-Butadiene                  | 54             | 1.8E-01                             | 7.30E+00              | 9.80E-02                               | 1.10E-05                               | 1.20E+02                                | 1.80E-01                               | 7.40E+02              | 6.24E-03                               | 1.57E+03                   | 9.10E+02       |
| 2-Butanone (MEK)               | 72             | 2.7E-05                             | 1.10E-03              | 9.00E-02                               | 9.80E-06                               | 4.50E+00                                | 6.75E-03                               | 2.70E+05              | 7.91E-06                               | 4.41E+04                   | 4.87E+04       |
| tert-Butyl methyl ether (MTBE) | 88.2           | 5.9E-04                             | 2.40E-02              | 8.00E-02                               | 1.00E-05                               | 6.00E+00                                | 9.00E-03                               | 1.50E+05              | 1.11E-04                               | 1.18E+04                   | 2.78E+04       |
| n-Butylbenzene                 | 130            | 1.3E-02                             | 5.40E-01              | 7.50E-02                               | 7.80E-06                               | 2.80E+03                                | 4.20E+00                               | 1.40E+01              | 9.56E-05                               | 1.27E+04                   | 6.21E+01       |
| sec-Butylbenzene               | 130            | 1.9E-02                             | 7.70E-01              | 7.50E-02                               | 7.80E-06                               | 2.20E+03                                | 3.30E+00                               | 1.70E+01              | 1.70E-04                               | 9.53E+03                   | 6.06E+01       |
| tert-Butylbenzene              | 130            | 1.3E-02                             | 5.20E-01              | 7.50E-02                               | 7.80E-06                               | 2.20E+03                                | 3.30E+00                               | 3.00E+01              | 1.16E-04                               | 1.15E+04                   | 1.06E+02       |
| Cadmium                        | 112.41         | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 7.50E+01                               |                       |                                        |                            |                |
| Carbon disulfide               | 76             | 2.9E-02                             | 1.20E+00              | 1.04E-01                               | 1.00E-05                               | 4.60E+01                                | 6.90E-02                               | 1.19E+03              | 3.42E-03                               | 2.12E+03                   | 4.60E+02       |
| Carbon tetrachloride           | 154            | 3.0E-02                             | 1.25E+00              | 7.80E-02                               | 8.80E-06                               | 1.74E+02                                | 2.61E-01                               | 7.93E+02              | 1.76E-03                               | 2.96E+03                   | 4.63E+02       |
| Chlordane                      | 409.8          | 4.9E-05                             | 1.99E-03              | 1.18E-02                               | 4.37E-06                               | 1.20E+05                                | 1.80E+02                               | 5.60E-02              |                                        |                            |                |
| 2-Chloroacetophenone           | 154.59         | 3.7E-02                             | 1.50E+00              | 7.20E-02                               | 6.80E-06                               | 3.30E+02                                | 4.95E-01                               | 4.70E+02              | 1.34E-03                               | 3.39E+03                   | 3.99E+02       |
| 2-Chloro-1,3-butadiene         | 88             | 3.2E-02                             | 1.30E+00              | 1.10E-01                               | 1.10E-05                               | 5.00E+01                                | 7.50E-02                               | 7.40E+02              | 3.75E-03                               | 2.03E+03                   | 2.99E+02       |
| 1-Chloro-1,1-difluoroethane    | 100.5          | 1.0E-01                             | 4.10E+00              | 8.00E-02                               | 1.10E-05                               | 5.80E+01                                | 8.70E-02                               | 2.80E+02              | 4.67E-03                               | 1.82E+03                   | 2.11E+02       |
| Chlorobenzene                  | 113            | 3.7E-03                             | 1.50E-01              | 7.30E-02                               | 8.70E-06                               | 2.19E+02                                | 3.29E-01                               | 4.72E+02              | 2.21E-04                               | 8.34E+03                   | 2.45E+02       |
| 1-Chlorobutane                 | 92.57          | 3.2E-02                             | 1.30E+00              | 1.10E-01                               | 1.10E-05                               | 5.00E+01                                | 7.50E-02                               | 7.40E+02              | 3.75E-03                               | 2.03E+03                   | 2.99E+02       |
| Chlorodifluoromethane          | 86.47          | 1.0E-01                             | 4.10E+00              | 8.00E-02                               | 1.10E-05                               | 5.80E+01                                | 8.70E-02                               | 2.80E+02              | 4.67E-03                               | 1.82E+03                   | 2.11E+02       |
| Chloroethane                   | 65             | 1.1E-02                             | 4.50E-01              | 1.00E-01                               | 1.20E-05                               | 1.50E+01                                | 2.25E-02                               | 5.70E+03              | 1.90E-03                               | 2.85E+03                   | 1.42E+03       |
| Chloroform                     | 120            | 3.7E-03                             | 1.50E-01              | 1.04E-01                               | 1.00E-05                               | 3.98E+01                                | 5.97E-02                               | 7.92E+03              | 6.53E-04                               | 4.86E+03                   | 1.99E+03       |
| Chloromethane                  | 51             | 2.4E-02                             | 9.80E-01              | 1.09E-01                               | 6.50E-06                               | 3.50E+01                                | 5.25E-02                               | 8.20E+03              | 3.29E-03                               | 2.16E+03                   | 2.82E+03       |
| β-Chloronaphthalene            | 160            | 3.2E-04                             | 1.30E-02              | 3.50E-02                               | 8.80E-06                               | 1.60E+03                                | 2.40E+00                               | 1.20E+01              | 1.98E-06                               | 8.81E+04                   | 3.09E+01       |
| o-Chloronitrobenzene           | 153.33         | 4.4E-05                             | 1.80E-03              | 7.60E-02                               | 8.60E-06                               | 6.50E+01                                | 9.75E-02                               | 2.10E+03              | 6.54E-06                               | 4.85E+04                   | 5.69E+02       |
| p-Chloronitrobenzene           | 153.33         | 5.1E-05                             | 2.10E-03              | 7.60E-02                               | 8.60E-06                               | 6.50E+01                                | 9.75E-02                               | 2.10E+03              | 7.42E-06                               | 4.56E+04                   | 5.69E+02       |
| 2-Chlorophenol                 | 130            | 3.9E-04                             | 1.60E-02              | 5.01E-02                               | 9.46E-06                               | 4.00E+02                                | 6.00E-01                               | 2.20E+04              | 1.13E-05                               | 3.69E+04                   | 1.71E+04       |
| 2-Chloropropane                | 78.54          | 2.3E-03                             | 9.40E-02              | 8.00E-02                               | 1.00E-05                               | 5.10E+01                                | 7.65E-02                               | 2.70E+03              | 3.03E-04                               | 7.13E+03                   | 7.05E+02       |
| o-Chlorotoluene                | 172.57         | 3.4E-03                             | 1.40E-01              | 7.20E-02                               | 8.70E-06                               | 1.60E+02                                | 2.40E-01                               | 4.70E+02              | 2.46E-04                               | 7.91E+03                   | 2.02E+02       |
| Chromium III                   | 52             |                                     |                       |                                        |                                        |                                         | 1.80E+06                               |                       |                                        |                            |                |
| Chromium VI                    | 52             |                                     |                       |                                        |                                        |                                         | 1.90E+01                               |                       |                                        |                            |                |
| Chrysene                       | 228.28         | 9.5E-05                             | 3.88E-03              | 2.48E-02                               | 6.21E-06                               | 3.98E+05                                | 5.97E+02                               | 1.60E-03              | 2.10E-09                               | 2.71E+06                   | 9.55E-01       |
| Cobalt                         | 58.93          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 4.50E+01                               |                       |                                        |                            |                |
| Copper                         | 63.55          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 3.50E+01                               |                       |                                        |                            |                |
| Crotonaldehyde                 | 70.09          | 2.4E-01                             | 1.00E+01              | 9.10E-02                               | 1.00E-05                               | 8.40E+02                                | 1.26E+00                               | 2.00E+01              | 3.67E-03                               | 2.05E+03                   | 5.27E+01       |

| Chemical                    | MW<br>(g/mole) | H<br>(atm-<br>m <sup>3</sup> /mole) | H'<br>(dimensionless) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | D <sub>w</sub><br>(cm <sup>2</sup> /s) | K <sub>oc</sub><br>(cm <sup>3</sup> /g) | K <sub>d</sub><br>(cm <sup>3</sup> /g) | S<br>(mg/L-<br>water) | D <sub>A</sub><br>(cm <sup>2</sup> /s) | VF<br>(m <sup>3</sup> /kg) | SAT<br>(mg/kg) |
|-----------------------------|----------------|-------------------------------------|-----------------------|----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|----------------------------------------|----------------------------|----------------|
| Cumene (isopropylbenzene)   | 120            | 1.2E+00                             | 4.90E+01              | 7.50E-02                               | 7.10E-06                               | 2.20E+02                                | 3.30E-01                               | 6.10E+01              | 6.22E-03                               | 1.57E+03                   | 3.89E+02       |
| Cyanide                     | 27.03          |                                     | 5.44E-03              |                                        |                                        | 2.71E+00                                | 9.90E+00                               |                       |                                        |                            |                |
| Cyanogen                    | 52             | 5.1E-03                             | 2.10E-01              | 2.00E-01                               | 1.40E-05                               | 1.40E+00                                | 2.10E-03                               | 8.50E+03              | 2.20E-03                               | 2.64E+03                   | 1.71E+03       |
| Cyanogen bromide            | 52             | 5.1E-03                             | 2.10E-01              | 9.60E-02                               | 1.00E-05                               | 2.60E+01                                | 3.90E-02                               | 8.50E+03              | 8.93E-04                               | 4.15E+03                   | 2.02E+03       |
| Cyanogen chloride           | 52             | 5.1E-03                             | 2.10E-01              | 9.60E-02                               | 1.00E-05                               | 2.60E+01                                | 3.90E-02                               | 8.50E+03              | 8.93E-04                               | 4.15E+03                   | 2.02E+03       |
| DDD                         | 320            | 4.0E-06                             | 1.64E-04              | 1.69E-02                               | 4.76E-06                               | 1.00E+06                                | 1.50E+03                               | 9.00E-02              |                                        |                            |                |
| DDE                         | 318            | 2.1E-05                             | 8.61E-04              | 1.44E-02                               | 5.87E-06                               | 4.47E+06                                | 6.71E+03                               | 1.20E-01              |                                        |                            |                |
| DDT                         | 354.5          | 8.1E-06                             | 3.32E-04              | 1.37E-02                               | 4.95E-06                               | 2.63E+06                                | 3.95E+03                               | 2.50E-02              |                                        |                            |                |
| Dibenz(a,h)anthracene       | 278.3          | 1.5E-08                             | 6.03E-07              | 2.02E-02                               | 5.18E-06                               | 3.80E+06                                | 5.70E+03                               | 2.49E-03              |                                        |                            |                |
| Dibenzofuran                | 284.8          | 1.3E-05                             | 5.33E-04              | 6.01E-02                               | 1.00E-05                               | 7.76E+03                                | 1.16E+01                               | 3.10E+00              | 6.20E-08                               | 4.98E+05                   | 3.66E+01       |
| 1,2-Dibromo-3-chloropropane | 240            | 1.5E-04                             | 6.00E-03              | 8.00E-02                               | 8.00E-06                               | 1.70E+02                                | 2.55E-01                               | 1.20E+03              | 1.24E-05                               | 3.52E+04                   | 5.15E+02       |
| Dibromochloromethane        | 210            | 8.5E-04                             | 3.50E-02              | 2.00E-02                               | 1.00E-05                               | 6.30E+01                                | 9.45E-02                               | 4.40E+03              | 2.84E-05                               | 2.33E+04                   | 1.20E+03       |
| 1,2-Dibromoethane           | 188            | 3.2E-04                             | 1.30E-02              | 7.33E-02                               | 8.06E-06                               | 2.80E+01                                | 4.20E-02                               | 3.40E+03              | 4.75E-05                               | 1.80E+04                   | 7.37E+02       |
| 1,4-Dichloro-2-butene       | 130            | 2.7E-04                             | 1.10E-02              | 7.30E-02                               | 8.10E-06                               | 4.80E+01                                | 7.20E-02                               | 2.80E+03              | 3.54E-05                               | 2.09E+04                   | 6.91E+02       |
| 1,2-Dichlorobenzene         | 147            | 1.9E-03                             | 7.79E-02              | 6.90E-02                               | 7.90E-06                               | 3.80E+01                                | 5.70E-02                               | 1.56E+02              | 2.36E-04                               | 8.07E+03                   | 3.74E+01       |
| 1,3-Dichlorobenzene         | 147            | 1.9E-03                             | 7.80E-02              | 6.90E-02                               | 7.90E-06                               | 3.80E+01                                | 5.70E-02                               | 1.56E+02              | 2.37E-04                               | 8.07E+03                   | 3.74E+01       |
| 1,4-Dichlorobenzene         | 147            | 2.4E-03                             | 9.96E-02              | 6.90E-02                               | 7.90E-06                               | 6.16E+02                                | 9.24E-01                               | 7.38E+01              | 6.51E-05                               | 1.54E+04                   | 8.19E+01       |
| 3,3-Dichlorobenzidine       | 253.13         | 4.0E-09                             | 1.64E-07              | 1.94E-02                               | 6.74E-06                               | 7.24E+02                                | 1.09E+00                               | 3.11E+00              |                                        |                            |                |
| Dichlorodifluoromethane     | 120            | 1.0E-01                             | 4.10E+00              | 8.00E-02                               | 1.05E-05                               | 5.80E+01                                | 8.70E-02                               | 2.80E+02              | 4.67E-03                               | 1.82E+03                   | 2.11E+02       |
| 1,1-Dichloroethane          | 99             | 5.6E-03                             | 2.30E-01              | 7.42E-02                               | 1.05E-05                               | 5.30E+01                                | 7.95E-02                               | 5.06E+03              | 6.40E-04                               | 4.90E+03                   | 1.42E+03       |
| 1,2-Dichloroethane          | 99             | 9.8E-04                             | 4.01E-02              | 1.04E-01                               | 9.90E-06                               | 3.80E+01                                | 5.70E-02                               | 8.52E+03              | 1.87E-04                               | 9.07E+03                   | 2.00E+03       |
| cis-1,2-Dichloroethene      | 97             | 4.1E-03                             | 1.67E-01              | 7.36E-02                               | 1.13E-05                               | 3.55E+01                                | 5.33E-02                               | 3.50E+03              | 5.25E-04                               | 5.42E+03                   | 8.63E+02       |
| trans-1,2-Dichloroethene    | 97             | 9.4E-03                             | 3.85E-01              | 7.07E-02                               | 1.19E-05                               | 3.80E+01                                | 5.70E-02                               | 6.30E+03              | 1.04E-03                               | 3.85E+03                   | 1.74E+03       |
| 1,1-Dichloroethene          | 97             | 2.7E-02                             | 1.10E+00              | 9.00E-02                               | 1.00E-05                               | 6.50E+01                                | 9.75E-02                               | 2.30E+03              | 2.60E-03                               | 2.43E+03                   | 9.27E+02       |
| 2,4-Dichlorophenol          | 163            | 3.2E-06                             | 1.30E-04              | 3.46E-02                               | 8.77E-06                               | 1.47E+02                                | 2.21E-01                               | 4.50E+03              |                                        |                            |                |
| 1,2-Dichloropropane         | 110            | 2.7E-03                             | 1.10E-01              | 7.80E-02                               | 8.70E-06                               | 4.40E+01                                | 6.50E-02                               | 2.80E+03              | 3.58E-04                               | 6.56E+03                   | 7.07E+02       |
| 1,3-Dichloropropane         | 111            | 1.8E-02                             | 7.26E-01              | 6.26E-02                               | 1.00E-05                               | 2.70E+01                                | 4.05E-02                               | 2.80E+03              | 1.60E-03                               | 3.11E+03                   | 8.43E+02       |
| Dicyclopentadiene           | 130            | 1.1E-02                             | 4.40E-01              | 6.70E-02                               | 1.00E-05                               | 5.70E+02                                | 8.55E-01                               | 1.80E+03              | 2.86E-04                               | 7.34E+03                   | 1.95E+03       |
| Dieldrin                    | 381            | 1.5E-05                             | 6.19E-04              | 1.25E-02                               | 4.74E-06                               | 2.14E+04                                | 3.21E+01                               | 1.95E-01              |                                        |                            |                |
| Diethyl phthalate           | 222.2          | 4.5E-07                             | 1.85E-05              | 2.56E-02                               | 6.35E-06                               | 2.88E+02                                | 4.32E-01                               | 1.08E+03              |                                        |                            |                |
| Dimethyl phthalate          | 194.19         | 4.1E-07                             | 1.70E-05              | 5.68E-02                               | 6.29E-06                               | 3.71E+01                                | 5.56E-02                               | 4.00E+03              |                                        |                            |                |
| Di-n-butyl phthalate        | 278.34         | 9.4E-10                             | 3.85E-08              | 4.38E-02                               | 7.86E-06                               | 3.39E+04                                | 5.09E+01                               | 1.12E+01              |                                        |                            |                |

| Chemical                  | MW<br>(g/mole) | H<br>(atm-<br>m <sup>3</sup> /mole) | H'<br>(dimensionless) | D <sub>2</sub><br>(cm <sup>2</sup> /s) | D <sub>w</sub><br>(cm <sup>2</sup> /s) | K <sub>oc</sub><br>(cm <sup>3</sup> /g) | K <sub>d</sub><br>(cm <sup>3</sup> /g) | S<br>(mg/L-<br>water) | D <sub>A</sub><br>(cm <sup>2</sup> /s) | VF<br>(m <sup>3</sup> /kg) | SAT<br>(mg/kg) |
|---------------------------|----------------|-------------------------------------|-----------------------|----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|----------------------------------------|----------------------------|----------------|
| 2,4-Dimethylphenol        | 122.16         | 2.0E-06                             | 8.20E-05              | 5.84E-02                               | 8.69E-06                               | 2.09E+02                                | 3.14E-01                               | 7.87E+03              |                                        |                            |                |
| 4,6-Dinitro-o-cresol      | 198.14         | 1.4E-06                             | 5.72E-05              | 2.93E-02                               | 6.91E-06                               | 6.02E+02                                | 9.02E-01                               | 1.98E+02              |                                        |                            |                |
| 2,4-Dinitrophenol         | 184.11         | 8.6E-08                             | 3.52E-06              | 2.73E-02                               | 9.06E-06                               | 3.64E+02                                | 5.46E-01                               | 2.79E+03              |                                        |                            |                |
| 2,4-Dinitrotoluene        | 182.14         | 9.3E-08                             | 3.80E-06              | 2.03E-01                               | 7.06E-06                               | 9.55E+01                                | 1.43E-01                               | 2.70E+02              |                                        |                            |                |
| 1,2-Diphenylhydrazine     | 184.24         | 4.6E-11                             | 1.90E-09              | 3.17E-02                               | 7.36E-06                               | 3.48E+03                                | 5.22E+00                               | 2.21E+02              |                                        |                            |                |
| Endosulfan                | 406.95         | 1.1E-05                             | 4.59E-04              | 1.15E-02                               | 4.55E-06                               | 2.14E+03                                | 3.21E+00                               | 5.10E-01              |                                        |                            |                |
| Endrin                    | 381            | 7.5E-06                             | 3.08E-04              | 1.25E-02                               | 4.74E-06                               | 1.23E+04                                | 1.85E+01                               | 2.50E-01              |                                        |                            |                |
| Epichlorohydrin           | 93             | 3.2E-05                             | 1.30E-03              | 8.80E-02                               | 9.80E-06                               | 3.50E+00                                | 5.25E-03                               | 6.00E+04              | 8.85E-06                               | 4.17E+04                   | 1.07E+04       |
| Ethyl acetate             | 88             | 1.4E-04                             | 5.70E-03              | 7.30E-02                               | 9.70E-06                               | 5.90E+01                                | 8.85E-02                               | 8.00E+04              | 1.81E-05                               | 2.92E+04                   | 2.10E+04       |
| Ethyl acrylate            | 100.1          | 2.4E-01                             | 9.80E+00              | 9.10E-02                               | 8.60E-06                               | 8.40E+02                                | 1.26E+00                               | 2.00E+01              | 3.63E-03                               | 2.06E+03                   | 5.22E+01       |
| Ethyl chloride            | 65             | 1.1E-02                             | 4.50E-01              | 1.00E-01                               | 1.20E-05                               | 1.50E+01                                | 2.25E-02                               | 5.70E+03              | 1.90E-03                               | 2.85E+03                   | 1.42E+03       |
| Ethyl ether               | 74.12          | 1.3E-05                             | 5.30E-04              | 7.00E-02                               | 9.30E-06                               | 1.40E+01                                | 2.10E-02                               | 1.00E+04              | 3.90E-06                               | 6.29E+04                   | 1.94E+03       |
| Ethyl methacrylate        | 114.12         | 2.4E-01                             | 1.00E+01              | 9.10E-02                               | 8.60E-06                               | 8.40E+02                                | 1.26E+00                               | 2.00E+01              | 3.67E-03                               | 2.05E+03                   | 5.27E+01       |
| Ethylbenzene              | 106.2          | 7.9E-03                             | 3.23E-01              | 7.50E-02                               | 7.80E-06                               | 3.63E+02                                | 5.45E-01                               | 1.69E+02              | 3.36E-04                               | 6.77E+03                   | 1.28E+02       |
| Ethylene oxide            | 44             | 7.6E-05                             | 3.10E-03              | 1.30E-01                               | 1.50E-05                               | 2.20E+00                                | 3.30E-03                               | 1.00E+06              | 2.72E-05                               | 2.38E+04                   | 1.77E+05       |
| Fluoranthene              | 202.3          | 1.6E-05                             | 6.60E-04              | 3.02E-02                               | 6.35E-06                               | 1.07E+05                                | 1.61E+02                               | 2.06E-01              |                                        |                            |                |
| Fluorene                  | 166.21         | 7.8E-05                             | 3.20E-03              | 6.10E-02                               | 7.88E-06                               | 7.90E+03                                | 1.19E+01                               | 1.90E+00              | 1.96E-07                               | 2.80E+05                   | 2.28E+01       |
| Fluoride                  | 38             | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 1.50E+02                               | 1.69E+00              | 1.06E-03                               | 3.81E+03                   | 2.18E+03       |
| Furan                     | 68             | 5.4E-03                             | 2.20E-01              | 1.00E-01                               | 1.20E-05                               | 1.20E+01                                | 1.80E-02                               | 1.80E-01              |                                        |                            |                |
| Heptachlor                | 373.5          | 1.1E-03                             | 4.47E-02              | 1.12E-02                               | 5.69E-06                               | 1.41E+06                                | 2.12E+03                               | 6.20E+00              |                                        |                            |                |
| Hexachlorobenzene         | 284.8          | 1.3E-03                             | 5.41E-02              | 5.42E-02                               | 5.91E-06                               | 5.50E+04                                | 8.25E+01                               | 3.23E+00              |                                        |                            |                |
| Hexachloro-1,3-butadiene  | 260.76         | 8.1E-03                             | 3.34E-01              | 5.61E-02                               | 6.16E-06                               | 5.37E+04                                | 8.06E+01                               | 1.80E+00              |                                        |                            |                |
| Hexachlorocyclopentadiene | 272.75         | 2.7E-02                             | 1.11E+00              | 1.61E-02                               | 7.21E-06                               | 2.00E+05                                | 3.00E+02                               | 5.00E+01              |                                        |                            |                |
| Hexachloroethane          | 236.74         | 3.9E-03                             | 1.59E-01              | 2.50E-03                               | 6.80E-06                               | 1.78E+03                                | 2.67E+00                               | 1.80E+01              | 5.01E-03                               | 1.75E+03                   | 3.80E+01       |
| n-Hexane                  | 86             | 1.2E-01                             | 5.00E+00              | 2.00E-01                               | 7.80E-06                               | 8.90E+02                                | 1.34E+00                               | 1.80E+01              |                                        |                            |                |
| HMX                       | 296.2          | 1.0E-11                             | 4.10E-10              |                                        |                                        | 1.85E+03                                | 2.78E+00                               | 2.56E+03              |                                        |                            |                |
| Hydrogen cyanide          | 27             | 1.3E-04                             | 5.30E-03              | 1.80E-01                               | 1.80E-05                               | 1.70E+01                                | 2.55E-02                               | 1.00E+06              | 5.36E-05                               | 1.69E+04                   | 1.99E+05       |
| Indeno(1,2,3-c,d)pyrene   | 276.3          | 1.6E-06                             | 6.56E-05              | 1.90E-02                               | 5.66E-06                               | 3.47E+06                                | 5.21E+03                               | 2.20E-05              |                                        |                            |                |
| Iron                      | 55.84          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 2.50E+01                               |                       |                                        |                            |                |
| Isobutanol                | 74             | 1.2E-05                             | 4.90E-04              | 8.60E-02                               | 9.30E-06                               | 6.20E+01                                | 9.30E-02                               | 8.50E+04              | 3.04E-06                               | 7.12E+04                   | 2.26E+04       |
| Isophorone                | 138.21         | 6.6E-06                             | 2.72E-04              | 6.23E-02                               | 6.76E-06                               | 4.68E+01                                | 7.02E-02                               | 1.20E+04              |                                        |                            |                |
| Lead                      | 207.2          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 9.00E+02                               |                       |                                        |                            |                |

| Chemical                 | MW<br>(g/mole) | H<br>(atm-<br>m/mole) | H <sup>+</sup><br>(dimensionless) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | D <sub>v</sub><br>(cm <sup>2</sup> /s) | K <sub>oc</sub><br>(cm <sup>3</sup> /g) | K <sub>d</sub><br>(cm <sup>3</sup> /g) | S<br>(mg/L-<br>water) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | VF<br>(m <sup>3</sup> /kg) | SAT<br>(mg/kg) |
|--------------------------|----------------|-----------------------|-----------------------------------|----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|----------------------------------------|----------------------------|----------------|
| lead (Tetraethyl-)       | 64.52          |                       |                                   |                                        |                                        |                                         |                                        |                       |                                        |                            |                |
| Maleic hydrazide         | 110            | 6.6E-03               | 2.70E-01                          | 9.00E-02                               | 1.10E-05                               | 4.20E+01                                | 6.30E-02                               | 6.00E+03              | 9.52E-04                               | 4.02E+03                   | 1.61E+03       |
| Manganese                | 54.94          | 2.4E-02               | 1.00E+00                          |                                        |                                        | 1.43E+01                                | 6.50E+01                               |                       |                                        |                            |                |
| Mercury (elemental)      | 200.59         | 2.4E-02               | 1.00E+00                          | 3.07E-02                               | 6.30E-06                               | 1.43E+01                                | 5.20E+01                               |                       |                                        |                            |                |
| Mercury (methyl)         | 215.62         | 1.1E-02               | 4.67E-01                          |                                        |                                        | 1.43E+01                                |                                        |                       |                                        |                            |                |
| Methacrylonitrile        | 67.09          | 8.8E-05               | 3.60E-03                          | 1.10E-01                               | 1.30E-05                               | 8.40E-01                                | 1.26E-03                               | 7.90E+04              | 2.66E-05                               | 2.41E+04                   | 1.38E+04       |
| Methomyl                 | 160            | 3.9E-02               | 1.60E+00                          | 6.90E-02                               | 1.00E-05                               | 1.50E+01                                | 2.25E-02                               | 1.70E+05              | 3.03E-03                               | 2.25E+03                   | 6.59E+04       |
| Methyl acetate           | 74.08          | 2.0E-05               | 8.40E-04                          | 1.00E-01                               | 1.00E-05                               | 2.20E+00                                | 3.30E-03                               | 1.00E+06              | 7.22E-06                               | 4.62E+04                   | 1.77E+05       |
| Methyl acrylate          | 86.09          | 2.4E-01               | 9.80E+00                          | 9.10E-02                               | 8.60E-06                               | 8.40E+02                                | 1.26E+00                               | 6.00E+01              | 3.63E-03                               | 2.06E+03                   | 1.57E+02       |
| Methyl isobutyl ketone   | 100            | 1.4E-04               | 5.70E-03                          | 7.50E-02                               | 7.80E-06                               | 1.30E+02                                | 1.95E-01                               | 1.90E+04              | 1.30E-05                               | 3.45E+04                   | 7.01E+03       |
| Methyl methacrylate      | 100            | 3.4E-04               | 1.40E-02                          | 7.70E-02                               | 8.60E-06                               | 1.30E+01                                | 1.95E-02                               | 1.50E+04              | 5.98E-05                               | 1.61E+04                   | 2.92E+03       |
| Methyl styrene (alpha)   | 118.18         | 2.3E-03               | 9.40E-02                          | 7.10E-02                               | 8.00E-06                               | 3.60E+02                                | 5.40E-01                               | 3.00E+02              | 9.69E-05                               | 1.26E+04                   | 2.17E+02       |
| Methyl styrene (mixture) | 118.18         | 2.3E-03               | 9.40E-02                          | 7.10E-02                               | 8.00E-06                               | 3.60E+02                                | 5.40E-01                               | 3.00E+02              | 9.69E-05                               | 1.26E+04                   | 2.17E+02       |
| Methylcyclohexane        | 98             | 4.4E-01               | 1.80E+01                          | 7.00E-02                               | 9.00E-06                               | 2.20E+03                                | 3.30E+00                               | 1.40E+01              | 2.37E-03                               | 2.55E+03                   | 7.89E+01       |
| Methylene bromide        | 170            | 9.0E-04               | 3.70E-02                          | 8.00E-02                               | 8.00E-06                               | 1.80E+02                                | 2.70E-01                               | 1.20E+04              | 6.99E-05                               | 1.48E+04                   | 5.37E+03       |
| Methylene chloride       | 85             | 2.2E-03               | 9.00E-02                          | 1.00E-01                               | 1.20E-05                               | 1.20E+01                                | 1.80E-02                               | 1.30E+04              | 4.69E-04                               | 5.73E+03                   | 2.63E+03       |
| Molybdenum               | 95.94          | 2.4E-02               | 1.00E+00                          |                                        |                                        | 1.43E+01                                | 2.00E+01                               |                       |                                        |                            |                |
| Naphthalene              | 128.16         | 4.8E-04               | 1.98E-02                          | 5.90E-02                               | 7.50E-06                               | 2.00E+03                                | 3.00E+00                               | 3.10E+01              | 3.94E-06                               | 6.25E+04                   | 9.84E+01       |
| Nickel                   | 58.71          | 2.4E-02               | 1.00E+00                          |                                        |                                        | 1.43E+01                                | 6.50E+01                               |                       |                                        |                            |                |
| Nitrate                  | 101.1          | 2.4E-02               | 1.00E+00                          |                                        |                                        | 1.43E+01                                |                                        |                       |                                        |                            |                |
| Nitrite                  | 46             | 2.0E-07               | 8.38E-06                          |                                        |                                        | 2.37E+01                                | 3.56E-02                               |                       |                                        |                            |                |
| Nitrobenzene             | 120            | 2.4E-05               | 9.84E-04                          | 7.60E-02                               | 8.60E-06                               | 6.46E+01                                | 9.69E-02                               | 2.10E+03              | 4.16E-06                               | 6.09E+04                   | 5.68E+02       |
| Nitroglycerin            | 227.08         | 6.1E-03               | 2.50E-01                          |                                        |                                        | 2.60E+02                                | 3.90E-01                               | 1.80E+03              |                                        |                            |                |
| N-Nitrosodiethylamine    | 102.14         | 3.7E-06               | 1.50E-04                          | 6.48E-02                               | 9.13E-06                               | 1.20E+03                                | 1.80E+00                               | 1.06E+05              |                                        |                            |                |
| N-Nitrosodimethylamine   | 74.08          | 1.4E-01               | 5.90E+00                          | 3.12E-02                               | 6.35E-06                               | 3.82E+01                                | 5.73E-02                               | 1.00E+06              |                                        |                            |                |
| N-Nitrosod-n-butylamine  | 158.2          | 3.2E-04               | 1.31E-02                          | 5.80E-02                               | 9.72E-06                               | 2.60E+02                                | 3.90E-01                               | 1.27E+03              | 1.48E-05                               | 3.23E+04                   | 7.17E+02       |
| N-Nitrosodiphenylamine   | 198.23         | 5.0E-06               | 2.05E-04                          | 3.12E-02                               | 6.35E-06                               | 1.29E+03                                | 1.94E+00                               | 3.51E+01              |                                        |                            | 7.40E+01       |
| N-Nitrosopyrrolidine     | 100.2          | 4.9E-08               | 2.00E-06                          |                                        |                                        | 1.59E+02                                | 2.38E-01                               | 1.00E+06              |                                        |                            |                |
| m-Nitrotoluene           | 137.1          | 2.4E-05               | 9.80E-04                          | 7.60E-02                               | 8.60E-06                               | 6.50E+01                                | 9.75E-02                               | 2.10E+03              | 4.14E-06                               | 6.10E+04                   | 5.69E+02       |
| o-Nitrotoluene           | 137.13         | 2.4E-05               | 9.80E-04                          | 7.60E-02                               | 8.60E-06                               | 6.50E+01                                | 9.75E-02                               | 2.10E+03              | 4.14E-06                               | 6.10E+04                   | 5.69E+02       |
| p-Nitrotoluene           | 137.1          | 2.4E-05               | 9.80E-04                          | 7.60E-02                               | 8.60E-06                               | 6.50E+01                                | 9.75E-02                               | 2.10E+03              | 4.14E-06                               | 6.10E+04                   | 5.69E+02       |
| Pentachlorobenzene       | 250.32         | 7.1E-03               | 2.90E-01                          | 5.70E-02                               | 6.30E-06                               | 2.00E+03                                | 3.00E+00                               | 8.31E+02              |                                        |                            |                |



| Chemical                              | MW<br>(g/mole)                   | H<br>(atm-<br>m <sup>3</sup> /mole) | H'<br>(dimensionless) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | D <sub>w</sub><br>(cm <sup>2</sup> /s) | K <sub>oc</sub><br>(cm <sup>3</sup> /g) | K <sub>d</sub><br>(cm <sup>3</sup> /g) | S<br>(mg/L-<br>water) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | VF<br>(m <sup>3</sup> /kg) | SAT<br>(mg/kg) |
|---------------------------------------|----------------------------------|-------------------------------------|-----------------------|----------------------------------------|----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|----------------------------------------|----------------------------|----------------|
| Pentachlorophenol                     | 266.34                           | 2.4E-08                             | 1.00E-06              | 5.60E-02                               | 6.10E-06                               | 5.92E+02                                | 8.88E-01                               | 1.95E+03              |                                        |                            |                |
| Phenanthrene                          | 178.2                            | 2.3E-05                             | 9.40E-04              |                                        |                                        | 1.40E+04                                | 2.10E+01                               | 1.15E+00              |                                        |                            |                |
| Phenol                                | 94                               | 4.0E-07                             | 1.63E-05              | 8.20E-02                               | 9.10E-06                               | 2.88E+01                                | 4.32E-02                               | 8.28E+04              |                                        |                            |                |
| <b>Polychlorinated biphenyls</b>      |                                  |                                     |                       |                                        |                                        |                                         |                                        |                       |                                        |                            |                |
| Aroclor 1016                          | (291.98 -<br>360.86)<br>variable |                                     |                       |                                        |                                        |                                         |                                        |                       |                                        |                            |                |
| Aroclor 1221                          | variable                         | 4.2E-02                             | 1.73E+00              | 1.75E-02                               | 8.00E-06                               | 4.48E+04                                | 6.72E+01                               | 2.77E-01              |                                        |                            |                |
| Aroclor 1221                          | variable                         | 1.8E-08                             | 7.40E-07              | 1.75E-02                               | 8.00E-06                               | 4.48E+04                                | 6.72E+01                               | 2.77E-01              |                                        |                            |                |
| Aroclor 1232                          | variable                         | 1.8E-08                             | 7.40E-07              | 1.75E-02                               | 8.00E-06                               | 4.48E+04                                | 6.72E+01                               | 2.77E-01              |                                        |                            |                |
| Aroclor 1242                          | variable                         | 1.8E-08                             | 7.40E-07              | 1.75E-02                               | 8.00E-06                               | 4.48E+04                                | 6.72E+01                               | 2.77E-01              |                                        |                            |                |
| Aroclor 1248                          | variable                         | 1.8E-08                             | 7.40E-07              | 5.70E+03                               | 6.00E-01                               | 5.30E+05                                | 7.95E+02                               | 2.77E-01              |                                        |                            |                |
| Aroclor 1264                          | variable                         | 1.8E-08                             | 7.40E-07              | 5.70E+03                               | 6.00E-01                               | 5.30E+05                                | 7.95E+02                               | 2.77E-01              |                                        |                            |                |
| Aroclor 1260                          | variable                         | 1.8E-08                             | 7.40E-07              | 5.70E+03                               | 6.00E-01                               | 5.30E+05                                | 7.95E+02                               | 2.77E-01              |                                        |                            |                |
| n-Propylbenzene                       | 120.19                           | 1.3E-02                             | 5.40E-01              | 7.50E-02                               | 7.80E-06                               | 2.80E+03                                | 4.20E+00                               | 1.40E+01              | 9.56E-05                               | 1.27E+04                   | 6.21E+01       |
| Propylene oxide                       | 58                               | 8.5E-05                             | 3.50E-03              | 1.20E-01                               | 1.30E-05                               | 2.50E+01                                | 3.75E-02                               | 4.80E+05              | 2.33E-05                               | 2.57E+04                   | 1.01E+05       |
| Pyrene                                | 200                              | 1.1E-05                             | 4.51E-04              | 2.72E-02                               | 7.24E-06                               | 6.80E+04                                | 1.02E+02                               | 1.35E-01              | 4.07E-09                               | 1.95E+06                   | 1.38E+01       |
| RDX                                   | 222.12                           | 6.3E-08                             | 2.60E-06              |                                        |                                        | 7.00E+01                                | 1.05E-01                               | 5.97E+01              |                                        |                            |                |
| Selenium                              | 78.96                            | 9.7E-03                             | 3.98E-01              |                                        |                                        | 1.43E+01                                | 5.00E+00                               |                       |                                        |                            |                |
| Silver                                | 107.87                           | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 8.30E+00                               |                       |                                        |                            |                |
| Strontium                             | 87.62                            | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 3.50E+01                               |                       |                                        |                            |                |
| Styrene                               | 100                              | 2.7E-03                             | 1.10E-01              | 7.10E-02                               | 8.00E-06                               | 9.10E+01                                | 1.37E-01                               | 3.10E+02              | 2.54E-04                               | 7.78E+03                   | 1.00E+02       |
| 1,2,4,5-Tetrachlorobenzene            | 215.89                           | 1.0E-03                             | 4.10E-02              | 2.11E-02                               | 8.76E-06                               | 1.19E+03                                | 1.78E+00                               | 5.95E-01              |                                        |                            |                |
| 1,1,1,2-Tetrachloroethane             | 167.85                           | 3.4E-04                             | 1.41E-02              | 7.10E-02                               | 7.90E-06                               | 7.90E+01                                | 1.19E-01                               | 2.97E+03              | 3.68E-05                               | 2.05E+04                   | 8.72E+02       |
| 1,1,2,2-Tetrachloroethane             | 169.86                           | 3.4E-04                             | 1.40E-02              | 7.10E-02                               | 7.90E-06                               | 7.90E+01                                | 1.19E-01                               | 2.97E+03              | 3.65E-05                               | 2.05E+04                   | 8.72E+02       |
| Tetrachloroethene                     | 170                              | 1.8E-02                             | 7.54E-01              | 7.20E-02                               | 8.20E-06                               | 2.70E+02                                | 4.05E-01                               | 2.00E+02              | 8.54E-04                               | 4.25E+03                   | 1.34E+02       |
| Thallium                              | 204.37                           | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 7.10E+01                               |                       |                                        |                            |                |
| Toluene                               | 92                               | 6.6E-03                             | 2.72E-01              | 8.70E-02                               | 8.60E-06                               | 1.82E+02                                | 2.73E-01                               | 5.26E+02              | 5.19E-04                               | 5.45E+03                   | 2.52E+02       |
| Toxaphene                             | 414                              | 6.0E-06                             | 2.46E-04              | 1.16E-02                               | 4.34E-06                               | 2.57E+05                                | 3.88E+02                               | 7.40E-01              |                                        |                            |                |
| Tribromomethane                       | 252.73                           | 6.6E-04                             | 2.70E-02              | 1.49E-02                               | 1.03E-05                               | 8.70E+01                                | 6.92E+00                               | 3.10E+03              | 6.51E-07                               | 1.54E+05                   | 2.20E+04       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 187.38                           | 5.2E-01                             | 2.14E+01              | 2.88E-02                               | 8.07E-06                               | 1.60E+02                                | 2.40E-01                               | 1.10E+03              | 2.23E-03                               | 2.63E+03                   | 3.28E+03       |
| 1,2,4-Trichlorobenzene                | 181                              | 1.4E-03                             | 5.82E-02              | 3.00E-02                               | 8.23E-06                               | 1.78E+03                                | 2.67E+00                               | 3.00E+02              | 6.53E-06                               | 4.86E+04                   | 8.55E+02       |
| 1,1,1-Trichloroethane                 | 130                              | 1.7E-02                             | 7.06E-01              | 7.80E-02                               | 8.80E-06                               | 1.10E+02                                | 1.85E-01                               | 1.35E+03              | 1.37E-03                               | 3.35E+03                   | 5.63E+02       |
| 1,1,2-Trichloroethane                 | 133                              | 9.1E-04                             | 3.74E-02              | 7.88E-02                               | 8.80E-06                               | 5.01E+01                                | 7.52E-02                               | 4.42E+03              | 1.22E-04                               | 1.12E+04                   | 1.12E+03       |

| Chemical               | MW<br>(g/mole) | H<br>(atm-<br>m <sup>3</sup> /mole) | H'<br>(dimensionless) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | D <sub>w</sub><br>(cm <sup>2</sup> /s) | K <sub>ow</sub><br>(cm <sup>3</sup> /g) | K <sub>oc</sub><br>(cm <sup>3</sup> /g) | S<br>(mg/L-<br>water) | D <sub>a</sub><br>(cm <sup>2</sup> /s) | VF<br>(m <sup>3</sup> /kg) | SAT<br>(mg/kg) |
|------------------------|----------------|-------------------------------------|-----------------------|----------------------------------------|----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------|----------------------------------------|----------------------------|----------------|
| Trichloroethylene      | 131            | 1.0E-02                             | 4.22E-01              | 7.90E-02                               | 9.10E-06                               | 9.40E+01                                | 1.41E-01                                | 1.10E+03              | 9.61E-04                               | 4.00E+03                   | 4.01E+02       |
| Trichlorofluoromethane | 140            | 9.8E-02                             | 4.00E+00              | 8.70E-02                               | 1.30E-05                               | 1.60E+02                                | 2.40E-01                                | 1.10E+03              | 4.15E-03                               | 1.93E+03                   | 9.83E+02       |
| 2,4,5-Trichlorophenol  | 197.46         | 4.4E-06                             | 1.80E-04              | 2.91E-02                               | 7.03E-06                               | 1.19E+03                                | 1.78E+00                                | 1.20E+03              |                                        |                            |                |
| 2,4,6-Trichlorophenol  | 197.46         | 7.8E-06                             | 3.20E-04              | 3.18E-02                               | 6.25E-06                               | 1.19E+03                                | 1.78E+00                                | 8.00E+02              |                                        |                            |                |
| 1,1,2-Trichloropropane | 147.43         | 2.9E-02                             | 1.20E+00              | 4.00E-02                               | 9.30E-06                               | 5.10E+01                                | 7.65E-02                                | 2.70E+03              | 1.29E-03                               | 3.45E+03                   | 1.06E+03       |
| 1,2,3-Trichloropropane | 147.43         | 2.7E-02                             | 1.10E+00              | 7.10E-02                               | 7.90E-06                               | 5.10E+01                                | 7.65E-02                                | 2.70E+03              | 2.17E-03                               | 2.67E+03                   | 1.03E+03       |
| 1,2,3-Trichloropropene | 145.42         | 2.7E-02                             | 1.10E+00              | 7.10E-02                               | 7.90E-06                               | 5.10E+01                                | 7.65E-02                                | 2.70E+03              | 2.17E-03                               | 2.67E+03                   | 1.03E+03       |
| Triethylamine          | 101.19         | 9.0E-05                             | 3.70E-03              | 1.20E-01                               | 1.30E-05                               | 2.20E+00                                | 3.30E-03                                | 1.00E+06              | 2.92E-05                               | 2.30E+04                   | 1.77E+05       |
| 1,2,4-Trimethylbenzene | 120            | 5.6E-03                             | 2.30E-01              | 7.50E-02                               | 7.10E-06                               | 3.70E+03                                | 5.55E+00                                | 2.60E-01              | 3.14E-05                               | 2.21E+04                   | 1.50E+00       |
| 1,3,5-Trimethylbenzene | 120            | 7.8E-03                             | 3.20E-01              | 7.50E-02                               | 7.10E-06                               | 8.20E+02                                | 1.23E+00                                | 4.80E+01              | 1.75E-04                               | 9.40E+03                   | 6.92E+01       |
| 2,4,6-Trinitrotoluene  | 227.13         | 4.6E-01                             | 1.90E-05              | 2.45E-02                               | 6.36E-06                               | 1.83E+03                                | 2.75E+00                                | 1.30E+02              |                                        |                            |                |
| Vanadium               | 50.94          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 1.00E+03                                |                       |                                        |                            |                |
| Vinyl acetate          | 86             | 5.1E-04                             | 2.10E-02              | 8.50E-02                               | 9.20E-06                               | 5.30E+00                                | 7.95E-03                                | 2.00E+04              | 1.04E-04                               | 1.22E+04                   | 3.68E+03       |
| Vinyl bromide          | 106.95         | 6.3E-03                             | 2.60E-01              | 1.00E-01                               | 1.20E-05                               | 1.30E+02                                | 1.95E-01                                | 1.80E+04              | 6.84E-04                               | 4.75E+03                   | 7.19E+03       |
| Vinyl chloride         | 63             | 2.7E-02                             | 1.11E+00              | 1.10E-01                               | 1.20E-06                               | 1.86E+01                                | 2.79E-02                                | 2.80E+03              | 3.87E-03                               | 1.99E+03                   | 9.36E+02       |
| Vinyl chloride         | 63             | 2.7E-02                             | 1.11E+00              | 1.10E-01                               | 1.20E-06                               | 1.86E+01                                | 2.79E-02                                | 2.80E+03              | 3.87E-03                               | 1.99E+03                   | 9.36E+02       |
| m-Xylene               | 106            | 7.3E-03                             | 3.01E-01              | 7.00E-02                               | 7.80E-06                               | 2.00E+02                                | 3.00E-01                                | 1.61E+02              | 4.34E-04                               | 5.96E+03                   | 8.20E+01       |
| o-Xylene               | 106            | 5.2E-03                             | 2.13E-01              | 8.70E-02                               | 1.00E-05                               | 2.40E+02                                | 3.60E-01                                | 1.78E+02              | 3.48E-04                               | 6.65E+03                   | 9.95E+01       |
| Xylenes                | 106            | 7.3E-03                             | 3.00E-01              | 7.00E-02                               | 7.80E-06                               | 2.00E+02                                | 3.00E-01                                | 1.61E+02              | 4.33E-04                               | 5.96E+03                   | 8.20E+01       |
| Zinc                   | 65.38          | 2.4E-02                             | 1.00E+00              |                                        |                                        | 1.43E+01                                | 6.20E+01                                |                       |                                        |                            |                |

Notes:

MW – Molecular weight

H' – Dimensionless Henry's Law Constant

D<sub>w</sub> – Diffusivity in water

K<sub>d</sub> – Soil-water partition coefficient

D<sub>a</sub> – Apparent diffusivity (calculated for VOCs only)

SAT – Soil saturation limit (calculated for VOCs only)

H – Henry's Law Constant

D<sub>a</sub> – Diffusivity in air

K<sub>oc</sub> – Soil organic carbon partition coefficient

S – Solubility in water

VF – Volatilization factor (calculated for VOCs only)

VOC – Volatile organic compound

**APPENDIX C**

Table C-1: Human Health Benchmarks Used for Calculating SSLs

| Chemical             | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RID <sub>o</sub><br>(mg/kg-day) | Reference | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RID <sub>i</sub><br>(mg/kg-day) | Reference | ABS  |
|----------------------|-----------------------------------------------|-----------|---------------------------------|-----------|-----------------------------------------------|-----------|---------------------------------|-----------|------|
| Acenaphthene         |                                               |           | 6.00E-02                        | IRIS      |                                               |           | 6.00E-02                        | route     | 0    |
| Acetaldehyde         |                                               |           |                                 |           | 7.70E-03                                      | IRIS      | 2.60E-03                        | IRIS      | 0    |
| Acetone              |                                               |           | 9.00E-01                        | IRIS      |                                               |           | 9.00E-01                        | route     | 0    |
| Acrylonitrile        | 5.40E-01                                      | IRIS      | 1.00E-03                        | HEAST     | 2.40E-01                                      | IRIS      | 5.71E-04                        | IRIS      | 0    |
| Acetophenone         |                                               |           | 1.00E-01                        | IRIS      |                                               |           | 1.00E-01                        | route     | 0    |
| Acrolein             |                                               |           | 5.00E-04                        | IRIS      |                                               |           | 5.71E-06                        | IRIS      | 0    |
| Aldrin               | 1.72E+01                                      | IRIS      | 3.00E-05                        | IRIS      | 1.72E+01                                      | IRIS      | 3.00E-05                        | route     | 0.1  |
| Aluminum             |                                               |           | 1.00E+00                        | NCEA      |                                               |           | 1.40E-03                        | NCEA      | 0    |
| Anthracene           |                                               |           | 3.00E-01                        | IRIS      |                                               |           | 3.00E-01                        | route     | 0    |
| Antimony             |                                               |           | 4.00E-04                        | IRIS      |                                               |           |                                 |           | 0    |
| Arsenic              | 1.50E+00                                      | IRIS      | 3.00E-04                        | IRIS      | 1.51E+01                                      | IRIS      |                                 |           | 0.03 |
| Barium               |                                               |           | 2.00E-01                        | IRIS      |                                               |           | 2.00E-01                        | route     | 0    |
| Benzene              | 5.50E-02                                      | IRIS      | 4.00E-03                        | IRIS      | 2.70E-02                                      | IRIS      | 8.60E-03                        | IRIS      | 0    |
| Benzidine            | 2.30E+02                                      | IRIS      | 3.00E-03                        | IRIS      | 2.35E+02                                      | IRIS      | 3.00E-03                        | route     | 0.1  |
| Benzo(a)anthracene   | 7.30E-01                                      | NCEA      |                                 |           | 3.10E-01                                      | NCEA      |                                 |           | 0.13 |
| Benzo(a)pyrene       | 7.30E+00                                      | IRIS      |                                 |           | 3.10E+00                                      | NCEA      |                                 |           | 0.13 |
| Benzo(b)fluoranthene | 7.30E-01                                      | NCEA      |                                 |           | 3.10E-01                                      | NCEA      |                                 |           | 0.13 |
| Benzo(k)fluoranthene | 7.30E-02                                      | NCEA      |                                 |           | 3.10E-02                                      | NCEA      |                                 |           | 0.13 |
| Beryllium            |                                               |           | 2.00E-03                        | IRIS      | 8.40E+00                                      | IRIS      | 5.71E-06                        | IRIS      | 0    |
| α-BHC                | 6.30E+00                                      | IRIS      | 5.00E-04                        | NCEA      | 6.30E+00                                      | IRIS      | 5.00E-04                        | route     | 0.04 |
| β-BHC                | 1.80E+00                                      | IRIS      | 2.00E-04                        | NCEA      | 1.80E+00                                      | IRIS      | 2.00E-04                        | route     | 0.04 |
| γ-BHC                | 1.30E+00                                      | HEAST     | 3.00E-04                        | IRIS      | 3.00E-04                                      | route     | 3.00E-04                        | route     | 0.04 |
| 1,1-Biphenyl         |                                               |           | 5.00E-02                        | IRIS      |                                               |           | 5.00E-02                        | route     | 0    |

| Chemical                       | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference  | RfD <sub>o</sub><br>(mg/kg-day) | Reference  | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Reference | ABS   |
|--------------------------------|-----------------------------------------------|------------|---------------------------------|------------|-----------------------------------------------|-----------|---------------------------------|-----------|-------|
| Bis(2-chloroethyl) ether       | 1.10E+00                                      | IRIS       |                                 |            | 1.16E+00                                      | IRIS      |                                 |           | 0     |
| Bis(2-chloroisopropyl) ether   | 7.00E-02                                      | HEAST      | 4.00E-02                        |            | 3.50E-02                                      | HEAST     | 4.00E-02                        | route     | 0     |
| Bis(2-ethylhexyl) phthalate    | 1.40E-02                                      | IRIS       | 2.00E-02                        |            | 1.40E-02                                      | route     | 2.00E-02                        | route     | 0.1   |
| Bis(chloromethyl) ether        | 2.20E+02                                      | IRIS       |                                 |            | 2.17E+02                                      | IRIS      |                                 |           | 0     |
| Boron                          |                                               |            | 2.00E-01                        | IRIS       |                                               |           | 5.70E-03                        | HEAST     | 0     |
| Bromobenzene                   |                                               |            | 2.00E-02                        | NCEA       |                                               |           | 2.90E-03                        | NCEA      | 0     |
| Bromodichloromethane           | 6.20E-02                                      | IRIS       | 2.00E-02                        | IRIS       | 6.20E-02                                      | route     | 2.00E-02                        | route     | 0     |
| Bromomethane                   |                                               |            | 1.40E-03                        | IRIS       |                                               |           | 1.43E-03                        | IRIS      | 0     |
| 1,3-Butadiene                  |                                               |            |                                 |            | 1.05E-01                                      | IRIS      | 5.71E-04                        | IRIS      | 0     |
| 2-Butanone (MEK)               |                                               |            | 6.00E-01                        | IRIS       |                                               |           | 1.43E+00                        | IRIS      | 0     |
| tert-Butyl methyl ether (MTBE) | 1.80E-03                                      | Reg 6/prov | 8.60E-01                        | route      | 1.80E-03                                      | route     | 8.57E-01                        | IRIS      | 0     |
| n-Butylbenzene                 |                                               |            | 1.00E-02                        | NCEA       |                                               |           | 1.00E-02                        | route     | 0     |
| sec-Butylbenzene               |                                               |            | 1.00E-02                        | NCEA       |                                               |           | 1.00E-02                        | route     | 0     |
| tert-Butylbenzene              |                                               |            | 1.00E-02                        | NCEA       |                                               |           | 1.00E-02                        | route     | 0     |
| Cadmium                        |                                               |            | 5.00E-04                        | IRIS       | 6.30E+00                                      | IRIS      |                                 |           | 0.001 |
| Carbon disulfide               |                                               |            | 1.00E-01                        | IRIS       |                                               |           | 2.00E-01                        | IRIS      | 0     |
| Carbon tetrachloride           | 1.30E-01                                      | IRIS       | 7.00E-04                        | IRIS       | 5.25E-02                                      | IRIS      |                                 |           | 0     |
| Chlordane                      | 3.50E-01                                      | IRIS       | 5.00E-04                        | IRIS       | 3.50E-01                                      | IRIS      | 2.00E-04                        | IRIS      | 0.04  |
| 2-Chloroacetophenone           |                                               |            | 8.60E-06                        | route      |                                               |           | 8.57E-06                        | IRIS      | 0     |
| 2-Chloro-1,3-butadiene         |                                               |            | 2.00E-02                        | HEAST      |                                               |           | 2.00E-03                        | HEAST     | 0     |
| 1-Chloro-1,1-difluoroethane    |                                               |            | 1.40E+01                        | route      |                                               |           | 1.43E+01                        | IRIS      | 0     |
| Chlorobenzene                  |                                               |            | 2.00E-02                        | IRIS       |                                               |           | 1.70E-02                        | NCEA      | 0     |
| 1-Chlorobutane                 |                                               |            | 4.00E-02                        | Reg 6/prov |                                               |           | 4.00E-02                        | route     | 0     |
| Chlorodifluoromethane          |                                               |            | 4.10E+01                        | route      |                                               |           | 1.43E+01                        | IRIS      | 0     |
| Chloroethane                   | 2.90E-03                                      | NCEA       | 4.00E-01                        | NCEA       | 2.90E-03                                      | route     | 2.86E+00                        | IRIS      | 0     |
| Chloroform                     |                                               |            | 1.00E-02                        | IRIS       | 8.05E-02                                      | IRIS      | 1.35E-02                        | NCEA      | 0     |

| Chemical                    | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>o</sub><br>(mg/kg-day) | Reference | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Reference | ABS  |
|-----------------------------|-----------------------------------------------|-----------|---------------------------------|-----------|-----------------------------------------------|-----------|---------------------------------|-----------|------|
| Chloromethane               | 1.30E-02                                      | HEAST     |                                 |           | 6.30E-03                                      | HEAST     | 2.57E-02                        | IRIS      | 0    |
| β-Chloronaphthalene         |                                               |           | 8.00E-02                        | IRIS      |                                               |           | 8.00E-02                        | route     | 0    |
| o-Chloronitrobenzene        | 9.70E-03                                      | HEAST     | 1.00E-03                        | HEAST     | 9.70E-03                                      | route     | 2.00E-05                        | HEAST     | 0    |
| p-Chloronitrobenzene        | 6.70E-03                                      | HEAST     | 1.00E-03                        | HEAST     | 6.70E-03                                      | route     | 1.70E-04                        | HEAST     | 0    |
| 2-Chlorophenol              |                                               |           | 5.00E-03                        | IRIS      |                                               |           | 5.00E-03                        | route     | 0    |
| 2-Chloropropane             |                                               |           | 2.90E-02                        | route     |                                               |           | 2.90E-02                        | HEAST     | 0    |
| o-Chlorotoluene             |                                               |           | 2.00E-02                        | IRIS      |                                               |           | 2.00E-02                        | route     | 0    |
| Chromium III                |                                               |           | 1.50E+00                        | IRIS      |                                               |           |                                 |           | 0    |
| Chromium VI                 |                                               |           | 3.00E-03                        | IRIS      | 2.90E+02                                      | IRIS      | 2.85E-05                        | IRIS      | 0    |
| Chrysene                    | 7.30E-03                                      | NCEA      |                                 |           | 3.10E-03                                      | NCEA      |                                 |           | 0.13 |
| Cobalt                      |                                               |           | 2.00E-02                        | NCEA      | 9.80E+00                                      | NCEA      | 5.70E-06                        | NCEA      | 0    |
| Copper                      |                                               |           | 4.00E-02                        | HEAST     |                                               |           |                                 |           | 0    |
| Crotonaldehyde              | 1.90E+00                                      | HEAST     |                                 |           | 1.90E+00                                      | route     |                                 |           | 0    |
| Cumene (isopropylbenzene)   |                                               |           | 1.00E-01                        | IRIS      |                                               |           | 1.14E-01                        | IRIS      | 0    |
| Cyanide                     |                                               |           | 2.00E-02                        | IRIS      |                                               |           |                                 |           | 0.1  |
| Cyanogen                    |                                               |           | 4.00E-02                        | IRIS      |                                               |           |                                 |           | 0    |
| Cyanogen bromide            |                                               |           | 9.00E-02                        | IRIS      |                                               |           |                                 |           | 0    |
| Cyanogen chloride           |                                               |           | 5.00E-02                        | IRIS      |                                               |           |                                 |           | 0    |
| DDD                         | 2.40E-01                                      | IRIS      |                                 |           | 2.40E-01                                      | route     |                                 |           | 0.03 |
| DDE                         | 3.40E-01                                      | IRIS      |                                 |           | 3.40E-01                                      | route     |                                 |           | 0.03 |
| DDT                         | 3.40E-01                                      | IRIS      | 5.00E-04                        | IRIS      | 3.40E-01                                      | IRIS      | 5.00E-04                        | route     | 0.03 |
| Dibenz(a,h)anthracene       | 7.30E+00                                      | NCEA      |                                 |           | 3.10E+00                                      | NCEA      |                                 |           | 0.13 |
| Dibenzofuran                |                                               |           | 2.00E-03                        | NCEA      |                                               |           | 2.00E-03                        | route     | 0    |
| 1,2-Dibromo-3-chloropropane | 1.40E+00                                      | HEAST     | 5.70E-05                        | route     | 2.40E-03                                      | HEAST     | 5.70E-05                        | IRIS      | 0    |
| Dibromochloromethane        | 8.40E-02                                      | IRIS      | 2.00E-02                        | IRIS      | 8.40E-02                                      | route     | 2.00E-02                        | route     | 0    |
| 1,2-Dibromoethane           | 2.00E+00                                      | IRIS      | 9.00E-03                        | IRIS      | 2.00E+00                                      | IRIS      | 2.60E-03                        | IRIS      | 0    |

| Chemical                 | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RID <sub>o</sub><br>(mg/kg-day) | Reference  | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RID <sub>i</sub><br>(mg/kg-day) | Reference  | ABS |
|--------------------------|-----------------------------------------------|-----------|---------------------------------|------------|-----------------------------------------------|-----------|---------------------------------|------------|-----|
| 1,4-Dichloro-2-butene    | 9.30E+00                                      | route     |                                 |            | 9.30E+00                                      | HEAST     |                                 |            | 0   |
| 1,2-Dichlorobenzene      |                                               |           | 9.00E-02                        | IRIS       |                                               |           | 6.90E-03                        | NCEA       | 0   |
| 1,3-Dichlorobenzene      |                                               |           | 3.00E-03                        | NCEA       |                                               |           | 3.00E-03                        | NCEA       | 0   |
| 1,4-Dichlorobenzene      | 2.40E-02                                      | HEAST     | 3.00E-02                        | NCEA       | 2.20E-02                                      | NCEA      | 2.29E-01                        | IRIS       | 0   |
| 3,3-Dichlorobenzidine    | 4.50E-01                                      | IRIS      |                                 |            | 4.50E-01                                      | route     |                                 |            | 0.1 |
| Dichlorodifluoromethane  |                                               |           | 2.00E-01                        | IRIS       |                                               |           | 5.71E-02                        | HEAST      | 0   |
| 1,1-Dichloroethane       |                                               |           | 2.00E-01                        | Reg 6/prov |                                               |           | 2.00E-01                        | Reg 6/prov | 0   |
| 1,2-Dichloroethane       | 9.10E-02                                      | IRIS      | 2.00E-02                        | NCEA       | 9.10E-02                                      | IRIS      | 1.40E-03                        | NCEA       | 0   |
| cis-1,2-Dichloroethene   |                                               |           | 1.00E-02                        | HEAST      |                                               |           | 1.00E-02                        | route      | 0   |
| trans-1,2-Dichloroethene |                                               |           | 2.00E-02                        | IRIS       |                                               |           | 2.00E-02                        | route      | 0   |
| 1,1-Dichloroethene       |                                               |           | 5.00E-02                        | IRIS       |                                               |           | 5.70E-02                        | IRIS       | 0   |
| 2,4-Dichlorophenol       |                                               |           | 3.00E-03                        | IRIS       |                                               |           | 3.00E-03                        | route      | 0.1 |
| 1,2-Dichloropropane      | 6.80E-02                                      | HEAST     | 1.10E-03                        | route      | 6.80E-02                                      | route     | 1.10E-03                        | IRIS       | 0   |
| 1,3-Dichloropropene      | 1.00E-01                                      | IRIS      | 3.00E-02                        | IRIS       | 1.40E-02                                      | IRIS      | 5.71E-03                        | IRIS       | 0   |
| Dicyclopentadiene        |                                               |           | 8.00E-03                        | Reg 6/prov |                                               |           | 2.00E-03                        | Reg 6/prov | 0   |
| Dieldrin                 | 1.60E+01                                      | IRIS      | 5.00E-05                        | IRIS       | 1.61E+01                                      | IRIS      | 5.00E-05                        | route      | 0.1 |
| Diethyl phthalate        |                                               |           | 8.00E-01                        | IRIS       |                                               |           | 8.00E-01                        | route      | 0.1 |
| Dimethyl phthalate       |                                               |           | 1.00E+01                        | HEAST      |                                               |           | 1.00E+01                        | route      | 0.1 |
| Di-n-butyl phthalate     |                                               |           | 1.00E-01                        | IRIS       |                                               |           | 1.00E-01                        | route      | 0.1 |
| 2,4-Dimethylphenol       |                                               |           | 2.00E-02                        | IRIS       |                                               |           | 2.00E-02                        | route      | 0.1 |
| 4,6-Dinitro-o-cresol     |                                               |           | 1.00E-04                        | prov.      |                                               |           | 1.00E-04                        | route      | 0.1 |
| 2,4-Dinitrophenol        |                                               |           | 2.00E-03                        | IRIS       |                                               |           | 2.00E-03                        | route      | 0.1 |
| 2,4-Dinitrotoluene       |                                               |           | 2.00E-03                        | IRIS       |                                               |           | 2.00E-03                        | route      | 0.1 |
| 1,2-Diphenylhydrazine    | 8.00E-01                                      | IRIS      |                                 |            | 7.70E-01                                      | IRIS      |                                 |            | 0.1 |
| Endosulfan               |                                               |           | 6.00E-03                        | IRIS       |                                               |           | 6.00E-03                        | route      | 0.1 |
| Endrin                   |                                               |           | 3.00E-04                        | IRIS       |                                               |           | 3.00E-04                        | route      | 0.1 |

| Chemical                  | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>o</sub><br>(mg/kg-day) | Reference | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Reference | ABS  |
|---------------------------|-----------------------------------------------|-----------|---------------------------------|-----------|-----------------------------------------------|-----------|---------------------------------|-----------|------|
| Epichlorohydrin           | 9.90E-03                                      | IRIS      | 2.00E-03                        | HEAST     | 4.20E-03                                      | IRIS      | 2.86E-04                        | IRIS      | 0    |
| Ethyl acetate             |                                               |           | 9.00E-01                        | IRIS      |                                               |           | 9.00E-01                        | route     | 0    |
| Ethyl acrylate            | 4.80E-02                                      | HEAST     |                                 |           | 4.80E-02                                      | route     |                                 |           | 0    |
| Ethyl chloride            | 2.90E-03                                      | NCEA      | 4.00E-01                        | NCEA      | 2.90E-03                                      | route     | 2.86E+00                        | IRIS      | 0    |
| Ethyl ether               |                                               |           | 2.00E-01                        | IRIS      |                                               |           | 2.00E-01                        | route     | 0    |
| Ethyl methacrylate        |                                               |           | 9.00E-02                        | HEAST     |                                               |           | 9.00E-02                        | route     | 0    |
| Ethylbenzene              |                                               |           | 1.00E-01                        | IRIS      |                                               |           | 2.90E-01                        | IRIS      | 0    |
| Ethylene oxide            | 1.00E+00                                      | HEAST     |                                 |           | 3.50E-01                                      | HEAST     |                                 |           | 0    |
| Fluoranthene              |                                               |           | 4.00E-02                        | IRIS      |                                               |           | 4.00E-02                        | route     | 0.13 |
| Fluorene                  |                                               |           | 4.00E-02                        | IRIS      |                                               |           | 4.00E-02                        | route     | 0    |
| Fluoride                  |                                               |           | 6.00E-02                        | IRIS      |                                               |           |                                 |           | 0.1  |
| Furan                     |                                               |           | 1.00E-03                        | IRIS      |                                               |           | 1.00E-03                        | route     | 0    |
| Heptachlor                | 4.50E+00                                      | IRIS      | 5.00E-04                        | IRIS      | 4.55E+00                                      | IRIS      | 5.00E-04                        | route     | 0.1  |
| Hexachlorobenzene         | 1.60E+00                                      | IRIS      | 8.00E-04                        | IRIS      | 1.61E+00                                      | IRIS      | 8.00E-04                        | route     | 0.1  |
| Hexachloro-1,3-butadiene  | 7.80E-02                                      | IRIS      | 2.00E-04                        | HEAST     | 7.70E-02                                      | IRIS      | 2.00E-04                        | route     | 0.1  |
| Hexachlorocyclopentadiene |                                               |           | 6.00E-03                        | IRIS      |                                               |           | 5.71E-05                        | IRIS      | 0.1  |
| Hexachloroethane          | 1.40E-02                                      | IRIS      | 1.00E-03                        | IRIS      | 1.40E-02                                      | IRIS      | 1.00E-03                        | route     | 0.1  |
| n-Hexane                  |                                               |           | 1.10E+01                        | prov.     |                                               |           | 5.71E-02                        | IRIS      | 0    |
| HMX                       |                                               |           | 5.00E-02                        | IRIS      |                                               |           | 5.00E-02                        | route     | 0.1  |
| Hydrogen cyanide          |                                               |           | 2.00E-02                        | IRIS      |                                               |           | 8.57E-04                        | IRIS      | 0    |
| Indeno(1,2,3-c,d)pyrene   | 7.30E-01                                      | NCEA      |                                 |           | 3.10E-01                                      | NCEA      |                                 |           | 0.13 |
| Iron                      |                                               |           | 3.00E-01                        | NCEA      |                                               |           |                                 |           | 0    |
| Isobutanol                |                                               |           | 3.00E-01                        | IRIS      |                                               |           | 3.00E-01                        | route     | 0    |
| Isophorone                | 9.50E-04                                      | IRIS      | 2.00E-01                        | IRIS      | 9.50E-04                                      | route     | 2.00E-01                        | route     | 0.1  |
| Lead                      |                                               |           |                                 |           |                                               |           |                                 |           | 0    |
| Lead (tetraethyl-)        |                                               |           | 1.00E-07                        | IRIS      |                                               |           |                                 |           | 0.1  |



| Chemical                 | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>o</sub><br>(mg/kg-day) | Reference | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Reference | ABS |
|--------------------------|-----------------------------------------------|-----------|---------------------------------|-----------|-----------------------------------------------|-----------|---------------------------------|-----------|-----|
| Maleic hydrazide         |                                               |           | 5.00E-01                        | IRIS      |                                               |           | 5.00E-01                        | route     | 0   |
| Manganese                |                                               |           | 4.70E-02                        | Reg 6     |                                               |           | 1.40E-05                        | IRIS      | 0   |
| Mercury (elemental)      |                                               |           |                                 |           |                                               |           | 8.57E-05                        | IRIS      | 0   |
| Mercury (methyl)         |                                               |           | 1.00E-04                        | IRIS      |                                               |           |                                 |           | 0.1 |
| Methacrylonitrile        |                                               |           | 1.00E-04                        | IRIS      |                                               |           | 2.00E-04                        | HEAST     | 0   |
| Methionyl                |                                               |           | 2.50E-02                        | IRIS      |                                               |           | 2.50E-02                        | route     | 0   |
| Methyl acetate           |                                               |           | 1.00E+00                        | HEAST     |                                               |           | 1.00E+00                        | route     | 0   |
| Methyl acrylate          |                                               |           | 3.00E-02                        | HEAST     |                                               |           | 3.00E-02                        | route     | 0   |
| Methyl isobutyl ketone   |                                               |           | 8.00E-02                        | HEAST     |                                               |           | 8.57E-01                        | IRIS      | 0   |
| Methyl methacrylate      |                                               |           | 1.40E+00                        | IRIS      |                                               |           | 2.00E-01                        | IRIS      | 0   |
| Methyl styrene (alpha)   |                                               |           | 7.00E-02                        | HEAST     |                                               |           | 7.00E-02                        | route     | 0   |
| Methyl styrene (mixture) |                                               |           | 6.00E-03                        | HEAST     |                                               |           | 1.00E-02                        | HEAST     | 0   |
| Methylcyclohexane        |                                               |           | 8.60E-01                        | route     |                                               |           | 8.60E-01                        | HEAST     | 0   |
| Methylene bromide        |                                               |           | 1.00E-02                        | HEAST     |                                               |           | 1.00E-02                        | route     | 0   |
| Methylene chloride       | 7.50E-03                                      | IRIS      | 6.00E-02                        | IRIS      | 1.65E-03                                      | IRIS      | 8.60E-01                        | HEAST     | 0   |
| Molybdenum               |                                               |           | 5.00E-03                        | IRIS      |                                               |           |                                 |           | 0   |
| Naphthalene              |                                               |           | 2.00E-02                        | IRIS      |                                               |           | 8.57E-04                        | IRIS      | 0   |
| Nickel                   |                                               |           | 2.00E-02                        | IRIS      |                                               |           |                                 |           | 0   |
| Nitrate                  |                                               |           | 1.60E+00                        | IRIS      |                                               |           |                                 |           | 0   |
| Nitrite                  |                                               |           | 1.00E-01                        | IRIS      |                                               |           |                                 |           | 0   |
| Nitrobenzene             |                                               |           | 5.00E-04                        | IRIS      |                                               |           | 5.71E-04                        | HEAST     | 0   |
| Nitroglycerin            | 1.40E-02                                      | NCEA      |                                 |           | 1.40E-02                                      | route     |                                 |           | 0.1 |
| N-Nitrosodiethylamine    | 1.50E+02                                      | IRIS      |                                 |           | 1.51E+02                                      | IRIS      |                                 |           | 0.1 |
| N-Nitrosodimethylamine   | 5.10E+01                                      | IRIS      | 8.00E-05                        | prov.     | 4.90E+01                                      | II        | 8.00E-06                        | route     | 0.1 |
| N-Nitrosodi-n-butylamine | 5.40E+00                                      | IRIS      |                                 |           | 5.60E+00                                      | IRIS      |                                 |           | 0.1 |
| N-Nitrosodiphenylamine   | 4.90E-03                                      | IRIS      | 2.00E-02                        | prov.     | 4.90E-03                                      | route     | 2.00E-02                        | route     | 0.1 |

| Chemical                         | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>o</sub><br>(mg/kg-day) | Reference | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Reference | ABS  |
|----------------------------------|-----------------------------------------------|-----------|---------------------------------|-----------|-----------------------------------------------|-----------|---------------------------------|-----------|------|
| N-Nitrosopyrrolidine             | 2.10E+00                                      | IRIS      |                                 |           | 2.14E+00                                      | IRIS      |                                 |           | 0.1  |
| m-Nitrotoluene                   |                                               |           | 2.00E-02                        | HEAST     |                                               |           | 2.00E-02                        | route     | 0    |
| o-Nitrotoluene                   | 2.30E-01                                      | prov.     | 1.00E-02                        | HEAST     | 2.30E-01                                      | route     | 1.00E-02                        | route     | 0    |
| p-Nitrotoluene                   | 1.70E-02                                      | prov.     | 1.00E-02                        | HEAST     | 1.70E-02                                      | route     | 1.00E-02                        | route     | 0    |
| Pentachlorobenzene               |                                               |           | 8.00E-04                        | IRIS      |                                               |           | 8.00E-04                        | route     | 0.1  |
| Pentachlorophenol                | 1.20E-01                                      | IRIS      | 3.00E-02                        | IRIS      | 1.20E-01                                      | route     | 3.00E-02                        | route     | 0.25 |
| Phenanthrene (pyrene surrogate)  |                                               |           | 3.00E-02                        | IRIS      |                                               |           | 3.00E-02                        | route     | 0.1  |
| Phenol                           |                                               |           | 3.00E-01                        | IRIS      |                                               |           | 3.00E-01                        | route     | 0.1  |
| <b>Polychlorinated biphenyls</b> |                                               |           |                                 |           |                                               |           |                                 |           |      |
| Aroclor 1016                     | 7.00E-02                                      | IRIS      | 7.00E-05                        | IRIS      | 7.00E-02                                      | IRIS      | 7.00E-05                        | route     | 0.14 |
| Aroclor 1221                     | 2.00E+00                                      | IRIS      | 2.00E-05                        | IRIS      | 2.00E+00                                      | IRIS      | 2.00E-05                        | route     | 0.14 |
| Aroclor 1232                     | 2.00E+00                                      | IRIS      | 2.00E-05                        | IRIS      | 2.00E+00                                      | IRIS      | 2.00E-05                        | route     | 0.14 |
| Aroclor 1242                     | 2.00E+00                                      | IRIS      | 2.00E-05                        | IRIS      | 2.00E+00                                      | IRIS      | 2.00E-05                        | route     | 0.14 |
| Aroclor 1248                     | 2.00E+00                                      | IRIS      | 2.00E-05                        | IRIS      | 2.00E+00                                      | IRIS      | 2.00E-05                        | route     | 0.14 |
| Aroclor 1254                     | 2.00E+00                                      | IRIS      | 2.00E-05                        | IRIS      | 2.00E+00                                      | IRIS      | 2.00E-05                        | route     | 0.14 |
| Aroclor 1260                     | 2.00E+00                                      | IRIS      | 2.00E-05                        | IRIS      | 2.00E+00                                      | IRIS      | 2.00E-05                        | route     | 0.14 |
| n-Propylbenzene                  |                                               |           | 1.00E-02                        | NCEA      |                                               |           | 1.00E-02                        | route     | 0    |
| Propylene oxide                  | 2.40E-01                                      | IRIS      | 8.60E-03                        | route     | 1.30E-02                                      | IRIS      | 8.57E-03                        | IRIS      | 0    |
| Pyrene                           |                                               |           | 3.00E-02                        | IRIS      |                                               |           | 3.00E-02                        | route     | 0    |
| RDX                              | 1.10E-01                                      | IRIS      | 3.00E-03                        | IRIS      | 1.10E-01                                      | route     | 3.00E-03                        | route     | 0.1  |
| Selenium                         |                                               |           | 5.00E-03                        | IRIS      |                                               |           |                                 |           | 0    |
| Silver                           |                                               |           | 5.00E-03                        | IRIS      |                                               |           |                                 |           | 0    |
| Strontium                        |                                               |           | 6.00E-01                        | IRIS      |                                               |           |                                 |           | 0    |
| Styrene                          |                                               |           | 2.00E-01                        | IRIS      |                                               |           | 2.86E-01                        | IRIS      | 0    |
| 1,2,4,5-Tetrachlorobenzene       |                                               |           | 3.00E-04                        | IRIS      |                                               |           | 3.00E-04                        | route     | 0.1  |
| 1,1,1,2-Tetrachloroethane        | 2.60E-02                                      | IRIS      | 3.00E-02                        | IRIS      | 2.59E-02                                      | IRIS      | 3.00E-02                        | route     | 0    |

| Chemical                              | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Reference | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Reference | RfD <sub>i</sub><br>(mg/kg-day) | Abs |
|---------------------------------------|-----------------------------------------------|-----------|---------------------------------|-----------|-----------------------------------------------|-----------|---------------------------------|-----------|---------------------------------|-----|
| 1,1,2,2-Tetrachloroethane             | 2.00E-01                                      | IRIS      | 6.00E-02                        | NCEA      | 2.03E-01                                      | IRIS      | 6.00E-02                        | route     | 6.00E-02                        | 0   |
| Tetrachloroethylene                   | 5.20E-02                                      | NCEA      | 1.00E-02                        | IRIS      | 2.03E-02                                      | NCEA      | 1.14E-01                        | NCEA      | 1.14E-01                        | 0   |
| Thallium                              |                                               |           | 6.60E-05                        | IRIS      |                                               |           |                                 |           |                                 | 0   |
| Toluene                               |                                               |           | 8.00E-02                        | IRIS      |                                               |           |                                 |           | 1.40E+00                        | 0   |
| Toxaphene                             | 1.10E+00                                      | IRIS      |                                 |           | 1.12E+00                                      | IRIS      |                                 |           |                                 | 0.1 |
| Tribromomethane (Bromoform)           | 7.90E-03                                      | IRIS      | 2.00E-02                        | IRIS      | 3.85E-03                                      | IRIS      | 2.00E-02                        | route     | 2.00E-02                        | 0   |
| 1,1,2-Trichloro-1,2,2-trifluoroethane |                                               |           | 3.00E+01                        | IRIS      |                                               |           |                                 | HEAST     | 8.57E+00                        | 0   |
| 1,2,4-Trichlorobenzene                |                                               |           | 1.00E-02                        | IRIS      |                                               |           |                                 | prov.     | 1.00E-03                        | 0   |
| 1,1,1-Trichloroethane                 |                                               |           | 2.80E-01                        | NCEA      |                                               |           |                                 | NCEA      | 6.30E-01                        | 0   |
| 1,1,2-Trichloroethane                 | 5.70E-02                                      | IRIS      | 4.00E-03                        | IRIS      | 5.60E-02                                      | IRIS      | 4.00E-03                        | route     | 4.00E-03                        | 0   |
| Trichloroethene                       | 4.0E-01                                       | NCEA      | 3.00E-04                        | NCEA      | 4.0E-01                                       | NCEA      | 1.00E-02                        | NCEA      | 1.00E-02                        | 0   |
| Trichlorofluoromethane                |                                               |           | 3.00E-01                        | IRIS      |                                               |           |                                 | HEAST     | 2.00E-01                        | 0   |
| 2,4,5-Trichlorophenol                 |                                               |           | 1.00E-01                        | IRIS      |                                               |           |                                 | route     | 1.00E-01                        | 0.1 |
| 2,4,6-Trichlorophenol                 | 1.10E-02                                      | IRIS      | 1.00E-04                        | NCEA      | 1.09E-02                                      | IRIS      | 1.00E-04                        | route     | 1.00E-04                        | 0.1 |
| 1,1,2-Trichloropropane                |                                               |           | 5.00E-03                        | IRIS      |                                               |           |                                 | route     | 5.00E-03                        | 0   |
| 1,2,3-Trichloropropane                | 2.00E+00                                      | NCEA      | 6.00E-03                        | IRIS      | 2.00E+00                                      | route     | 1.40E-03                        | NCEA      | 1.40E-03                        | 0   |
| 1,2,3-Trichloropropene                |                                               |           | 1.00E-02                        | prov.     |                                               |           |                                 | prov.     | 2.90E-04                        | 0   |
| Triethylaniline                       |                                               |           | 1.99E-03                        | route     |                                               |           |                                 | IRIS      | 1.99E-03                        | 0   |
| 1,2,4-Trimethylbenzene                |                                               |           | 5.00E-02                        | NCEA      |                                               |           |                                 | NCEA      | 1.70E-03                        | 0   |
| 1,3,5-Trimethylbenzene                |                                               |           | 5.00E-02                        | NCEA      |                                               |           |                                 | NCEA      | 1.70E-03                        | 0   |
| 2,4,6-Trinitrotoluene                 | 3.00E-02                                      | IRIS      | 5.00E-04                        | IRIS      | 3.00E-02                                      | route     | 5.00E-04                        | route     | 5.00E-04                        | 0.1 |
| Vanadium                              |                                               |           | 1.00E-03                        | NCEA      |                                               |           |                                 |           |                                 | 0   |
| Vinyl acetate                         |                                               |           | 1.00E+00                        | HEAST     |                                               |           |                                 | IRIS      | 5.71E-02                        | 0   |
| Vinyl bromide (Bromomethene)          | 1.10E-02                                      | route     | 8.60E-04                        | HEAST     | 1.10E-01                                      | HEAST     | 8.57E-04                        | IRIS      | 8.57E-04                        | 0   |
| Vinyl chloride (Child)                | 1.40E+00                                      | IRIS      | 3.00E-03                        | IRIS      | 3.00E-02                                      | IRIS      | 2.80E-02                        | IRIS      | 2.80E-02                        | 0   |
| Vinyl chloride (Adult)                | 7.20E-01                                      | IRIS      | 3.00E-03                        | IRIS      | 1.54E-02                                      | IRIS      | 2.85E-02                        | IRIS      | 2.85E-02                        | 0   |

NMED Soil Screening Levels  
June 2006  
Revision 4.0

| Chemical | CSF <sub>o</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RID <sub>o</sub><br>(mg/kg-day) | Reference | CSF <sub>i</sub><br>(mg/kg-day) <sup>-1</sup> | Reference | RID <sub>i</sub><br>(mg/kg-day) | Reference | ABS |
|----------|-----------------------------------------------|-----------|---------------------------------|-----------|-----------------------------------------------|-----------|---------------------------------|-----------|-----|
| m-Xylene |                                               |           | 2.00E-01                        | IRIS      |                                               |           | 2.86E-02                        | IRIS      | 0.1 |
| o-Xylene |                                               |           | 2.00E-01                        | IRIS      |                                               |           |                                 |           | 0.1 |
| Xylenes  |                                               |           | 2.00E-01                        | IRIS      |                                               |           | 2.86E-02                        | IRIS      | 0.1 |
| Zinc     |                                               |           | 3.00E-01                        | IRIS      |                                               |           |                                 |           | 0   |

Notes:

CSF<sub>o</sub> – Oral cancer slope factor  
 CSF<sub>i</sub> – Inhalation cancer slope factor  
 RID<sub>o</sub> – Oral Reference Dose  
 RID<sub>i</sub> – Inhalation Reference Dose  
 r – Route-to-route extrapolation  
 ABS – Dermal absorption coefficient

IRIS – Integrated Risk Information System, USEPA 2006.  
 NCEA – National Center for Environmental Assessment, Office of Research and Development, USEPA 2003c.

**VOLUME 2**

**TIER 1: SCREENING-LEVEL ECOLOGICAL RISK  
ASSESSMENT**

**PHASE I  
Scoping Assessment**

## TABLE OF CONTENTS

|     |                                                                |   |
|-----|----------------------------------------------------------------|---|
| 1.  | Introduction .....                                             | 1 |
| 2.  | Scoping Assessment.....                                        | 2 |
| 2.1 | Compile and Assess Basic Site Information.....                 | 2 |
| 2.2 | Site Visit.....                                                | 3 |
| 2.3 | Identify Contaminants of Potential Ecological Concern .....    | 4 |
| 2.4 | Developing the Preliminary Conceptual Site Exposure Model..... | 4 |
| 2.5 | Assembling the Scoping Assessment Report.....                  | 6 |
| 3.  | Site Exclusion Criteria .....                                  | 9 |
| 4.  | Technical Decision Point: Is Ecological Risk Suspected? .....  | 9 |

## 1. Introduction

The purpose of an ecological risk assessment is to evaluate the potential adverse effects that chemical contamination has on the plants and animals that make up ecosystems. The risk assessment process provides a way to develop, organize and present scientific information so that it is relevant to environmental decisions.

The New Mexico Environment Department Hazardous Waste Bureau (NMED) has developed a tiered procedure for the evaluation of ecological risk. This procedure is outlined in the *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Risk Assessment* (GAERPC) (NMED, 2000). Briefly, the tiers of the procedure are organized as follows:

### PHASE I: QUALITATIVE ASSESSMENT

- Tier I: Screening-Level Ecological Risk Assessment
- Scoping Assessment
- Screening Assessment

### PHASE II: QUANTITATIVE ASSESSMENT

- Tier II: Site-Specific Ecological Risk Assessment

As discussed above and illustrated in Figure 1, the Scoping Assessment is the first phase of the Tier I Screening-Level Ecological Risk Assessment process as defined by the NMED GAERPC. This document provides specific procedures to assist the facility in conducting the first step (Scoping Assessment) of the Tier I, Screening-Level Ecological Risk Assessment process outlined in the GAERPC. The purpose of the Scoping Assessment is to gather information, which will be used to determine if there is "any reason to believe that ecological receptors and/or complete exposure pathways exist at or in the locality of the site" (NMED, 2000). The scoping assessment step also serves as the initial information-gathering phase for sites clearly in need of a more detailed assessment of potential ecological risk. This document outlines the methodology for conducting a Scoping Assessment, and includes a Site Assessment Checklist (Attachment A), which serves as tool for gathering information about the facility property and surrounding areas. Although the GAERPC provides a copy of the US EPA Checklist for Ecological Assessment/Sampling (US EPA, 1997), the attached Site Assessment Checklist provides an expanded, user-friendly template, which both guides the user as to what information to collect and furnishes an organized structure in which to enter the information.

After the Site Assessment Checklist has been completed, the assessor must use the collected information to generate a Scoping Assessment Report and Preliminary Conceptual Site Exposure Model (PCSEM). Guidance for performing these tasks is provided in this document, and in the GAERPC. The Scoping Assessment Report and PCSEM are subsequently used to address the first in a series of Technical Decision Points of the tiered GAERPC process. Technical Decision Points are questions which must be answered by the assessor after the completion of certain phases in the process. The resulting answer to the question determines the next step to be undertaken by the

facility. The first Technical Decision Point, as illustrated in Figure 1, is to decide: *Is Ecological Risk Suspected?*

If the answer to the first Technical Decision Point is “no” (that is, ecological risk is not suspected), the assessor may use the Exclusion Criteria Checklist and Decision Tree (Attachment B) to help confirm or deny that possibility. However, it is unlikely that any site containing potential ecological habitat or receptors will meet the Site Exclusion Criteria.

If ecological risk is suspected, the facility will usually be directed to proceed to the next phase of Tier I, which is a Screening Level Ecological Risk Assessment (SLERA). A SLERA is a simplified risk assessment that can be conducted with limited site-specific data by defining assumptions for parameters that lack site-specific data (US EPA, 1997). Values used for screening are consistently biased in the direction of overestimating risk to ensure that sites that might pose an ecological risk are properly identified. The completed Site Assessment Checklist is a valuable source of information needed for the completion of the SLERA. Instructions for performing a SLERA can be found in the GAERPC and in a number of EPA guidance documents (e.g., US EPA, 1997; US EPA, 1998).

## **2. Scoping Assessment**

The Scoping Assessment serves as the initial information gathering and evaluation phase of the Tier I process. A Scoping Assessment consists of the following steps:

- Compile and Assess Basic Site Information (using Site Assessment Checklist)
- Conduct Site Visit
- Identify Preliminary Contaminants of Potential Ecological Concern
- Develop a Preliminary Conceptual Site Exposure Model
- Prepare a Scoping Assessment Report

The following subsections provide guidance for completing each step of the Scoping Assessment. For additional guidance, readers should refer to the GAERPC (NMED, 2000).

### **2.1 COMPILE AND ASSESS BASIC SITE INFORMATION**

The first step of the Scoping Assessment process is to compile and assess basic site information. Since the purpose of the Scoping Assessment is to determine if ecological habitats, receptors, and complete exposure pathways are likely to exist at the site, those items are the focus of the information gathering. The Site Assessment Checklist (Attachment A) should be used to complete this step. The questions in the Site Assessment Checklist should be addressed as completely as possible with the information available before conducting a site visit.

In many cases, a large portion of the Site Assessment Checklist can be completed using reference materials and general knowledge of the site. A thorough file search should be conducted to compile all potential reference materials. Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) and Facility Investigation (RFI) reports, inspection reports, RCRA Part B Permit



Applications, and facility maps can all be good sources of the information needed for the Site Assessment Checklist.

Habitats and receptors which may be present at the site can be identified by contacting local and regional natural resource agencies. Habitat types may be determined by reviewing land use and land cover maps (LULC), which are available via the Internet at <http://www.nationalatlas.gov/scripts>. Additional sources of general information for the identification of ecological receptors and habitats are listed in the introduction section of the Site Assessment Checklist (Attachment A).

After all available information has been compiled and entered into the Site Assessment Checklist, the assessor should review the checklist and identify data gaps. Plans should then be made to obtain the missing information by performing additional research and/or by observation and investigation during the site visit.

## **2.2 SITE VISIT**

When performing a Scoping Assessment, at least one site visit should be conducted to directly assess ecological features and conditions. As discussed in the previous section, completion of the Site Assessment Checklist should have begun during the compilation of basic site information. The site visit allows for verification of the information obtained from the review of references and other information sources. The current land and surface water usage and characteristics at the site can be observed, as well as direct and indirect evidence of receptors. In addition to the site, areas adjacent to the site and all areas where ecological receptors are likely to contact site-related chemicals (i.e., all areas which may have been impacted by the release or migration of chemicals from the site) should be observed or visited and addressed in the Site Assessment Checklist. The focus of the habitat and receptor observations should be on a community level. That is, dominant plant and animal species and habitats (e.g., wetlands, wooded areas) should be identified during the site visit. Photographs should be taken during the site visit and attached to the Scoping Assessment Report. Photographs are particularly useful for documenting the nature, quality, and distribution of vegetation, other ecological features, potential exposure pathways, and any evidence of contamination or impact. While the focus of the survey is on the community level, the U.S. Fish and Wildlife Service and the New Mexico Natural Heritage Program should be contacted prior to the site visit. The intent is to determine if state listed and/or federal listed Threatened & Endangered (T&E) species or sensitive habitats may be present at the site, or if any other fish or wildlife species could occur in the area (as indicated in the Site Assessment Checklist, Section IIID). A trained biologist or ecologist should conduct the biota surveys to appropriately characterize major habitats and to determine whether T&E species are present or may potentially use the site. The site assessment should also include a general survey for T&E species and any sensitive habitats (e.g. wetlands, perennial waters, breeding areas), due to the fact that federal and state databases might not be complete.

Site visits should be conducted at times of the year when ecological features are most apparent (i.e., spring, summer, early fall). Visits during winter might not provide as much evidence of the presence or absence of receptors and potential exposure pathways.

In addition to observations of ecological features, the assessor should note any evidence of chemical releases (including visual and olfactory clues), drainage patterns, areas with apparent erosion, signs of

groundwater discharge at the surface (such as seeps or springs), and any natural or anthropogenic site disturbances.

### **2.3 IDENTIFY CONTAMINANTS OF POTENTIAL ECOLOGICAL CONCERN**

Contaminants of Potential Ecological Concern (COPECs) are chemicals which may pose a threat to individual species or biological communities. For the purposes of the Scoping Assessment, all chemicals known or suspected of being released at the site are considered COPECs. The identification of COPECs is usually accomplished by the review of historical information in which previous site activities and releases are identified, or by sampling data which confirm the presence of contaminants in environmental media at the site. If any non-chemical stressors such as mechanical disturbances or extreme temperature conditions are known to be present at the site, they too are to be considered in the assessment.

After the COPECs have been identified, they should be summarized and organized (such as in table or chart form) for presentation in the Scoping Assessment Report.

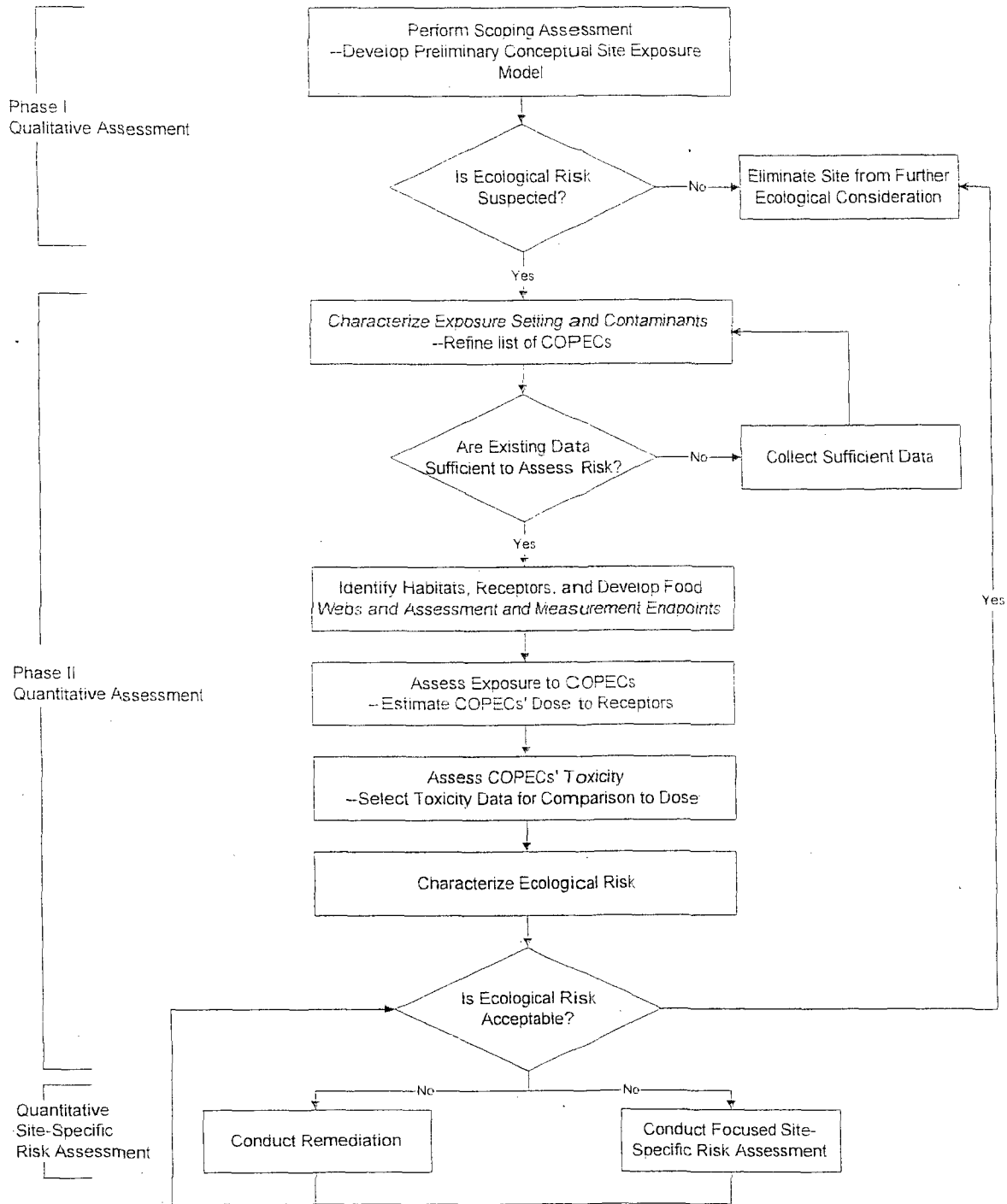
### **2.4 DEVELOPING THE PRELIMINARY CONCEPTUAL SITE EXPOSURE MODEL**

A PCSEM provides a summary of potentially complete exposure pathways, along with potentially exposed receptor types. The PCSEM, in conjunction with the scoping report, is used to determine whether further ecological assessment (i.e., Screening-Level Assessment, Site-Specific Assessment) and/or interim measures are required.

A complete exposure pathway is defined as a pathway having all of the following attributes (US EPA, 1998; NMED, 2000):

- A source and mechanism for hazardous waste/constituent release to the environment
- An environmental transport medium or mechanism by which a receptor can come into contact with the hazardous waste/constituent
- A point of receptor contact with the contaminated media or via the food web, and
- An exposure route to the receptor.

If any of the above components are missing from the exposure pathway, it is not a complete pathway for the site. A discussion regarding all possible exposure pathways and the rationale/justification for eliminating any pathways should be included in the PCSEM narrative and in the Scoping Assessment Report.



Adapted from GAERPC (NMED 2000).

**Figure 1. NMED Ecological Risk Assessment Process**

The PCSEM is presented as both a narrative discussion and a diagram illustrating potential contaminant migration and exposure pathways to ecological receptors. A sample PCSEM diagram is presented in Figure 2. On the PCSEM diagram, the components of a complete exposure pathway are grouped into three main categories: sources, release mechanisms, and potential receptors. As a contaminant migrates and/or is transformed in the environment, sources and release mechanisms can be defined as primary, secondary, and tertiary.

For example, Figure 2 depicts releases from a landfill that migrate into soils, and reach nearby surface water and sediment via storm water runoff. In this situation, the release from the landfill is considered the primary release, with infiltration as the primary release mechanism. Soil becomes the secondary source, and storm water runoff is the secondary release mechanism to surface water and sediments, the tertiary source.

Subsequent ecological exposures to terrestrial and aquatic receptors will result from this release. The primary exposure routes to ecological receptors are direct contact, ingestion, and possibly inhalation. For example, plant roots will be in direct contact with contaminated sediments, and burrowing mammals will be exposed via dermal contact with soil and incidental ingestion of contaminated soil. In addition, exposures for birds and mammals will occur as they ingest prey items through the food web.

Although completing the Site Assessment Checklist will not provide the user with a ready made PCSEM, a majority of the components of the PCSEM can be found in the information provided by the Site Assessment Checklist. The information gathered for the completion of Section II of the Site Assessment Checklist, can be used to identify sources of releases. The results of Section III, Habitat Evaluation, can be used to both identify secondary and tertiary sources and to identify the types of receptors which may be exposed. The information gathered for completion of Section IV, Exposure Pathway Evaluation, will assist users in tracing the migration pathways of releases in the environment, thus helping to identify release mechanisms and sources.

Once all of the components of the conceptual model have been identified, complete exposure pathways and receptors that have the potential for exposure to site releases can be identified.

For further guidance on constructing a PCSEM, consult the GAERPC (NMED, 2000), and EPA's Office of Solid Waste and Emergency Response's *Soil Screening Guidance: User's Guide* (1996).

## **2.5 ASSEMBLING THE SCOPING ASSESSMENT REPORT**

After completion of the previously described activities of the scoping assessment, the Scoping Assessment Report should be assembled to summarize the site information and present an evaluation of receptors and pathways at the site. The Scoping Assessment Report should be designed to support the decision made regarding the first Technical Decision Point (Is Ecological Risk Suspected?). The Scoping Assessment Report should, at a minimum, contain the following information:

- Existing Data Summary
- Site Visit Summary (including a completed Site Assessment Checklist)

- Evaluation of Receptors and Pathways
- Recommendations
- Attachments (e.g. photographs, field notes, telephone conversation logs with natural resource agencies)
- References/Data Sources

After completion, the Scoping Assessment Report and PCSEM should be submitted to NMED for review and approval. These documents will serve as a basis for decisions regarding future actions at the site.

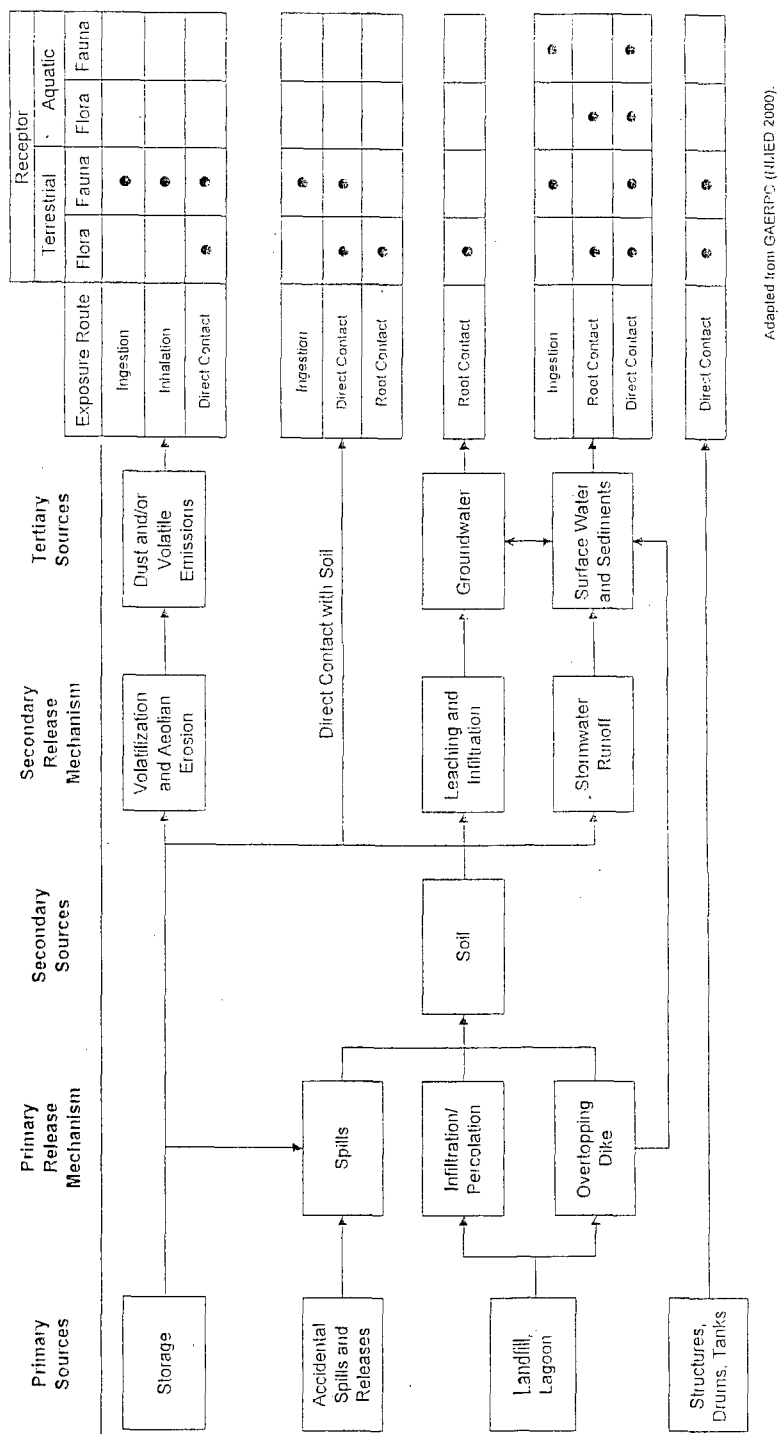


Figure 2. Example Preliminary Conceptual Site Exposure Model Diagram for a Hypothetical Site

### **3. Site Exclusion Criteria**

If the assessor believes that the answer to the first Technical Decision Point (Is Ecological Risk Suspected?) is "no" based on the results of the PCSEM and Scoping Assessment Report, it should be determined whether the facility meets the NMED Site Exclusion Criteria.

Exclusion criteria are defined as those conditions at an affected property which eliminate the need for a SLERA. The three criteria are as follows:

- Affected property does not include viable ecological habitat.
- Affected property is not utilized by potential receptors.
- Complete or potentially complete exposure pathways do not exist due to affected property setting or conditions of affected property media.

The Exclusion Criteria Checklist and associated Decision Tree (Attachment B) can be used as a tool to help the user determine if an affected site meets the exclusion criteria. The checklist assists in making a conservative, qualitative determination of whether viable habitats, ecological receptors, and/or complete exposure pathways exist at or in the locality of the site where a release of hazardous waste/constituents has occurred. Thus, meeting the exclusion criteria means that the facility can answer "no" to the first Technical Decision Point.

If the affected property meets the Site Exclusion Criteria, based on the results of the checklist and decision tree, the facility must still submit a Scoping Assessment Report to NMED which documents the site conditions and justification for how the criteria have been met. Upon review and approval of the exclusion by the appropriate NMED Bureau, the facility will not be required to conduct any further evaluation of ecological risk. However, the exclusion is not permanent; a future change in circumstances may result in the affected property no longer meeting the exclusion criteria.

### **4. Technical Decision Point: Is Ecological Risk Suspected?**

As discussed in the beginning of this document, the Scoping Assessment is the first phase of the GAERPC ecological risk assessment process (Figure 1). Following the submission of the Scoping Assessment Report and PCSEM, NMED will decide upon one of the following three recommendations for the site:

- No further ecological investigation at the site, or
- Continue the risk assessment process, and/or
- Undertake a removal or remedial action.

If the information presented in the Scoping Assessment Report supports the answer of "no" to the first Technical Decision Point, and the site meets the exclusion criteria, the site will likely be excused from further consideration of ecological risk. However, this is only true if it can be documented that a complete exposure pathway does not exist and will not exist in the future at the site based on current conditions. For those sites where valid pathways for potential exposure exist or are likely to exist in the future, further ecological risk assessment (usually in the form of a SLERA) will be

required. However, if the Scoping Assessment indicates that a detailed assessment is warranted, the facility would not be required to conduct a SLERA. Instead the facility would move directly to Tier II--Site-Specific Ecological Risk Assessment.

## References

Los Alamos National Laboratory (LANL), 1997. *Administrative Procedure 4.5*, Draft

New Mexico Environment Department (NMED), 2000. *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Risk Assessment*, Hazardous and Radioactive Materials Bureau, Final, March.

U.S. Environmental Protection Agency (US EPA), 1996. *Soil Screening Guidance: User's Guide*. Office of Solid Waste and Emergency Response. Washington, DC. EPA-540-R-96/018. July.

U.S. EPA, 1997. *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments*, Environmental Response Team, Interim Final, June 5.

U.S.EPA, 1998. *Guidelines for Ecological Risk Assessment*, Risk Assessment Forum, Final, April. EPA/630/R-95/002F; <http://www.epa.gov/ncea/ecorisk.htm>.



## Section 5.0 Groundwater Monitoring Results

| Title                                                             | Tab/Figure           | Section |
|-------------------------------------------------------------------|----------------------|---------|
| Measured Depth to Groundwater.....                                | Tab 1.....           | 9.0     |
| Direction of Groundwater Flow.....                                | Figures 4 & 5.....   | 10.0    |
| Field Water Quality Measurements.....                             | Tab 2 .....          | 9.0     |
| Comparison to Previous Monitoring.....                            | Tabs 3, 4, 5, 6..... | 9.0     |
| Tank #33 Analytical Data.....                                     | Tab 8.....           | 9.0     |
| Measured Depth to Groundwater<br>North Boundary Barrier Wall..... | Tabs 9 – 16.....     | 15.0    |
| North Boundary Barrier Analytical Data.....                       | Tabs 17, 18, 19..... | 15.0    |

## Section 6.0 Chemical Analytical Data

| <u>Title</u>                                | <u>Tab</u>           | <u>Section</u> |
|---------------------------------------------|----------------------|----------------|
| Organics.....                               | Tab 3.....           | 9.0            |
| General Chemistry.....                      | Tab 4.....           | 9.0            |
| Dissolved Metals.....                       | Tab 5.....           | 9.0            |
| Total Metals.....                           | Tab 6.....           | 9.0            |
| San Juan River Analytical Data.....         | Tab 7.....           | 9.0            |
| Tank #33 Analytical Data.....               | Tab 10.....          | 9.0            |
| North Boundary Barrier Analytical Data..... | Tabs 17, 18, 19..... | 15.0           |

## **Section 7.0 Remediation System Monitoring**

# Remediation System Monitoring

## Total Fluids Pumping

Traditionally, the primary remediation system in place at Bloomfield is separate phase hydrocarbon (SPH) removal utilizing total fluids pumping. The total fluids pumping system is used to bring SPH and hydrocarbon impacted groundwater to the surface for treatment or disposal. This is accomplished by pumping wells within the SPH plume. The recovery wells pump SPH and hydrocarbon impacted groundwater to the refinery API separator and through the refinery process wastewater treatment system. Pumping is most effective in saturated zones with high hydraulic conductivities such as those measured at the refinery. In 2006 total fluids pumping was accomplished through the use of thirteen recovery wells: RW# 1, 2, 9, 15, 16, 17, 18, 19, 22, 23, 28, 42 and 43.

In 2006 the estimated total gallons pumped from the recovery wells was 495,000 gallons.

## North Boundary Barrier Wall

The North Boundary Barrier Wall and Collection System was completed in late April of 2005. The primary purpose of the wall and collection system was to prevent the flow of hydrocarbon-impacted groundwater to the San Juan River. The wall and the collection wells were designed to accumulate fluids in the depressions or troughs of the Nacimiento Formation.

Monitoring of fluids levels on both sides of the barrier wall consists of measuring the depth to water and depth to product on an every other week basis.

Using a vacuum truck, fluids have been removed from the collection and observation wells on a 3X per week basis throughout 2006. Total calculated volume from the Observation wells (located on the north side of the slurry wall) is 500 gallons for 2006 or 10 gallons per week.

Total calculated volume removed from Collection wells (located on the south side of the slurry wall) is 16,898 gallons or 324 gallons per week. The formula used for calculating the amount of water pulled from each well is the following: Total Well Depth – Depth to Water X (Conversion Factor for Pipe Size) X 156 (Wells pulled 3X/week X 52 Weeks).

## Hammond Ditch Recovery System

The Hammond Ditch Recovery System consists of recovery tank #37, which collects groundwater from two 8-inch influent lines connected to the perforated

sub-drain (the French Drain) beneath the Hammond Ditch irrigation canal. The water collected in Tk #37 is pumped to the API Separator. The total volume pumped in 2006 was 39,675 barrels (1,666,350 gallons) or 32,045 gallons per week.

### **North Outfalls/Draws**

The lined collection and barrier systems that were installed at the point of the seeps in the draws north of the barrier wall are monitored and pumped for recovery. From May 2006 to December 2006, approximate total of 52,754 gallons was pulled from all outfalls. The majority of the fluids removed from the outfalls are from precipitation events.

Inspections of the draws north of the barrier wall indicate that the barrier wall is preventing migration of contaminated groundwater toward the San Juan River. Since installation of the barrier wall, all previous areas where seepage of fuel hydrocarbon impacted water was present have been reduced or eliminated.

As a matter of preventive maintenance, containments in the draws were upgraded periodically throughout 2006.

### **River Terrace**

The River Terrace Bioventing Project was put on-line in January 2006. Monitoring and remedial actions are following the Voluntary Measures Bioventing Monitoring Plan that has been approved by NMED and are submitted in a separate report to the agencies.

### **East Outfall**

The east outfall is collected into a pipe, which flows to Tank #38 and then to Tank #33 located just south of the western fresh water pond. Hydrocarbons are skimmed off the top of the tank into a secondary tank, which is emptied with a vacuum truck and taken to the API separator. The remaining water from Tank #33 is then piped to the fresh water pond. The total gallons pumped in 2006 were 10,011,527 gallons.

Tank #33 effluent analytical summary can be found in Section 9.

### **Overall System Capabilities**

The French Drain and the collection wells are in the same column of water. The French Drain removed 98.9% of the water south of the slurry wall. Vacuuming the Collection Wells three times per week only removed 1.1% of the water south of the slurry wall.

**Section 8.0 Summary**

## **Summary**

### **Compliance Monitoring**

#### **Groundwater Monitoring**

2006 semi-annual monitoring occurred in April. Samples were collected from all wells with the exception of wells that contained separate phase hydrocarbon or wells that were dry or did not contain enough water to pull a sample. Annual sampling started the week of August 15, 2006. Giant followed NMED guidelines from the Corrective Measures Study and Corrective Measures Implementation letter dated January 6, 2003. In conjunction, OCD guidance was followed per the Site Investigation and Abatement plan letter dated December 30, 2002. The August 11, 2006 letter from NMED (Notification to August 15, 2006 Annual GW Sampling event) included additional sampling requirements which Giant complied with.

#### **Well Elevation**

Well elevations on all monitoring wells, recovery wells, collection wells, and observation wells were also measured during the 2006 sampling events. Separate phase hydrocarbon was detected in MW #4, RW #1, RW #15, and RW #22 in April but not in August. Separate phase hydrocarbon was detected in MW #20, MW #21, MW #25, MW #40, MW #41, MW #45, MW #47, RW #2, RW #9, RW #17, RW #18, RW #19, RW #23, RW #28, RW #42, and RW #43 in both April and August.

#### **BTEX**

MW #1, MW #3, MW #7, MW #8, MW #12, MW #13, MW #27, MW #29, MW #32, MW #33, MW #35, MW #36, MW #37, MW #38, MW #44, East Outfall #2, and East Outfall #3 did not exceed the WQCC BTEX standards. MW #11 and MW #26 were over the benzene standard of 0.01 ppm in April and August 2006. MW #34 topped the benzene standard in August 2006. RW #16 surpassed the benzene standard in April 2006. MW #30, MW #31, RW #3, RW #14 exceeded the WQCC BTEX standards in April 2006. RW #15 exceeded the WQCC BTEX standards in August 2006. MW #39 surpassed benzene (0.01 ppm), ethylbenzene (0.75 ppm, and xylene (0.62 ppm) standards in April 2006.

#### **General Chemistry**

WQCC TDS standard (1000 ppm) was exceeded by MW #8, MW #11, MW #13, MW #26, MW #27, MW #32, MW #33, MW #34, MW #35, MW #35, MW #37, MW #38, and MW #15. The sulfate standard (600 ppm) was surpassed by MW #8, MW #13, MW #27, MW #32, and MW #33. The chloride standard (250 ppm) was topped by MW #8, MW #13, MW #26, MW #32, MW #33, MW #37, and RW #15.

### **Dissolved Metals**

The wells detected to have iron (1.00 ppm) and manganese (0.20 ppm) above the WQCC standard are MW #11, MW #26, MW #27, MW #34, MW #35, MW #37, MW #38 and RW #15. MW #12, MW #13, MW #36 exceeded the manganese standard. MW #26, RW #15 surpassed the barium (1.00 ppm) standard.

### **Total Metals (RCRA 8)**

Barium exceeded the MCL in MW #26.

## **North Boundary Barrier Wall**

### **Groundwater Monitoring**

At the request of NMED, initial groundwater samples from all Observation and Collection Wells that do not contain separate phase hydrocarbon were taken in May 2005 to establish a baseline. The subsequent sampling schedule of the wells associated with the North Boundary Barrier Wall coincided with the same schedule as the facility-wide compliance program. Sampling occurred in August 2005, April 2006, and again in August 2006. Following NMED directives, the wells were sampled for BTEX/MTBE (8021B), DRO (8015B), and field measurements of conductivity, pH, and temperature. Also following NMED directives, collection wells were not sampled in August 2006

### **Well Elevation**

Well elevations on all monitoring wells, recovery wells, collection wells, and observation wells were also measured during the April and August 2006 sampling events. Groundwater elevation maps were produced using the data gathered at that time even though the North Boundary Barrier Wall wells are measured on a bimonthly schedule. OW 1+50, OW 3+85, OW 16+60, and CW 8+45 had separate phase hydrocarbon present in both April and August. Separate phase hydrocarbon was detected in OW 5+50 and OW 19+50 in August.

### **Water Analysis**

OW 0+60 was over the benzene (0.01 ppm ) and xylene (0.62 ppm) WQCC standards in April and August 2006. OW 11+15, OW 23+10, MW #11, and MW #39 exceeded the benzene standard in April and August 2006. MW #39 also exceeded the ethylbenzene (0.75 ppm) and xylene standards in April and August 2006. OW 5+50 and OW 23+90 topped the benzene standard in April 2006. All of the collection wells with the exception of CW 25+95 exceeded the benzene standard in April 2006. CW 14+10 surpassed the ethylbenzene limit in April 2006. CW 16+60 and CW 19+50 were over the ethylbenzene and xylene standards in April 2006. All the wells associated with the North Boundary Barrier Wall that were analyzed for Total Dissolved Solids exceeded the WQCC TDS standard (1000 ppm) in April 2006.





## **Remedial Action and Conclusions**

### **North Boundary Barrier Wall**

Groundwater elevation maps indicate that the wall is performing as intended by capturing the water along the south side of the wall. Inspections of the draws north of the barrier wall indicate where seepage of fuel hydrocarbon impacted water was present has been reduced or eliminated.

Future remedial action will consist of continuing to remove fluids from the observation and collection wells as well as maximizing recovery systems within the facility. In addition, fluid monitoring will continue on a bimonthly schedule. The location of separate phase hydrocarbon in all wells along Hammond Ditch will be assessed and trends in detection, absence, SPH thickness, and fluid build up on both sides of the barrier will be assessed.

### **River Terrace Investigation**

The system was put on-line in January 2006. Monitoring and remedial actions are following the Voluntary Measures Bioventing Monitoring Plan that has been approved by NMED.

Monitoring results and conclusions will be presented in the River Terrace Bioventing Project Annual Report due in January 2008.

### **Future Remedial Actions**



Future monitoring and remedial action will be addressed in an updated monitoring plan that will be submitted to the agencies for approval. The updated plan will attempt to incorporate all the current projects and remediation systems that are situated at Giant – Bloomfield Refinery.



## Section 9.0 List of Tables

| <u>Title</u>                                    | <u>Tab</u> |
|-------------------------------------------------|------------|
| Measured Depth to Groundwater.....              | 1          |
| Water Quality Field Measurements.....           | 2          |
| Summary of Groundwater Chemical Analytical Data |            |
| Organics.....                                   | 3          |
| General Chemistry.....                          | 4          |
| Dissolved Metals.....                           | 5          |
| Total Metals.....                               | 6          |
| Summary of San Juan River Analytical Data.....  | 7          |
| Summary of Tank #33 Analytical Data.....        | 8          |

## Groundwater Elevation Information

All Monitoring Wells, Recovery Wells, Observation Wells, Collections Wells. And Sump Wells were resurveyed in February 2006. All Measuring Point Elevations were updated with the 2006 survey for this report.

The following equations were used to calculate "Corrected Groundwater Elevation":

$$(1) \text{ Separate Phase Hydrocarbon not detected} = \text{MPE} - \text{DTW}$$

$$(2) \text{ Separate Phase Hydrocarbon detected} = \text{MPE} - \text{DTW} + (\text{DTW} - \text{DTP} \times 0.8)$$

$$\text{Separate Phase Hydrocarbon Thickness} = \text{DTW} - \text{DTP}$$

MPE = Measuring Point Elevation

DTW = Depth to Water

DTP = Depth to Product

## Groundwater Elevation

| Date      | Well ID | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|---------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| 8/23/2006 | MW-01   | 5519.21                   | 21.56            | NPP                    | 17.35                | 5501.86                         | NPP                                  |
| 4/13/2006 |         | 5519.21                   | 21.56            | NPP                    | 17.23                | 5501.98                         | NPP                                  |
| 8/23/2006 | MW-03   | 5539.27                   | 36.75            | NPP                    | 36.36                | 5502.91                         | NPP                                  |
| 4/12/2006 |         | 5539.27                   | 36.75            | NPP                    | 36.19                | 5503.08                         | NPP                                  |
| 8/16/2006 | MW-04   | 5527.78                   | 30.48            | NPP                    | 26.85                | 5500.93                         | NPP                                  |
| 4/19/2006 |         | 5527.78                   | 30.48            | 26.78                  | 26.79                | 5501.00                         | 0.01                                 |
| 8/16/2006 | MW-05   | 5548.56                   | 37.2             | NPP                    | NWP                  |                                 | NPP                                  |
| 4/13/2006 |         | 5548.56                   | 37.2             | NPP                    | NWP                  |                                 | NPP                                  |
| 8/16/2006 | MW-06   | 5554.61                   | 48               | NPP                    | NWP                  |                                 | NPP                                  |
| 4/13/2006 |         | 5554.61                   | 48               | NPP                    | NWP                  |                                 | NPP                                  |
| 8/22/2006 | MW-07   | 5527.66                   | 62.61            | NPP                    | 27.14                | 5500.52                         | NPP                                  |
| 4/12/2006 |         | 5527.66                   | 62.61            | NPP                    | 27.8                 | 5499.86                         | NPP                                  |
| 8/23/2006 | MW-08   | 5534.58                   | 35.93            | NPP                    | 31.79                | 5502.79                         | NPP                                  |
| 4/12/2006 |         | 5534.58                   | 35.93            | NPP                    | 31.66                | 5502.92                         | NPP                                  |
| 8/15/2006 | MW-11   | 5510.31                   | 22.94            | NPP                    | 10.57                | 5499.74                         | NPP                                  |
| 4/17/2006 |         | 5510.31                   | 22.94            | NPP                    | 11.11                | 5499.20                         | NPP                                  |
| 8/15/2006 | MW-12   | 5501.61                   | 14.98            | NPP                    | 10.07                | 5491.54                         | NPP                                  |
| 4/5/2006  |         | 5501.61                   | 14.98            | NPP                    | 9.68                 | 5491.93                         | NPP                                  |
| 8/17/2006 | MW-13   | 5542.04                   | 52.89            | NPP                    | 40.19                | 5501.85                         | NPP                                  |
| 4/12/2006 |         | 5542.04                   | 52.89            | NPP                    | 40.09                | 5501.95                         | NPP                                  |
| 8/21/2006 | MW-20   | 5519.9                    | 27.13            | 20.74                  | 20.86                | 5499.14                         | 0.12                                 |
| 4/19/2006 |         | 5519.9                    | 27.13            | 20.69                  | 20.76                | 5499.20                         | 0.07                                 |
| 8/21/2006 | MW-21   | 5521.99                   | 30.38            | 21.84                  | 21.9                 | 5500.14                         | 0.06                                 |
| 4/13/2006 |         | 5521.99                   | 30.38            | 21.79                  | 21.84                | 5500.19                         | 0.05                                 |
| 8/16/2006 | MW-25   | 5533.99                   | 41.2             | 32.48                  | 32.84                | 5501.44                         | 0.36                                 |
| 4/20/2006 |         | 5533.99                   | 41.2             | 32.42                  | 32.67                | 5501.52                         | 0.25                                 |
| 8/17/2006 | MW-26   | 5517.88                   | 25.11            | NPP                    | 17.06                | 5500.82                         | NPP                                  |
| 4/11/2006 |         | 5517.88                   | 25.11            | NPP                    | 17.06                | 5500.82                         | NPP                                  |
| 8/17/2006 | MW-27   | 5518.67                   | 24.42            | NPP                    | 18.37                | 5500.30                         | NPP                                  |
| 4/10/2006 |         | 5518.67                   | 24.42            | NPP                    | 18.38                | 5500.29                         | NPP                                  |

NPP = No Product Present

NWP = No Water Present

## Groundwater Elevation

| Date      | Well ID | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|---------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| 8/16/2006 | MW-29   | 5524.97                   | 28.62            | NPP                    | 23.25                | 5501.72                         | NPP                                  |
| 4/13/2006 |         | 5524.97                   | 28.62            | NPP                    | 23.01                | 5501.96                         | NPP                                  |
| 8/16/2006 | MW-30   | 5536.83                   | 40.13            | NPP                    | 33.93                | 5502.90                         | NPP                                  |
| 4/17/2006 |         | 5536.83                   | 40.13            | NPP                    | 33.69                | 5503.14                         | NPP                                  |
| 8/16/2006 | MW-31   | 5536.24                   | 39.16            | NPP                    | 33.92                | 5502.32                         | NPP                                  |
| 4/10/2006 |         | 5536.24                   | 39.16            | NPP                    | 33.79                | 5502.45                         | NPP                                  |
| 8/17/2006 | MW-32   | 5525.64                   | 27.51            | NPP                    | 24.75                | 5500.89                         | NPP                                  |
| 4/6/2006  |         | 5525.64                   | 27.51            | NPP                    | 24.65                | 5500.99                         | NPP                                  |
| 8/17/2006 | MW-33   | 5521.79                   | 25.51            | NPP                    | 21.99                | 5499.80                         | NPP                                  |
| 4/10/2006 |         | 5521.79                   | 25.51            | NPP                    | 22.02                | 5499.77                         | NPP                                  |
| 8/15/2006 | MW-34   | 5511.63                   | 20.96            | NPP                    | 13.44                | 5498.19                         | NPP                                  |
| 4/5/2006  |         | 5511.63                   | 20.96            | NPP                    | 13.77                | 5497.86                         | NPP                                  |
| 8/15/2006 | MW-35   | 5518.95                   | 26.45            | NPP                    | 21.69                | 5497.26                         | NPP                                  |
| 4/5/2006  |         | 5518.95                   | 26.45            | NPP                    | 21.24                | 5497.71                         | NPP                                  |
| 8/15/2006 | MW-36   | 5516.95                   | 23.26            | NPP                    | 20.19                | 5496.76                         | NPP                                  |
| 4/5/2006  |         | 5516.95                   | 23.26            | NPP                    | 20.62                | 5496.33                         | NPP                                  |
| 8/15/2006 | MW-37   | 5519.62                   | 27.58            | NPP                    | 23.5                 | 5496.12                         | NPP                                  |
| 4/5/2006  |         | 5519.62                   | 27.58            | NPP                    | 23.23                | 5496.39                         | NPP                                  |
| 8/15/2006 | MW-38   | 5519.19                   | 26.82            | NPP                    | 23.29                | 5495.90                         | NPP                                  |
| 4/6/2006  |         | 5519.19                   | 26.82            | NPP                    | 23.49                | 5495.70                         | NPP                                  |
| 8/21/2006 | MW-39   | 5520.83                   | 38.34            | NPP                    | 26.24                | 5494.59                         | NPP                                  |
| 4/11/2006 |         | 5520.83                   | 38.34            | NPP                    | 25.21                | 5495.62                         | NPP                                  |
| 8/16/2006 | MW-40   | 5527.31                   | 30.07            | 27.31                  | 27.51                | 5499.96                         | 0.20                                 |
| 4/20/2006 |         | 5527.31                   | 30.07            | 27.62                  | 27.66                | 5499.68                         | 0.04                                 |
| 8/16/2006 | MW-41   | 5526.41                   | 31.62            | 25.99                  | 26.22                | 5500.37                         | 0.23                                 |
| 4/20/2006 |         | 5526.41                   | 31.62            | 25.97                  | 26.18                | 5500.40                         | 0.21                                 |
| 8/16/2006 | MW-44   | 5535.44                   | 50.91            | NPP                    | 34.4                 | 5501.04                         | NPP                                  |
| 4/13/2006 |         | 5535.44                   | 50.91            | NPP                    | 33.76                | 5501.68                         | NPP                                  |
| 8/21/2006 | MW-45   | 5506.36                   | 16.92            | 11.23                  | 11.25                | 5495.13                         | 0.02                                 |
| 4/3/2006  |         | 5506.36                   | 16.92            | 11.3                   | 11.34                | 5495.05                         | 0.04                                 |

NPP = No Product Present

NWP = No Water Present

## Groundwater Elevation

| Date      | Well ID | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|---------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| 8/21/2006 | MW-46   | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| 4/3/2006  |         | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| 8/21/2006 | MW-47   | 5506.77                   | 14.28            | 12.01                  | 12.89                | 5494.58                         | 0.88                                 |
| 4/3/2006  |         | 5506.77                   | 14.28            | 12.05                  | 12.84                | 5494.56                         | 0.79                                 |
| 8/16/2006 | P-03    | 5510.77                   | 22.73            | NPP                    | 10.56                | 5500.21                         | NPP                                  |
| 4/20/2006 |         | 5510.77                   | 22.73            | NPP                    | 10.65                | 5500.12                         | NPP                                  |
| 8/23/2006 | RW-01   | 5529.34                   | 40.8             | NPP                    | 29.97                | 5499.37                         | NPP                                  |
| 4/20/2006 |         | 5529.34                   | 40.8             | 30.12                  | 30.14                | 5499.22                         | 0.02                                 |
| 8/22/2006 | RW-02   | 5526.94                   | 35.86            | 25.85                  | 26.83                | 5500.89                         | 0.98                                 |
| 4/20/2006 |         | 5526.94                   | 35.86            | 26.02                  | 26.03                | 5500.92                         | 0.01                                 |
| 8/16/2006 | RW-03   | 5520.35                   | 34.57            | NPP                    | 21.02                | 5499.33                         | NPP                                  |
| 4/17/2006 |         | 5520.35                   | 34.57            | NPP                    | 21.14                | 5499.21                         | NPP                                  |
| 8/22/2006 | RW-09   | 5523.21                   | 34.04            | 24.39                  | 24.52                | 5498.79                         | 0.13                                 |
| 4/19/2006 |         | 5523.21                   | 34.04            | 24.41                  | 24.55                | 5498.77                         | 0.14                                 |
| 8/22/2006 | RW-14   | 5537.5                    | 41.94            | NPP                    | 35.12                | 5502.38                         | NPP                                  |
| 4/17/2006 |         | 5537.5                    | 41.94            | NPP                    | 34.86                | 5502.64                         | NPP                                  |
| 8/22/2006 | RW-15   | 5536.83                   | 43.43            | NPP                    | 34.83                | 5502.00                         | NPP                                  |
| 4/18/2006 |         | 5536.83                   | 43.43            | 34.56                  | 34.57                | 5502.27                         | 0.01                                 |
| 8/22/2006 | RW-16   | 5535.45                   | 41.48            | NPP                    | 33.73                | 5501.72                         | NPP                                  |
| 4/20/2006 |         | 5535.45                   | 41.48            | NPP                    | 33.61                | 5501.84                         | NPP                                  |
| 8/24/2006 | RW-17   | 5533.84                   | 41.89            | 32.72                  | 32.73                | 5501.12                         | 0.01                                 |
| 4/18/2006 |         | 5533.84                   | 41.89            | 32.7                   | 32.72                | 5501.14                         | 0.02                                 |
| 8/22/2006 | RW-18   | 5529.38                   | 37.58            | 29.23                  | 29.25                | 5500.15                         | 0.02                                 |
| 4/18/2006 |         | 5529.38                   | 37.58            | 20.3                   | 20.54                | 5509.03                         | 0.24                                 |
| 8/22/2006 | RW-19   | 5530.51                   | 36.64            | 29.68                  | 29.69                | 5500.83                         | 0.01                                 |
| 4/18/2006 |         | 5530.51                   | 36.64            | 29.73                  | 29.84                | 5500.76                         | 0.11                                 |

NPP = No Product Present

NWP = No Water Present

## Groundwater Elevation

| Date      | Well ID | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|---------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| 8/22/2006 | RW-22   | 5524.44                   | 35.6             | NPP                    | 25.03                | 5499.41                         | NPP                                  |
| 4/18/2006 |         | 5524.44                   | 35.6             | 25                     | 25.01                | 5499.44                         | 0.01                                 |
| 8/22/2006 | RW-23   | 5521.38                   | 35.53            | 23.06                  | 23.11                | 5498.31                         | 0.05                                 |
| 4/18/2006 |         | 5521.38                   | 35.53            | 23.15                  | 23.16                | 5498.23                         | 0.01                                 |
| 8/22/2006 | RW-28   | 5527.93                   | 36.99            | 28.23                  | 28.93                | 5499.56                         | 0.70                                 |
| 4/18/2006 |         | 5527.93                   | 36.99            | 28.11                  | 28.46                | 5499.75                         | 0.35                                 |
| 8/22/2006 | RW-42   | 5527.48                   | 32.02            | 26.16                  | 26.98                | 5501.16                         | 0.82                                 |
| 4/18/2006 |         | 5527.48                   | 32.02            | 26.69                  | 27.19                | 5500.69                         | 0.50                                 |
| 8/22/2006 | RW-43   | 5515.74                   | 24.03            | 20.32                  | 20.68                | 5495.35                         | 0.36                                 |
| 4/18/2006 |         | 5515.74                   | 24.03            | 20.3                   | 20.54                | 5495.39                         | 0.24                                 |

NPP = No Product Present

NWP = No Water Present

## Water Quality Field Measurements

| DATE   | RW/MW  | DEPTH TO LIQUID (ft) | Depth to Product | WELL DEPTH | E.C. (umhos/cm) | pH   | TEMP. (Fahrenheit) | D.O (mg/L) | ORP |
|--------|--------|----------------------|------------------|------------|-----------------|------|--------------------|------------|-----|
| Aug-06 | MW #1  | 17.35                | NPP              | 21.56      | 952             | 7.03 | 64                 | 0.9        | 223 |
| Apr-06 |        | 17.23                | NPP              | 21.56      | 815             | 6.84 | 56                 | NR         | NR  |
| Aug-05 |        | 17.98                | NPP              | 21.56      | 986             | 7.02 | 63                 | 9.2        | 106 |
| Aug-06 | MW #3  | 36.36                | NPP              | 36.75      | NS              | NS   | NS                 | NS         | NS  |
| Apr-06 |        | 36.19                | NPP              | 36.75      | 7212            | 7.02 | 65                 | NR         | NR  |
| Aug-05 |        | 36.44                | NPP              | 36.75      | 7685            | 6.98 | 67                 | NS         | -44 |
| Aug-06 | MW #4  | 26.85                | NPP              | 30.48      | NS              | NS   | NS                 | NS         | NS  |
| Apr-06 |        | 26.79                | 26.78            | 30.48      | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-05 |        | 27.4                 | 27.17            | 30.48      | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-06 | MW #5  | NWP                  | NPP              | 37.2       | NS              | NS   | NS                 | NS         | NS  |
| Apr-06 |        | NWP                  | NPP              | 37.2       | NS              | NS   | NS                 | NS         | NS  |
| Aug-05 |        | NWP                  | NPP              | 37.2       | NS              | NS   | NS                 | NS         | NS  |
| Aug-06 | MW #6  | NWP                  | NPP              | 47.92      | NS              | NS   | NS                 | NS         | NS  |
| Apr-06 |        | NWP                  | NPP              | 47.92      | NS              | NS   | NS                 | NS         | NS  |
| Aug-05 |        | NWP                  | NPP              | 47.92      | NS              | NS   | NS                 | NS         | NS  |
| Aug-06 | MW #7  | 27.14                | NPP              | 62.61      | NS              | NS   | NS                 | NS         | NS  |
| Apr-06 |        | 27.8                 | NPP              | 62.61      | 8497            | 7.04 | 64                 | NR         | NR  |
| Aug-05 |        | 27.8                 | NPP              | 62.61      | NR              | NR   | NR                 | NR         | NR  |
| Aug-06 | MW #8  | 31.79                | NPP              | 35.93      | 2966            | 7.04 | 61                 | 0.5        | 231 |
| Apr-06 |        | 31.56                | NPP              | 35.93      | 2791            | 6.97 | 58                 | NR         | NR  |
| Aug-05 |        | 32.82                | NPP              | 35.93      | 2730            | 6.91 | 59                 | 7.3        | 114 |
| Aug-06 | MW #11 | 10.57                | NPP              | 22.94      | 2066            | 6.91 | 66                 | 1.4        | 253 |
| Apr-06 |        | 11.76                | NPP              | 22.94      | 2084            | 7.03 | 68                 | >13.0      | -55 |
| Aug-05 |        | 11.09                | NPP              | 22.94      | 1768            | 6.68 | 53                 | NR         | NR  |
| Aug-06 | MW #12 | 10.07                | NPP              | 14.98      | 875             | 7.01 | 65                 | 0.37       | 158 |
| Apr-06 |        | 9.68                 | NPP              | 14.98      | 1049            | 6.86 | 49                 | NR         | NR  |
| Aug-05 |        | 12.35                | NPP              | 14.98      | 4291            | 6.90 | 65                 | 12.4       | 94  |
| Aug-06 | MW #13 | 40.19                | NPP              | 52.89      | 3993            | 6.93 | 62                 | 0.56       | 246 |
| Apr-06 |        | 40.09                | NPP              | 52.89      | 4108            | 7.06 | 63                 | NR         | NR  |
| Aug-05 |        | 40.4                 | NPP              | 52.89      | 4113            | 6.94 | 63                 | 6.2        | 166 |
| Aug-06 | MW #20 | 20.86                | 20.74            | 27.13      | SPH             | SPH  | SPH                | SPH        | SPH |
| Apr-06 |        | 20.76                | 20.69            | 27.13      | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-05 |        | 21.12                | 20.88            | 27.13      | SPH             | SPH  | SPH                | SPH        | SPH |

SPH = Well Contains Separate Phase Hydrocarbon - No Sample

NS = Well is Dry or not Enough to Sample - No Sample

NM = Not Measured - Not a Well

NR = Not Required to Sample

NWP = No Water Present

NPP = No Product Present



## Water Quality Field Measurements

| DATE   | RW/MW  | DEPTH TO LIQUID (ft) | Depth to Product | WELL DEPTH | E.C. (umhos/cm) | pH   | TEMP. (Fahrenheit) | D.O (mg/L) | ORP |
|--------|--------|----------------------|------------------|------------|-----------------|------|--------------------|------------|-----|
| Aug-06 | MW #21 | 21.9                 | 21.84            | 30.38      | SPH             | SPH  | SPH                | SPH        | SPH |
| Apr-06 |        | 21.84                | 21.79            | 30.38      | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-05 |        | 21.97                | 21.96            | 30.38      | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-06 | MW #25 | 32.84                | 32.48            | 41.2       | SPH             | SPH  | SPH                | SPH        | SPH |
| Apr-06 |        | 33.67                | 32.42            | 41.2       | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-05 |        | 33.09                | 32.67            | 41.2       | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-06 | MW #26 | 17.06                | NPP              | 25.11      | 2741            | 6.97 | 65                 | 0.17       | 224 |
| Apr-06 |        | 17.06                | NPP              | 25.11      | 2666            | 6.90 | 60                 | NR         | NR  |
| Aug-05 |        | 17.9                 | NPP              | 25.11      | 2543            | 6.99 | 66                 | 7.4        | -29 |
| Aug-06 | MW #27 | 18.37                | NPP              | 24.42      | 3453            | 6.99 | 65                 | 0.05       | 234 |
| Apr-06 |        | 18.38                | NPP              | 24.42      | 3888            | 7.12 | 60                 | NR         | NR  |
| Aug-05 |        | 19.67                | NPP              | 24.42      | 3404            | 6.94 | 63                 | >13.0      | -66 |
| Aug-06 | MW #29 | 23.25                | NPP              | 28.62      | NR              | NR   | NR                 | NR         | NR  |
| Apr-06 |        | 23.01                | NPP              | 28.62      | 1561            | 6.88 | 61                 | NR         | NR  |
| Aug-05 |        | 23.07                | 23.06            | 28.62      | SPH             | SPH  | SPH                | SPH        | SPH |
| Aug-06 | MW #30 | 33.93                | NPP              | 40.13      | NR              | NR   | NR                 | NR         | NR  |
| Apr-06 |        | 33.69                | NPP              | 40.13      | 3246.3          | 6.9  | 65.1               | NR         | NR  |
| Aug-05 |        | 33.90                | NPP              | 40.13      | NR              | NR   | NR                 | NR         | NR  |
| Aug-06 | MW #31 | 33.92                | NPP              | 39.16      | NR              | NR   | NR                 | NR         | NR  |
| Apr-06 |        | 33.79                | NPP              | 39.16      | 3891.7          | 7.0  | 63.5               | NR         | NR  |
| Aug-05 |        | 34.07                | NPP              | 39.16      | NR              | NR   | NR                 | NR         | NR  |
| Aug-06 | MW #32 | 24.75                | NPP              | 27.51      | 4561            | 6.99 | 62                 | 5.1        | 247 |
| Apr-06 |        | 24.65                | NPP              | 27.51      | 3898            | 6.78 | 56                 | NR         | NR  |
| Aug-05 |        | 25.34                | NPP              | 27.51      | 3936            | 6.93 | 60                 | NR         | 142 |
| Aug-06 | MW #33 | 21.99                | NPP              | 25.51      | 4484            | 6.96 | 64                 | 1.3        | 228 |
| Apr-06 |        | 22.02                | NPP              | 25.51      | 4868            | 7.07 | 60                 | NR         | NR  |
| Aug-05 |        | 22.64                | NPP              | 25.51      | 4595            | 7.02 | 63                 | >13.0      | 106 |
| Aug-06 | MW #34 | 13.44                | NPP              | 20.96      | 1532            | 6.95 | 63                 | 0.1        | 234 |
| Apr-06 |        | 13.77                | NPP              | 20.96      | 2168            | 6.92 | 53                 | NR         | NR  |
| Aug-05 |        | 14.37                | NPP              | 20.96      | 2147            | 6.97 | 63                 | 7.6        | -40 |
| Aug-06 | MW #35 | 21.69                | NPP              | 26.45      | 2276            | 6.98 | 63                 | 0.1        | 233 |
| Apr-06 |        | 21.24                | NPP              | 26.45      | 2081            | 6.94 | 58                 | NR         | NR  |
| Aug-05 |        | 23.9                 | NPP              | 26.45      | 2029            | 6.97 | 62                 | 5.6        | -40 |

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NWP = No Water Present

NPP = No Product Present

## Water Quality Field Measurements

| DATE   | RW/MW  | DEPTH TO LIQUID (ft) | Depth to Product | WELL DEPTH | E.C. (umhos/cm) | pH   | TEMP. (Farenheit) | D.O (mg/L) | ORP   |
|--------|--------|----------------------|------------------|------------|-----------------|------|-------------------|------------|-------|
| Aug-06 | MW #36 | 20.19                | NPP              | 23.26      | 1450            | 6.94 | 62                | 0.1        | 217   |
| Apr-06 |        | 20.62                | NPP              | 23.26      | 2271            | 6.88 | 54                | NR         | NR    |
| Aug-05 |        | 21.57                | NPP              | 23.26      | 1695            | 7.05 | 66                | 7.9        | -78   |
| Aug-06 | MW #37 | 23.5                 | NPP              | 27.58      | 2978            | 6.90 | 61                | 0.1        | 237   |
| Apr-06 |        | 23.23                | NPP              | 27.58      | 2774            | 6.93 | 58                | NR         | NR    |
| Aug-05 |        | 24.2                 | NPP              | 27.58      | 2132            | 6.97 | 62                | 4.1        | -56   |
| Aug-06 | MW #38 | 23.29                | NPP              | 26.82      | 2199            | 6.90 | 60                | 2.8        | 238   |
| Apr-06 |        | 23.49                | NPP              | 26.82      | 2299            | 6.94 | 56                | NR         | NR    |
| Aug-05 |        | 25.13                | NPP              | 26.82      | 2073            | 7.05 | 65                | 9.4        | -62   |
| Aug-06 | MW #39 | 26.24                | NPP              | 38.34      | 5625.0          | 7.04 | 65.0              | 0.3        | 201.7 |
| Apr-06 |        | 25.21                | NPP              | 38.34      | 5697.7          | 6.96 | 61.8              | NR         | NR    |
| Aug-05 |        | 27.43                | NPP              | 38.34      | NR              | NR   | NR                | NR         | NR    |
| Aug-06 | MW #40 | 27.51                | 27.31            | 30.07      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Apr-06 |        | 27.66                | 27.32            | 30.07      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 27.72                | 27.62            | 30.07      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-06 | MW #41 | 26.22                | 25.99            | 31.62      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Apr-06 |        | 26.18                | 25.97            | 31.62      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 27.15                | 26.70            | 31.62      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-06 | MW #44 | 34.4                 | NPP              | 50.91      | NR              | NR   | NR                | NR         | NR    |
| Apr-06 |        | 33.76                | NPP              | 50.91      | 5585.3          | 6.8  | 62.5              | NR         | NR    |
| Aug-05 |        | 34.6                 | 34.59            | 50.91      | NR              | NR   | NR                | NR         | NR    |
| Aug-06 | MW #45 | 11.25                | 11.23            | 16.92      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Apr-06 |        | 11.30                | 11.24            | 16.92      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 11.90                | 11.07            | 16.92      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-06 | MW #46 | NS                   | NPP              | 10.39      | NS              | NS   | NS                | NS         | NS    |
| Apr-06 |        | NS                   | NPP              | 10.39      | NS              | NS   | NS                | NS         | NS    |
| Aug-05 |        | 10.19                | NPP              | 10.39      | NS              | NS   | NS                | NS         | NS    |
| Aug-06 | MW #47 | 12.89                | 12.01            | 14.28      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Apr-06 |        | 12.84                | 12.05            | 14.28      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 12.51                | 12.40            | 14.28      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-06 | MW #48 | NR                   | NR               | 17.3       | NR              | NR   | NR                | NR         | NR    |
| Apr-06 |        | NR                   | NR               | 17.3       | NR              | NR   | NR                | NR         | NR    |
| Aug-05 |        | 7.62                 | NPP              | 17.3       | 2703            | 6.96 | 69                | 1.6        | 190   |

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## Water Quality Field Measurements

| DATE   | RW/MW  | DEPTH TO LIQUID (ft) | Depth to Product | WELL DEPTH | E.C. (umhos/cm) | pH   | TEMP. (Farenheit) | D.O (mg/L) | ORP   |
|--------|--------|----------------------|------------------|------------|-----------------|------|-------------------|------------|-------|
| Aug-06 | MW #49 | NR                   | NR               | 16.5       | NR              | NR   | NR                | NR         | NR    |
| Apr-06 |        | NR                   | NR               | 16.5       | NR              | NR   | NR                | NR         | NR    |
| Aug-05 |        | 9.57                 | NPP              | 16.5       | 2393            | 6.96 | 60                | >13.0      | -193  |
| Aug-06 | O/F #2 | NWP                  | NWP              | NWP        | NWP             | NWP  | NWP               | NWP        | NWP   |
| Apr-06 |        | NM                   | NM               | NM         | 967             | 6.98 | 53                | NR         | NR    |
| Aug-05 |        | NM                   | NM               | NM         | 882             | 7.06 | 65                | >13.0      | 143   |
| Aug-06 | O/F #3 | NM                   | NM               | NM         | 398             | 7.04 | 62                | NR         | 208   |
| Apr-06 |        | NM                   | NM               | NM         | 1166            | 6.92 | 52                | NR         | NR    |
| Aug-05 |        | NM                   | NM               | NM         | 1149            | 7.05 | 65                | >13.0      | 168   |
| Aug-06 | RW #3  | 21.02                | NPP              | 34.57      | NR              | NR   | NR                | NR         | NR    |
| Apr-06 |        | 21.14                | NPP              | 34.57      | 3403            | 6.83 | 63                | NR         | NR    |
| Aug-05 |        | 21.74                | 21.73            | 34.57      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-06 | RW #14 | 35.12                | NPP              | 41.94      | NR              | NR   | NR                | NR         | NR    |
| Apr-06 |        | 34.86                | NPP              | 41.94      | 4228.0          | 6.82 | 61.5              | NR         | NR    |
| Aug-05 |        | 35.04                | NPP              | 41.94      | NR              | NR   | NR                | NR         | NR    |
| Aug-06 | RW #15 | 34.83                | NPP              | 43.43      | 3149.3          | 7.0  | 61.0              | 3.3        | 231.0 |
| Apr-06 |        | 34.57                | 34.56            | 43.43      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 34.73                | NPP              | 43.43      | NR              | NR   | NR                | NR         | NR    |
| Aug-06 | RW #16 | 33.73                | NPP              | 41.48      | NR              | NR   | NR                | NR         | NR    |
| Apr-06 |        | 33.61                | NPP              | 41.48      | 34              | 6.83 | 61                | NR         | NR    |
| Aug-05 |        | 33.84                | 33.82            | 41.48      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-06 | RW #17 | 32.73                | 32.72            | 41.89      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Apr-06 |        | 32.72                | 32.7             | 41.89      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 33.06                | 32.98            | 41.89      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-06 | RW #18 | 29.25                | 29.23            | 37.58      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Apr-06 |        | 30.38                | 28.97            | 37.58      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 29.24                | NPP              | 37.58      | 3469            | 6.99 | 65                | NR         | -103  |
| Aug-06 | RW #22 | 25.03                | NPP              | 35.61      | NR              | NR   | NR                | NR         | NR    |
| Apr-06 |        | 25.01                | 25               | 35.61      | SPH             | SPH  | SPH               | SPH        | SPH   |
| Aug-05 |        | 25.46                | 25.45            | 35.61      | SPH             | SPH  | SPH               | SPH        | SPH   |

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# ORGANICS

## Groundwater Analysis

| EPA Method 8021B : August 2005 & 2006 EPA Method 8260B |                 |          |          |          |          |           |           |           |           |           |           |                          |
|--------------------------------------------------------|-----------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------|
| mg/L                                                   | DATE<br>SAMPLED | MW<br>#1 | MW<br>#3 | MW<br>#7 | MW<br>#8 | MW<br>#11 | MW<br>#12 | MW<br>#13 | MW<br>#21 | MW<br>#26 | MW<br>#27 | WQCC 20 NMAG<br>6.2:3103 |
| Benzene                                                | Aug-06          | <0.001   | NS       | NR       | <0.001   | 0.24      | <0.001    | <0.001    | NR        | 0.33      | <0.001    | 0.01                     |
|                                                        | Apr-06          | <0.001   | <0.001   | <0.001   | <0.001   | 3.2       | 0.001     | <0.001    | NR        | 0.29      | 0.0058    |                          |
|                                                        | Aug-05          | 0.0011   | <0.001   | NR       | <0.001   | 4.2       | <0.001    | <0.001    | NR        | 0.89      | <0.001    |                          |
|                                                        | Apr-05          | 0.0013   | <0.0005  | <0.0005  | 0.00053  | 0.4       | <0.0005   | <0.0005   | 0.13      | 1.3       | <0.0005   |                          |
| Toluene                                                | Aug-06          | <0.001   | NS       | NR       | <0.001   | <0.001    | <0.001    | <0.001    | NR        | <0.002    | <0.001    | 0.75                     |
|                                                        | Apr-06          | <0.001   | <0.001   | <0.001   | <0.001   | <0.005    | <0.001    | <0.001    | NR        | 0.073     | <0.001    |                          |
|                                                        | Aug-05          | <0.001   | <0.001   | NR       | <0.001   | <0.05     | <0.001    | <0.001    | NR        | <0.01     | <0.001    |                          |
|                                                        | Apr-05          | <0.0005  | <0.0005  | <0.0005  | <0.0005  | <0.02     | <0.0005   | <0.0005   | <0.0025   | <0.02     | <0.0005   |                          |
| EthylBen                                               | Aug-06          | <0.001   | NS       | NR       | <0.001   | 0.012     | <0.001    | <0.001    | NR        | 0.48      | <0.001    | 0.75                     |
|                                                        | Apr-06          | <0.001   | <0.001   | <0.001   | <0.001   | <0.005    | <0.001    | <0.001    | NR        | 0.3       | <0.001    |                          |
|                                                        | Aug-05          | <0.001   | <0.001   | NR       | <0.001   | 0.11      | <0.001    | <0.001    | NR        | 0.47      | <0.001    |                          |
|                                                        | Apr-05          | <0.0005  | <0.0005  | <0.0005  | <0.0005  | <0.02     | <0.0005   | <0.0005   | 0.025     | 0.44      | <0.0005   |                          |
| Xylene                                                 | Aug-06          | <0.003   | NS       | NR       | <0.003   | 0.045     | <0.003    | <0.003    | NR        | <0.06     | <0.003    | 0.62                     |
|                                                        | Apr-06          | <0.003   | <0.003   | <0.003   | <0.003   | 0.23      | <0.003    | <0.003    | NR        | <0.060    | 0.0042    |                          |
|                                                        | Aug-05          | <0.001   | <0.001   | NR       | <0.001   | 0.5       | 0.0085    | <0.001    | NR        | 0.25      | <0.001    |                          |
|                                                        | Apr-05          | 0.0011   | <0.0005  | 0.00067  | 0.0008   | 0.28      | 0.00072   | <0.0005   | 0.028     | 0.45      | 0.001     |                          |
| MTBE                                                   | Aug-06          | <0.0015  | NS       | NR       | <0.0015  | 0.033     | <0.015    | 0.007     | NR        | 0.038     | <0.0015   |                          |
|                                                        | Apr-06          | <0.0025  | <0.0025  | <0.0025  | <0.0025  | <0.120    | <0.025    | 0.01      | NR        | <0.005    | <0.0025   |                          |
|                                                        | Aug-05          | <0.001   | <0.001   | NR       | <0.001   | <0.05     | <0.001    | 0.015     | NR        | <0.01     | <0.001    |                          |
|                                                        | Apr-05          | <0.0025  | <0.0025  | <0.0025  | <0.0025  | <0.1      | 0.0025    | 0.014     | 0.041     | <0.1      | <0.0025   |                          |

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# ORGANICS

## Groundwater Analysis

| EPA Method 8021B : August 2005 & 2006 EPA Method 8260B |              |         |        |        |         |         |         |         |         |         |         |                       |
|--------------------------------------------------------|--------------|---------|--------|--------|---------|---------|---------|---------|---------|---------|---------|-----------------------|
| mg/L                                                   | DATE SAMPLED | MW #29  | MW #30 | MW #31 | MW #32  | MW #33  | MW #34  | MW #35  | MW #36  | MW #37  | MW #38  | WQCG 20 NMAG 6:2.3103 |
| Benzene                                                | Aug-06       | NR      | NR     | NR     | <0.001  | <0.001  | 0.032   | <0.005  | <0.001  | <0.001  | <0.001  | 0.01                  |
|                                                        | Apr-06       | <0.001  | 3.5    | 6.1    | <0.001  | <0.001  | <0.001  | <0.001  | <0.001  | <0.001  | <0.001  |                       |
|                                                        | Aug-05       | NR      | NR     | NR     | <0.001  | <0.001  | <0.005  | <0.001  | <0.001  | <0.001  | <0.001  |                       |
|                                                        | Apr-05       | <0.0005 | 5.7    | 2.6    | <0.0005 | <0.0005 | <0.0025 | <0.0025 | <0.0005 | <0.0025 | <0.0005 |                       |
| Toluene                                                | Aug-06       | NR      | NR     | NR     | <0.001  | <0.001  | <0.005  | <0.005  | <0.001  | <0.001  | <0.001  | 0.75                  |
|                                                        | Apr-06       | <0.001  | 1.4    | 1.5    | <0.001  | 0.0016  | 0.03    | 0.038   | 0.016   | 0.0053  | 0.0029  |                       |
|                                                        | Aug-05       | NR      | NR     | NR     | <0.001  | <0.001  | <0.005  | <0.001  | <0.001  | <0.001  | <0.001  |                       |
|                                                        | Apr-05       | <0.0005 | 3.7    | 0.062  | <0.0005 | <0.0005 | 0.024   | <0.0025 | <0.0005 | <0.0025 | <0.0005 |                       |
| EthylBen                                               | Aug-06       | NR      | NR     | NR     | <0.001  | <0.001  | <0.005  | <0.005  | <0.001  | <0.001  | <0.001  | 0.75                  |
|                                                        | Apr-06       | <0.001  | 2.6    | 0.94   | <0.001  | <0.001  | 0.0055  | 0.011   | 0.0046  | <0.001  | <0.001  |                       |
|                                                        | Aug-05       | NR      | NR     | NR     | <0.001  | <0.001  | <0.005  | <0.001  | <0.001  | <0.001  | <0.001  |                       |
|                                                        | Apr-05       | <0.0005 | 4.4    | 0.45   | <0.0005 | <0.0005 | 0.0041  | <0.0025 | <0.0005 | <0.0025 | <0.0005 |                       |
| Xylene                                                 | Aug-06       | NR      | NR     | NR     | <0.003  | <0.003  | <0.015  | <0.015  | <0.003  | <0.003  | <0.003  | 0.62                  |
|                                                        | Apr-06       | <0.003  | 6.8    | 4.5    | <0.003  | <0.003  | 0.021   | 0.039   | 0.014   | 0.003   | <0.003  |                       |
|                                                        | Aug-05       | NR      | NR     | NR     | <0.001  | <0.001  | <0.005  | <0.001  | 0.0016  | <0.001  | <0.001  |                       |
|                                                        | Apr-05       | <0.0005 | 12     | 1.2    | <0.0005 | <0.0005 | 0.0039  | 0.0026  | 0.0019  | <0.0025 | 0.0015  |                       |
| MTBE                                                   | Aug-06       | NR      | NR     | NR     | <0.0015 | <0.0015 | <0.075  | <0.075  | <0.015  | <0.0015 | 0.0038  |                       |
|                                                        | Apr-06       | 0.0045  | <0.620 | <0.120 | <0.0025 | <0.0025 | <0.0025 | <0.0025 | <0.0025 | <0.0025 | 0.0045  |                       |
|                                                        | Aug-05       | NR      | NR     | NR     | <0.001  | <0.001  | 0.0057  | 0.0065  | 0.0032  | 0.0017  | 0.0062  |                       |
|                                                        | Apr-05       | 0.0037  | <0.10  | <0.250 | <0.0025 | <0.0025 | <0.013  | <0.013  | <0.0025 | <0.013  | 0.0071  |                       |

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# ORGANICS

## Groundwater Analysis

| EPA Method 8021B : August 2005 & 2006 EPA Method 8260B |                 |           |           |           |           |          |           |           |           |           |           |                           |
|--------------------------------------------------------|-----------------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|---------------------------|
| mg/L                                                   | DATE<br>SAMPLED | MW<br>#39 | MW<br>#44 | MW<br>#48 | MW<br>#49 | RW<br>#3 | RW<br>#14 | RW<br>#15 | RW<br>#16 | RW<br>#18 | RW<br>#22 | WQCC 20/NMAC<br>6.2-3.103 |
| Benzene                                                | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 20        | NR        | NR        | NR        | 0.01                      |
|                                                        | Apr-06          | 0.28      | <0.001    | NR        | NR        | 24       | 1.2       | NR        | 0.81      | NR        | NR        |                           |
|                                                        | Aug-05          | NR        | NR        | 0.62      | 0.093     | NR       | NR        | NR        | NR        | 1.2       | NR        |                           |
|                                                        | Apr-05          | 0.52      | <0.0005   | 0.48      | 0.041     | 0.1      | 1.7       | 9         | 1.8       | 0.92      | 9.8       |                           |
| Toluene                                                | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 20        | NR        | NR        | NR        | 0.75                      |
|                                                        | Apr-06          | 0.05      | <0.001    | NR        | NR        | 28       | 10        | NR        | <0.002    | NR        | NR        |                           |
|                                                        | Aug-05          | NR        | NR        | 0.026     | <0.002    | NR       | NR        | NR        | NR        | <.1       | NR        |                           |
|                                                        | Apr-05          | 0.057     | <0.0005   | <0.025    | 0.0068    | 0.1      | 1.5       | 11        | <0.025    | 0.16      | 0.083     |                           |
| EthylBen                                               | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 7.2       | NR        | NR        | NR        | 0.75                      |
|                                                        | Apr-06          | 0.9       | <0.001    | NR        | NR        | 2.7      | 2.5       | NR        | 0.056     | NR        | NR        |                           |
|                                                        | Aug-05          | NR        | NR        | 2.5       | 0.015     | NR       | NR        | NR        | NR        | 0.28      | NR        |                           |
|                                                        | Apr-05          | 1.3       | <0.0005   | 1.7       | 0.015     | 0.1      | 3.4       | 2.5       | 0.17      | 0.54      | 1.8       |                           |
| Xylene                                                 | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 43        | NR        | NR        | NR        | 0.62                      |
|                                                        | Apr-06          | 0.89      | <0.003    | NR        | NR        | 15       | 15        | NR        | <0.006    | NR        | NR        |                           |
|                                                        | Aug-05          | NR        | NR        | 9.9       | 0.004     | NR       | NR        | NR        | NR        | 0.54      | NR        |                           |
|                                                        | Apr-05          | 1.5       | <0.0005   | 7.5       | 0.024     | 0.45     | 20        | 19        | 0.12      | 1.1       | 7.9       |                           |
| MTBE                                                   | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | <0.380    | NR        | NR        | NR        |                           |
|                                                        | Apr-05          | <0.005    | 0.0028    | NR        | NR        | 0.75     | <0.620    | NR        | <0.005    | NR        | NR        |                           |
|                                                        | Aug-05          | NR        | NR        | <0.02     | <0.002    | NR       | NR        | NR        | NR        | <0.1      | NR        |                           |
|                                                        | Apr-05          | <0.05     | 0.0041    | <0.13     | <0.0025   | <0.05    | <0.5      | <0.1      | <0.13     | 8.9       | 9.6       |                           |

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

# ORGANICS

## Groundwater Analysis

| EPA Method 8021B : August 2005 EPA Method 8260B |              |         |         |                       |  |  |
|-------------------------------------------------|--------------|---------|---------|-----------------------|--|--|
| mg/L                                            | DATE SAMPLED | O/F #2  | O/F #3  | WQCC 20 NMAG 6:2:3103 |  |  |
| Benzene                                         | Aug-06       | NS      | <0.001  | 0.01                  |  |  |
|                                                 | Apr-06       | <0.001  | <0.001  |                       |  |  |
|                                                 | Aug-05       | <0.001  | <0.001  |                       |  |  |
|                                                 | Apr-05       | <0.0005 | <0.0005 |                       |  |  |
| Toluene                                         | Aug-06       | NS      | <0.001  | 0.75                  |  |  |
|                                                 | Apr-06       | <0.001  | <0.001  |                       |  |  |
|                                                 | Aug-05       | <0.001  | <0.001  |                       |  |  |
|                                                 | Apr-05       | <0.0005 | <0.0005 |                       |  |  |
| EthylBen                                        | Aug-06       | NS      | <0.001  | 0.75                  |  |  |
|                                                 | Apr-06       | <0.001  | <0.001  |                       |  |  |
|                                                 | Aug-05       | <0.001  | <0.001  |                       |  |  |
|                                                 | Apr-05       | <0.0005 | <0.0005 |                       |  |  |
| Xylene                                          | Aug-06       | NS      | <0.003  | 0.62                  |  |  |
|                                                 | Apr-06       | <0.003  | <0.003  |                       |  |  |
|                                                 | Aug-05       | <0.001  | <0.001  |                       |  |  |
|                                                 | Apr-05       | <0.0005 | <0.0005 |                       |  |  |
| MTBE                                            | Aug-06       | NS      | <0.0015 |                       |  |  |
|                                                 | Apr-06       | <0.0025 | <0.0025 |                       |  |  |
|                                                 | Aug-05       | <0.001  | <0.001  |                       |  |  |
|                                                 | Apr-05       | <0.0025 | <0.0025 |                       |  |  |

NR = Not Required to Sample  
 NS = Well is Dry or Not Enough Water to Sample- No Sample

# GENERAL CHEMISTRY

## Groundwater Analysis

| EPA Method 300.0 |              |       |       |       |       |        |        |        |        |        |                      |  |
|------------------|--------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|----------------------|--|
| mg/L             | DATE SAMPLED | MW #1 | MW #3 | MW #7 | MW #8 | MW #11 | MW #12 | MW #13 | MW #21 | MW #26 | WQCC 20 NMAG 6.23103 |  |
| Fluoride         | Aug-06       | 0.65  | NS    | NR    | 0.67  | 0.1    | 0.36   | 0.12   | NR     | 0.36   | 1.6                  |  |
|                  | Aug-05       | 0.68  | 0.33  | NR    | 0.79  | 0.56   | 0.43   | 0.15   | NR     | 0.42   |                      |  |
|                  | Aug-04       | 0.63  | NS    | 0.75  | 0.64  | 0.41   | 0.52   | 0.2    | 0.18   | 0.29   |                      |  |
|                  | Aug-03       | 0.58  | 0.17  | NR    | 0.66  | 0.44   | 0.32   | 0.19   | NR     | 0.39   |                      |  |
| Chloride         | Aug-06       | 17    | NS    | NR    | 300   | 82     | 19     | 310    | NR     | 410    | 250                  |  |
|                  | Aug-05       | 31    | 1200  | NR    | 260   | 85     | 100    | 320    | NR     | 290    |                      |  |
|                  | Aug-04       | 29    | NS    | 25    | 250   | 97     | 130    | 330    | 420    | 230    |                      |  |
|                  | Aug-03       | 33    | 1400  | NR    | 260   | 150    | 130    | 510    | NR     | 160    |                      |  |
| Nitrite          | Aug-06       | 1.2   | NS    | NR    | 26    | <1.0   | <0.10  | 8.3    | NR     | <0.50  |                      |  |
|                  | Aug-05       | <0.10 | <0.50 | NR    | <0.50 | <0.10  | <0.10  | 0.23   | NR     | <0.50  |                      |  |
|                  | Aug-04       | <0.10 | NS    | <0.10 | NR    | NR     | NR     | 1.6    | <0.10  | <0.10  |                      |  |
|                  | Aug-03       | <0.10 | NR    | NR    | <0.10 | <0.10  | <0.10  | <0.10  | NR     | <0.10  |                      |  |
| Bromide          | Aug-06       | <0.50 | NS    | NR    | 1.5   | 1      | <0.50  | 3.7    | NR     | 5.2    |                      |  |
|                  | Aug-05       | <0.50 | 4.5   | NR    | <2.5  | 1.4    | 0.75   | 4.6    | NR     | 4.5    |                      |  |
|                  | Aug-04       | 0.14  | NS    | 0.14  | 1.2   | 0.97   | 0.78   | 4.3    | 3.4    | 4.2    |                      |  |
|                  | Aug-03       | 0.32  | 22    | NR    | 5     | 5.3    | 3.7    | 13     | NR     | 2.9    |                      |  |
| Nitrogen         | Aug-06       | NR    | NS    | NR    | NR    | <0.10  | <0.10  | NR     | NR     | NR     | 10                   |  |
|                  | Aug-05       | 2.1   | 42    | NR    | 27    | <0.10  | <0.10  | 6.1    | NR     | <0.10  |                      |  |
|                  | Aug-04       | 1.9   | NS    | <0.10 | NR    | NR     | NR     | 6.6    | <0.10  | <0.10  |                      |  |
|                  | Aug-03       | 1.6   | 41    | NR    | 14    | <0.10  | <0.10  | 12     | NR     | <0.10  |                      |  |
| P                | Aug-06       | <0.50 | NS    | NR    | <0.50 | <0.50  | <0.50  | <0.50  | NR     | <0.50  |                      |  |
|                  | Aug-05       | <0.50 | <0.50 | NR    | <0.50 | <0.50  | <0.50  | <0.50  | NR     | <0.50  |                      |  |
|                  | Aug-04       | <0.50 | NS    | <0.50 | <0.50 | <0.50  | NR     | <0.50  | <0.50  | <0.50  |                      |  |
|                  | Aug-03       | <0.50 | <0.50 | NR    | <0.50 | <0.50  | <0.50  | <0.50  | NR     | <0.50  |                      |  |
| Sulfate          | Aug-06       | 190   | NS    | NR    | 980   | 19     | 140    | 1100   | NR     | 0.68   | 600                  |  |
|                  | Aug-05       | 190   | 2300  | NR    | 740   | 20     | 2400   | 1000   | NR     | <0.50  |                      |  |
|                  | Aug-04       | 220   | NS    | 5100  | 920   | 13     | 680    | 950    | 1400   | <0.50  |                      |  |
|                  | Aug-03       | 200   | 1900  | NR    | 950   | 4.2    | 3100   | 840    | NR     | 1.00   |                      |  |

NR = Not Required to Sample

NA = Not Analyzed

NS = Well is Dry or Not Enough Water to Sample- No Sample

NW = New Well After August 2004



# GENERAL CHEMISTRY

## Groundwater Analysis

| mg/L      | DATE SAMPLED | MW #1  | MW #3 | MW #7 | MW #8 | MW #11 | MW #12 | MW #13 | MW #21 | MW #26 | WQGC-20 NMAC 6.2.3103 |
|-----------|--------------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-----------------------|
| EPA 160.1 | TDS          | Aug-06 | 640   | NS    | NR    | 2200   | 1400   | 560    | NR     | 1700   | 1000                  |
|           |              | Aug-05 | 650   | 6200  | NR    | 2000   | 1500   | 4000   | NR     | 1600   |                       |
|           |              | Aug-04 | 650   | NS    | 7400  | 2100   | 1500   | 1600   | 3400   | 1600   |                       |
|           |              | Aug-03 | 610   | 5700  | NR    | 2100   | 1100   | 5500   | NR     | 1400   |                       |
| EPA 120.1 | E.C.         | Aug-06 | 940   | NS    | NR    | 3200   | 2200   | 890    | NR     | 2900   |                       |
|           | (umhos/cm)   | Aug-05 | 980   | 8300  | NR    | 2900   | 2200   | 4600   | NR     | 2700   |                       |
|           |              | Aug-04 | 870   | NS    | 7800  | 2600   | 2100   | 1900   | 4000   | 2200   |                       |
|           |              | Aug-03 | 820   | 8500  | NR    | 2900   | 2500   | 6600   | NR     | 1900   |                       |
|           | D.O.         | Aug-06 | 0.93  | NS    | NR    | 0.47   | 1.36   | 0.37   | NR     | 0.16   |                       |
|           |              | Aug-05 | 9.2   | NS    | NR    | 7.3    | >13.0  | 12.4   | NR     | 7.4    |                       |
|           |              | Aug-04 | 5.4   | NS    | 2.8   | 2.9    | 13.8   | 9.3    | 4      | 7.5    |                       |
|           |              | Aug-03 | 6.5   | 6.5   | NR    | 7.1    | 5.6    | 5.3    | NR     | 4.9    |                       |
|           | O.R.P.       | Aug-06 | 223   | NS    | NR    | 231    | 253    | 158    | NR     | 224    |                       |
|           |              | Aug-05 | 106   | -44   | NR    | 114    | -55    | 94     | NR     | -29    |                       |
|           |              | Aug-04 | -532  | -11   | 84    | 142    | -36    | 151    | -43    | -33    |                       |
|           |              | Aug-03 | 105   | 105   | NR    | 176    | -5.3   | 81     | NR     | -63    |                       |
| EPA 310.1 | CO2          | Aug-06 | 240   | NS    | NR    | 200    | 1100   | 260    | NR     | 990    |                       |
|           |              | Aug-05 | 300   | 680   | NR    | 260    | 1100   | 310    | NR     | 1000   |                       |
|           |              | Aug-04 | 220   | NS    | 98    | 210    | 330    | 970    | 600    | 910    |                       |
|           |              | Aug-03 | 240   | NR    | NR    | 220    | 1300   | 310    | NR     | 1300   |                       |
|           | Alk          | Aug-06 | 270   | NS    | NR    | 210    | 1100   | 290    | NR     | 960    |                       |
|           |              | Aug-05 | 300   | 680   | NR    | 260    | 1100   | 310    | NR     | 1000   |                       |
|           |              | Aug-04 | 240   | NS    | 110   | 230    | 390    | 1100   | 670    | 1000   |                       |
|           |              | Aug-03 | 262   | NR    | NR    | 208    | 1120   | 319    | NR     | 1090   |                       |

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

NA = Not Analyzed

NW = New Well After August 2004

# GENERAL CHEMISTRY

## Groundwater Analysis

| EPA Method 300.0 |              |        |        |        |        |        |        |        |        |        |                       |
|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|
| mg/L             | DATE SAMPLED | MW #27 | MW #29 | MW #30 | MW #31 | MW #32 | MW #33 | MW #34 | MW #35 | MW #36 | WQCC 20 NMAG 6.2.3103 |
| Fluoride         | Aug-06       | 0.38   | NR     | NR     | NR     | 0.19   | 0.23   | 0.95   | 0.48   | 0.69   | 1.6                   |
|                  | Aug-05       | 0.24   | NR     | NR     | NR     | 0.27   | 0.3    | 0.81   | 0.45   | 0.52   |                       |
|                  | Aug-04       | 0.2    | 0.31   | 0.18   | 0.19   | 0.24   | 0.21   | 0.62   | 0.36   | 0.4    |                       |
|                  | Aug-03       | 0.22   | NR     | NR     | NR     | 0.18   | 0.24   | 0.57   | 0.39   | NA     |                       |
| Chloride         | Aug-06       | 150    | NR     | NR     | NR     | 940    | 560    | 60     | 180    | 65     | 250                   |
|                  | Aug-05       | 260    | NR     | NR     | NR     | 710    | 560    | 100    | 100    | 60     |                       |
|                  | Aug-04       | 290    | 35     | 360    | 370    | 650    | 550    | 100    | 110    | 100    |                       |
|                  | Aug-03       | 360    | NR     | NR     | NR     | 940    | 750    | 120    | 120    | NR     |                       |
| Nitrite          | Aug-06       | <0.50  | NR     | NR     | NR     | 5.6    | 33     | <1.0   | <1.0   | <1.0   |                       |
|                  | Aug-05       | <1.0   | NR     | NR     | NR     | <2.0   | <0.5   | <0.1   | <0.1   | <0.1   |                       |
|                  | Aug-04       | <0.1   | <0.10  | <0.10  | <0.10  | <0.10  | NR     | <0.10  | <0.10  | <0.10  |                       |
|                  | Aug-03       | <0.1   | NR     | NR     | NR     | <1.0   | <1.0   | <0.10  | <0.10  | NA     |                       |
| Bromide          | Aug-06       | 1.1    | NR     | NR     | NR     | 3.4    | 3      | 0.8    | 2.3    | 0.76   |                       |
|                  | Aug-05       | 2.1    | NR     | NR     | NR     | 2.9    | 3.2    | 1.2    | 1.2    | 0.54   |                       |
|                  | Aug-04       | 3.1    | <0.10  | 5.6    | 7.2    | 2.9    | 3.2    | 1.2    | 1.2    | 1      |                       |
|                  | Aug-03       | 4.7    | NR     | NR     | NR     | 13     | 19     | 5.1    | 2.1    | NR     |                       |
| Nitrogen         | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | <0.10  | <0.10  | <0.10  | 10                    |
|                  | Aug-05       | <0.1   | NR     | NR     | NR     | 8.7    | 26     | 0.1    | 0.1    | <0.10  |                       |
|                  | Aug-04       | <0.1   | 0.6    | <0.10  | 0.14   | 5      | NR     | <0.10  | <0.10  | <0.10  |                       |
|                  | Aug-03       | <0.1   | NR     | NR     | NR     | 22     | 26     | <0.10  | <0.10  | NA     |                       |
| P                | Aug-06       | <0.5   | NR     | NR     | NR     | <0.50  | <0.50  | <0.50  | <0.50  | <0.50  |                       |
|                  | Aug-05       | <0.5   | NR     | NR     | NR     | <0.50  | <0.50  | <0.50  | <0.50  | <0.50  |                       |
|                  | Aug-04       | <0.5   | <0.50  | <0.10  | <0.50  | <0.50  | ND     | <0.50  | <0.50  | <0.50  |                       |
|                  | Aug-03       | <0.5   | NR     | NR     | NR     | <0.50  | <0.50  | <0.50  | <0.50  | NR     |                       |
| Sulfate          | Aug-06       | 1700   | NR     | NR     | NR     | 940    | 1600   | 27     | 3.2    | 71     | 600                   |
|                  | Aug-05       | 1000   | NR     | NR     | NR     | 780    | 1500   | 9      | 3.2    | 66     |                       |
|                  | Aug-04       | 120    | 150    | 720    | 750    | 580    | 1600   | 29     | 1.7    | 16     |                       |
|                  | Aug-03       | 6.8    | NR     | NR     | NR     | 1200   | 1200   | 150    | 6.6    | NA     |                       |

NR = Not Required to Sample

NA = Not Analyzed

NS = Well is Dry or Not Enough Water to Sample- No Sample

NW = New Well After August 2004

# GENERAL CHEMISTRY

## Groundwater Analysis

|           | mg/L       | DATE<br>SAMPLED | MW<br>#27 | MW<br>#29 | MW<br>#30  | MW<br>#31 | MW<br>#32 | MW<br>#33 | MW<br>#34 | MW<br>#35 | MW<br>#36 | WQCC-20 NMAC<br>6.2.3103 |
|-----------|------------|-----------------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------|
| EPA 160.1 | TDS        | Aug-06          | 3000      | NR        | NR         | NR        | 3100      | 3400      | 1100      | 1500      | 910       | 1000                     |
|           |            | Aug-05          | 2600      | NR        | NR         | NR        | 2600      | 3500      | 1500      | 1400      | 920       |                          |
|           |            | Aug-04          | 1700      | 550       | 3100       | 2800      | 2400      | 3700      | 1500      | 1400      | 1200      |                          |
|           |            | Aug-03          | 1700      | NR        | NR         | NR        | 3800      | 3400      | 1700      | 1300      | NA        |                          |
| EPA 120.1 | E.C.       | Aug-06          | 3700      | NR        | NR         | NR        | 4900      | 4800      | 1600      | 2400      | 1400      |                          |
|           | (umhos/cm) | Aug-05          | 3500      | NR        | NR         | NR        | 4100      | 4700      | 2200      | 2100      | 1600      |                          |
|           |            | Aug-04          | 2400      | 760       | 3900       | 3700      | 3300      | 4400      | 2100      | 2000      | 1700      |                          |
|           |            | Aug-03          | 3100      | NR        | NR         | NR        | 5800      | 5000      | 2800      | 1900      | NA        |                          |
|           | D.O.       | Aug-06          | 0.05      | NR        | NR         | NR        | 5.13      | 1.27      | 0.11      | 0.1       | 0.08      |                          |
|           |            | Aug-05          | >13.0     | NR        | NR         | NR        | NA        | >13.0     | 7.6       | 5.6       | 7.9       |                          |
|           |            | Aug-04          | 1.7       | 4.7       | over range | 3.4       | 5.6       | 5.6       | 1.7       | 3.6       | 8.4       |                          |
|           |            | Aug-03          | 4.1       | NR        | NR         | NR        | 7.4       | 5         | 4.9       | 5.4       | NA        |                          |
|           | O.R.P.     | Aug-06          | 234       | NR        | NR         | NR        | 247       | 228       | 234       | 233       | 217       |                          |
|           |            | Aug-05          | -66       | NR        | NR         | NR        | 142       | 106       | -40       | -40       | -78       |                          |
|           |            | Aug-04          | -143      | 115       | -196       | -19       | 79        | -7.3      | -51       | -63       | -111      |                          |
|           |            | Aug-03          | -188      | NR        | NR         | NR        | 64        | 110       | -76       | -95       | NA        |                          |
| EPA 310.1 | CO2        | Aug-06          | 380       | NR        | NR         | NR        | 180       | 130       | 730       | 980       | 540       |                          |
|           |            | Aug-05          | 600       | NR        | NR         | NR        | 250       | 160       | 1100      | 1100      | 740       |                          |
|           |            | Aug-04          | 890       | 210       | 1200       | 980       | 280       | 140       | 990       | 910       | 880       |                          |
|           |            | Aug-03          | 1200      | NR        | NR         | NR        | 250       | 190       | 1300      | 1100      | NA        |                          |
|           | Alk        | Aug-06          | 370       | NR        | NR         | NR        | 200       | 140       | 760       | 1000      | 600       |                          |
|           |            | Aug-05          | 600       | NR        | NR         | NR        | 250       | 160       | 1200      | 1100      | 740       |                          |
|           |            | Aug-04          | 970       | 240       | 1400       | 1100      | 310       | 150       | 1100      | 1000      | 970       |                          |
|           |            | Aug-03          | 1040      | NR        | NR         | NR        | 242       | 198       | 1130      | 984       | NA        |                          |

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

NA = Not Analyzed

NW = New Well After August 2004

# GENERAL CHEMISTRY

## Groundwater Analysis

| EPA Method 300.0 |              |        |        |        |        |        |        |       |        |        |                        |  |
|------------------|--------------|--------|--------|--------|--------|--------|--------|-------|--------|--------|------------------------|--|
| mg/L             | DATE SAMPLED | MW #37 | MW #38 | MW #39 | MW #44 | MW #48 | MW #49 | RW #3 | RW #14 | RW #15 | WQCC 2011 MAC 6.2.3103 |  |
| Fluoride         | Aug-06       | 0.45   | 0.67   | NR     | NR     | NR     | NR     | NR    | NR     | <0.50  | 1.6                    |  |
|                  | Aug-05       | 0.48   | 0.62   | NR     | NR     | 0.54   | 0.37   | NR    | NR     | NR     |                        |  |
|                  | Aug-04       | 0.46   | 0.53   | 0.65   | 0.3    | NW     | NW     | <0.50 | 0.18   | 0.3    |                        |  |
|                  | Aug-03       | 0.49   | 0.67   | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                        |  |
| Chloride         | Aug-06       | 390    | 96     | NR     | NR     | NR     | NR     | NR    | NR     | 370    | 250                    |  |
|                  | Aug-05       | 150    | 100    | NR     | NR     | 120    | 140    | NR    | NR     | NR     |                        |  |
|                  | Aug-04       | 98     | 140    | 140    | 210    | NW     | NW     | 170   | 840    | 460    |                        |  |
|                  | Aug-03       | 110    | 120    | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                        |  |
| Nitrite          | Aug-06       | <1.0   | <0.10  | NR     | NR     | NR     | NR     | NR    | NR     | <0.50  |                        |  |
|                  | Aug-05       | <0.1   | <0.1   | NR     | NR     | <0.1   | <0.5   | NR    | NR     | NR     |                        |  |
|                  | Aug-04       | <0.10  | <0.1   | <0.10  | <0.10  | NW     | NW     | NR    | <0.10  | <0.10  |                        |  |
|                  | Aug-03       | <0.10  | <0.1   | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                        |  |
| Bromide          | Aug-06       | 4.2    | 1.1    | NR     | NR     | NR     | NR     | NR    | NR     | 7.6    |                        |  |
|                  | Aug-05       | 2.1    | 1.1    | NR     | NR     | <0.5   | <2.5   | NR    | NR     | NR     |                        |  |
|                  | Aug-04       | 1      | 1.3    | 1.7    | 0.79   | NW     | NW     | 2     | 5.7    | 6.7    |                        |  |
|                  | Aug-03       | 1.3    | 1.3    | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                        |  |
| Nitrogen         | Aug-06       | <0.10  | <0.10  | NR     | NR     | NR     | NR     | NR    | NR     | NR     | 10                     |  |
|                  | Aug-05       | <0.10  | <0.10  | NR     | NR     | <0.10  | <0.10  | NR    | NR     | NR     |                        |  |
|                  | Aug-04       | <0.10  | <0.10  | <0.10  | <0.10  | NW     | NW     | NR    | <0.10  | <0.10  |                        |  |
|                  | Aug-03       | <0.10  | <0.10  | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                        |  |
| P                | Aug-06       | <0.50  | <0.50  | NR     | NR     | NR     | NR     | NR    | NR     | <2.5   |                        |  |
|                  | Aug-05       | <0.50  | <0.5   | NR     | NR     | 0.53   | <0.5   | NR    | NR     | NR     |                        |  |
|                  | Aug-04       | <0.50  | <0.5   | <0.50  | <0.50  | NW     | NW     | <0.50 | <0.50  | <0.50  |                        |  |
|                  | Aug-03       | <0.50  | <0.5   | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                        |  |
| Sulfate          | Aug-06       | 290    | 490    | NR     | NR     | NR     | NR     | NR    | NR     | <2.5   | 600                    |  |
|                  | Aug-05       | 52     | 310    | NR     | NR     | 140    | 280    | NR    | NR     | NR     |                        |  |
|                  | Aug-04       | 15     | 330    | 3100   | 2800   | NW     | NW     | 340   | 2      | 3.4    |                        |  |
|                  | Aug-03       | 19     | 310    | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                        |  |

NR = Not Required to Sample

NA = Not Analyzed

NS = Well is Dry or Not Enough Water to Sample- No Sample

NW = New Well After August 2004

# GENERAL CHEMISTRY

## Groundwater Analysis

| mg/L               | DATE SAMPLED | MW #37 | MW #38 | MW #39 | MW #44 | MW #48 | MW #49 | RW #3 | RW #14 | RW #15 | WQGC 20 NMAG 6.2:3103 |
|--------------------|--------------|--------|--------|--------|--------|--------|--------|-------|--------|--------|-----------------------|
| TDS                | Aug-06       | 1900   | 1600   | NR     | NR     | NR     | NR     | NR    | NR     | 2000   | 1000                  |
|                    | Aug-05       | 1400   | 1500   | NR     | NR     | 1800   | 1600   | NR    | NR     | NR     |                       |
|                    | Aug-04       | 1300   | 1500   | 4900   | 4800   | NW     | NW     | 200   | 2700   | 2100   |                       |
|                    | Aug-03       | 1400   | 1600   | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                       |
| E.C.<br>(umhos/cm) | Aug-06       | 3100   | 2300   | NR     | NR     | NR     | NR     | NR    | NR     | 3300   |                       |
|                    | Aug-05       | 2200   | 2100   | NR     | NR     | 2703   | 2393   | NR    | NR     | NR     |                       |
|                    | Aug-04       | 1800   | 1800   | 5200   | 5200   | NW     | NW     | 2800  | 4000   | 3100   |                       |
|                    | Aug-03       | 1800   | 1900   | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                       |
| D.O.               | Aug-06       | 0.13   | 2.78   | NR     | NR     | NR     | NR     | NR    | NR     | 3      |                       |
|                    | Aug-05       | 4.1    | 9.4    | NR     | NR     | 1.6    | >13.0  | NR    | NR     | NR     |                       |
|                    | Aug-04       | 4.3    | 12.3   | 4.7    | 5.3    | NW     | NW     | 5.5   | 6.4    | NR     |                       |
|                    | Aug-03       | 6.4    | 4.7    | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                       |
| O.R.P.             | Aug-06       | 237    | 238    | NR     | NR     | NR     | NR     | NR    | NR     | 231    |                       |
|                    | Aug-05       | -56    | -62    | NR     | NR     | 190    | -58    | NR    | NR     | NR     |                       |
|                    | Aug-04       | -103   | -124   | -162   | -52    | NW     | NW     | -47   | -83    | -85    |                       |
|                    | Aug-03       | -129   | -145   | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                       |
| CO2                | Aug-06       | 720    | 600    | NR     | NR     | NR     | NR     | NR    | NR     | 1200   |                       |
|                    | Aug-05       | 960    | 720    | NR     | NR     | 110    | <2.0   | NR    | NR     | NR     |                       |
|                    | Aug-04       | 940    | 590    | 35     | 400    | NW     | NW     | 1100  | 1100   | 1100   |                       |
|                    | Aug-03       | 960    | 670    | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                       |
| Alk                | Aug-06       | 780    | 640    | NR     | NR     | NR     | NR     | NR    | NR     | 1200   |                       |
|                    | Aug-05       | 960    | 720    | NR     | NR     | 1300   | 960    | NR    | NR     | NR     |                       |
|                    | Aug-04       | 1000   | 660    | 38     | 450    | NW     | NW     | 1200  | 1200   | 1300   |                       |
|                    | Aug-03       | 1010   | 600    | NR     | NR     | NW     | NW     | NR    | NR     | NR     |                       |

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# GENERAL CHEMISTRY

## Groundwater Analysis

| EPA Method 300.0 |                 |           |           |           |           |  | WQCG-20/NMAC<br>6.2/3103 |
|------------------|-----------------|-----------|-----------|-----------|-----------|--|--------------------------|
| mg/L             | DATE<br>SAMPLED | RW<br>#16 | RW<br>#18 | O/F<br>#2 | O/F<br>#3 |  |                          |
| Fluoride         | Aug-06          | NR        | NR        | NS        | 0.25      |  | 16                       |
|                  | Aug-05          | NR        | <1.0      | 0.64      | 0.61      |  |                          |
|                  | Aug-04          | 0.3       | NR        | 0.67      | 0.46      |  |                          |
|                  | Aug-03          | NR        | NR        | NR        | 0.49      |  |                          |
| Chloride         | Aug-06          | NR        | NR        | NS        | 5.5       |  | 250                      |
|                  | Aug-05          | NR        | 110       | 18        | 37        |  |                          |
|                  | Aug-04          | 460       | NR        | 23        | 28        |  |                          |
|                  | Aug-03          | NR        | NR        | NR        | 25        |  |                          |
| Nitrite          | Aug-06          | NR        | NR        | NS        | <0.5      |  |                          |
|                  | Aug-05          | NR        | <1.0      | <0.10     | <0.1      |  |                          |
|                  | Aug-04          | <0.10     | NR        | <0.10     | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NR        | <0.10     |  |                          |
| Bromide          | Aug-06          | NR        | NR        | NS        | <0.5      |  |                          |
|                  | Aug-05          | NR        | <5.0      | <0.5      | <0.5      |  |                          |
|                  | Aug-04          | 5.8       | NR        | 0.13      | 0.17      |  |                          |
|                  | Aug-03          | NR        | NR        | NR        | 0.26      |  |                          |
| Nitrogen         | Aug-06          | NR        | NR        | NS        | <0.5      |  | 10                       |
|                  | Aug-05          | NR        | <1.0      | 2.2       | 5.2       |  |                          |
|                  | Aug-04          | <0.10     | NR        | 2.5       | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NR        | 3.9       |  |                          |
| P                | Aug-06          | NR        | NR        | NS        | <0.5      |  |                          |
|                  | Aug-05          | NR        | <5.0      | <0.5      | <0.5      |  |                          |
|                  | Aug-04          | <0.50     | NR        | <0.50     | <0.50     |  |                          |
|                  | Aug-03          | NR        | NR        | NR        | <0.50     |  |                          |
| Sulfate          | Aug-06          | NR        | NR        | NS        | 64        |  | 600                      |
|                  | Aug-05          | NR        | 940       | 210       | 270       |  |                          |
|                  | Aug-04          | 77        | NR        | 200       | 200       |  |                          |
|                  | Aug-03          | NR        | NR        | NR        | 170       |  |                          |

NR = Not Required to Sample

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NS = Well is Dry or Not Enough Water to Sample- No Sample

NW = New Well After August 2004

# GENERAL CHEMISTRY

## Groundwater Analysis

|           | DATE<br>SAMPLED | mg/L     | RW<br>#16 | RW<br>#18 | O/F<br>#2 | O/F<br>#3 | WQCC-20 NMAC<br>6.23103 |
|-----------|-----------------|----------|-----------|-----------|-----------|-----------|-------------------------|
| EPA 160.1 | Aug-06          | TDS      | NR        | NR        | NS        | 230       | 1000                    |
|           | Aug-05          |          | NR        | 3900      | 620       | 790       |                         |
|           | Aug-04          |          | 1900      | NR        | 670       | 660       |                         |
|           | Aug-03          |          | NR        | NR        | NR        | 490       |                         |
| EPA 120.1 | Aug-06          | E.C.     | NR        | NR        | NS        | 390       |                         |
|           | Aug-05          | umhos/cm | NR        | 3400      | 880       | 1100      |                         |
|           | Aug-04          |          | 2800      | NR        | 880       | 830       |                         |
|           | Aug-03          |          | NR        | NR        | NR        | 780       |                         |
|           | Aug-06          | D.O.     | NR        | NR        | NS        | NR        |                         |
|           | Aug-05          |          | NR        | NR        | >13       | >13.0     |                         |
|           | Aug-04          |          | 8.7       | NR        | 6.3       | 9.8       |                         |
|           | Aug-03          |          | NR        | NR        | NR        | 7.8       |                         |
|           | Aug-06          | O.R.P.   | NR        | NR        | NS        | 308       |                         |
|           | Aug-05          |          | NR        | -103      | 143       | 168       |                         |
|           | Aug-04          |          | -139      | NR        | 74        | 103       |                         |
|           | Aug-03          |          | NR        | NR        | NR        | 194       |                         |
| EPA 310.1 | Aug-06          | CO2      | NR        | NR        | NS        | 97        |                         |
|           | Aug-05          |          | NR        | 650       | 220       | 270       |                         |
|           | Aug-04          |          | 900       | NR        | 250       | 240       |                         |
|           | Aug-03          |          | NR        | NR        | NR        | 270       |                         |
|           | Aug-06          | Alk      | NR        | NR        | NS        | 110       |                         |
|           | Aug-05          |          | NR        | 650       | 230       | 270       |                         |
|           | Aug-04          |          | 1000      | NR        | 280       | 270       |                         |
|           | Aug-03          |          | NR        | NR        | NR        | 252       |                         |

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

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# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |              |        |        |        |        |        |        |        |        |        |        |                       |  |
|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|--|
| mg/L             | DATE SAMPLED | MW #1  | MW #3  | MW #7  | MW #8  | MW #11 | MW #12 | MW #13 | MW #21 | MW #26 | MW #27 | WQCC 20 NMAC 6.2.3103 |  |
| Arsenic          | Aug-06       | <0.02  | NS     | NR     | <0.02  | <0.02  | <0.02  | <0.02  | NR     | <0.02  | <0.02  | 0.10                  |  |
|                  | Aug-05       | <0.02  | <0.02  | NR     | <0.02  | <0.02  | <0.02  | <0.02  | NR     | <0.02  | <0.02  |                       |  |
|                  | Aug-04       | <0.02  | NS     | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  |                       |  |
|                  | Aug-03       | <0.02  | <0.02  | NR     | <0.02  | <0.02  | <0.02  | <0.02  | NR     | <0.02  | <0.02  |                       |  |
| Barium           | Aug-06       | 0.023  | NS     | NR     | 0.018  | 0.69   | 0.04   | 0.025  | NR     | 2.2    | 0.038  | 1.00                  |  |
|                  | Aug-05       | 0.022  | 0.018  | NR     | 0.021  | 0.73   | 0.07   | 0.028  | NR     | 1.9    | 0.063  |                       |  |
|                  | Aug-04       | 0.025  | NS     | 0.0097 | 0.021  | 0.47   | 0.06   | 0.022  | 0.028  | 1.8    | 0.083  |                       |  |
|                  | Aug-03       | 0.46   | 0.3    | NR     | 0.36   | 1.2    | 0.12   | 0.33   | NR     | 2.3    | 0.52   |                       |  |
| Cadmium          | Aug-06       | <0.002 | NS     | NR     | <0.002 | <0.002 | <0.002 | <0.002 | NR     | <0.002 | <0.002 | 0.01                  |  |
|                  | Aug-05       | <0.002 | <0.002 | NR     | <0.002 | <0.002 | <0.002 | <0.002 | NR     | <0.002 | <0.002 |                       |  |
|                  | Aug-04       | <0.002 | NS     | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |                       |  |
|                  | Aug-03       | <0.002 | <0.002 | NR     | <0.002 | <0.002 | <0.002 | <0.002 | NR     | <0.002 | <0.002 |                       |  |
| Calcium          | Aug-06       | 74     | NS     | NR     | 230    | 100    | 73     | 250    | NR     | 10     | 360    |                       |  |
|                  | Aug-05       | 68     | 480    | NR     | 230    | 96     | 370    | 240    | NR     | 92     | 290    |                       |  |
|                  | Aug-04       | 67     | NS     | 300    | 210    | 100    | 130    | 210    | 450    | 75     | 170    |                       |  |
|                  | Aug-03       | 61     | 490    | NR     | 200    | 120    | 420    | 270    | NR     | 91     | 210    |                       |  |
| Cr               | Aug-06       | <0.006 | NS     | NR     | <0.006 | <0.006 | 0.0078 | <0.006 | NR     | <0.006 | <0.006 | 0.05                  |  |
|                  | Aug-05       | <0.006 | <0.006 | NR     | <0.006 | <0.006 | 0.022  | <0.006 | NR     | <0.006 | <0.006 |                       |  |
|                  | Aug-04       | <0.006 | NS     | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |                       |  |
|                  | Aug-03       | <0.006 | <0.006 | NR     | <0.006 | <0.006 | 0.0066 | <0.006 | NR     | 0.0089 | <0.006 |                       |  |
| Copper           | Aug-06       | <0.006 | NS     | NR     | <0.006 | <0.006 | <0.006 | 0.0063 | NR     | <0.006 | <0.006 | 1.00                  |  |
|                  | Aug-05       | <0.006 | <0.006 | NR     | <0.006 | <0.006 | <0.006 | <0.006 | NR     | <0.006 | <0.006 |                       |  |
|                  | Aug-04       | <0.006 | NS     | <0.006 | <0.006 | 0.021  | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |                       |  |
|                  | Aug-03       | <0.006 | <0.006 | NR     | <0.006 | <0.006 | <0.006 | 0.0096 | NR     | <0.006 | <0.006 |                       |  |

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

NW = New Well After August 2004



# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |                 |          |          |          |          |           |           |           |           |           |           |      | WQGC 20<br>NMAC 6.2.3.103 |
|------------------|-----------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|------|---------------------------|
| mg/L             | DATE<br>SAMPLED | MW<br>#1 | MW<br>#3 | MW<br>#7 | MW<br>#8 | MW<br>#11 | MW<br>#12 | MW<br>#13 | MW<br>#21 | MW<br>#26 | MW<br>#27 |      |                           |
| Iron             | Aug-06          | <0.02    | NS       | NR       | 0.033    | 9.3       | 0.069     | <0.02     | NR        | 6.8       | 7.4       | 1.00 |                           |
|                  | Aug-05          | 0.14     | 0.047    | NR       | 0.078    | 7.6       | 0.55      | <0.02     | NR        | 6.3       | 3.4       |      |                           |
|                  | Aug-04          | 0.27     | NS       | 0.081    | 0.059    | 6.9       | 0.044     | 0.046     | 2.9       | 5.1       | 0.15      |      |                           |
|                  | Aug-03          | <0.005   | 0.27     | NR       | 0.044    | 7.6       | 0.024     | 0.04      | NR        | 5         | 0.44      |      |                           |
| Lead             | Aug-06          | <0.005   | NS       | NR       | <0.005   | <0.005    | <0.005    | 0.0078    | NR        | <0.005    | <0.005    | 0.05 |                           |
|                  | Aug-05          | <0.005   | <0.005   | NR       | <0.005   | <0.005    | <0.005    | <0.005    | NR        | <0.005    | <0.005    |      |                           |
|                  | Aug-04          | <0.005   | NS       | <0.005   | <0.005   | 0.022     | <0.005    | <0.005    | <0.005    | 0.0056    | <0.005    |      |                           |
|                  | Aug-03          | <0.005   | <0.005   | NR       | <0.005   | <0.005    | <0.005    | <0.005    | NR        | <0.005    | <0.005    |      |                           |
| Mg               | Aug-06          | 18       | NS       | NR       | 35       | 22        | 14        | 82        | NR        | 38        | 52        |      |                           |
|                  | Aug-05          | 18       | 130      | NR       | 37       | 22        | 97        | 85        | NR        | 32        | 45        |      |                           |
|                  | Aug-04          | 18       | NS       | 31       | 35       | 23        | NR        | 80        | 97        | 27        | 26        |      |                           |
|                  | Aug-03          | 16       | 140      | NR       | 38       | 25        | 130       | 110       | NR        | 32        | 34        |      |                           |
| Mn               | Aug-06          | 0.09     | NS       | NR       | 0.42     | 1.8       | 0.3       | 1.1       | NR        | 3.1       | 8         | 0.20 |                           |
|                  | Aug-05          | 0.14     | 0.43     | NR       | 0.65     | 1.6       | 0.64      | 1.1       | NR        | 2.8       | 2.7       |      |                           |
|                  | Aug-04          | 0.13     | NS       | 0.28     | 0.57     | 1.7       | 0.55      | 0.58      | 1.4       | 2         | 0.94      |      |                           |
|                  | Aug-03          | 0.08     | 0.58     | NR       | 0.68     | 2         | 1.8       | 1.1       | NR        | 2.4       | 1.4       |      |                           |
| K                | Aug-06          | 2.4      | NS       | NR       | 3.2      | 1.4       | 1.1       | 3.6       | NR        | 3         | 3.7       |      |                           |
|                  | Aug-05          | 2.7      | 7.6      | NR       | 3.1      | 1.7       | 2.8       | 3.8       | NR        | 2.8       | 3.4       |      |                           |
|                  | Aug-04          | 2.1      | NS       | 8.1      | 3        | 1.5       | 1.5       | 3.6       | 6.8       | 2.6       | 206       |      |                           |
|                  | Aug-03          | 2.6      | 10       | NR       | 4        | 2.3       | 4.3       | 5.3       | NR        | 4.2       | 4         |      |                           |
| Se               | Aug-06          | <0.05    | NS       | NR       | <0.05    | <0.05     | <0.05     | <0.05     | NR        | <0.05     | <0.05     | 0.05 |                           |
|                  | Aug-05          | <0.05    | <0.05    | NR       | <0.05    | <0.05     | <0.05     | <0.05     | NR        | <0.05     | <0.05     |      |                           |
|                  | Aug-04          | <0.05    | NS       | <0.05    | <0.05    | <0.05     | <0.05     | <0.05     | <0.05     | <0.05     | <0.05     |      |                           |
|                  | Aug-03          | 0.043    | 0.024    | NR       | 0.09     | 0.15      | 0.084     | 0.16      | NR        | 0.1       | 0.13      |      |                           |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |              |        |        |        |        |        |        |        |        |        |        |                        |
|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------------|
| mg/L             | DATE SAMPLED | MW #1  | MW #3  | MW #7  | MW #8  | MW #11 | MW #12 | MW #13 | MW #21 | MW #26 | MW #27 | WQCC 20 NMAC 6.2.3.103 |
| Silver           | Aug-06       | <0.005 | NS     | NR     | <0.005 | <0.005 | <0.005 | <0.005 | NR     | <0.005 | <0.005 | 0.05                   |
|                  | Aug-05       | <0.005 | <0.005 | NR     | <0.005 | <0.005 | <0.005 | <0.005 | NR     | <0.005 | <0.005 |                        |
|                  | Aug-04       | <0.005 | NS     | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |                        |
|                  | Aug-03       | <0.005 | <0.005 | NR     | <0.005 | <0.005 | <0.005 | <0.005 | NR     | <0.005 | <0.005 |                        |
| Sodium           | Aug-06       | 120    | NS     | NR     | 380    | 390    | 100    | 620    | NR     | 450    | 440    |                        |
|                  | Aug-05       | 140    | 1300   | NR     | 360    | 380    | 560    | 570    | NR     | 430    | 430    |                        |
|                  | Aug-04       | 110    | NS     | 1100   | 360    | 390    | 320    | 610    | 600    | 440    | 390    |                        |
|                  | Aug-03       | 150    | 1100   | NR     | 350    | 420    | 960    | 680    | NR     | 430    | 420    |                        |
| Uranium          | Aug-06       | <0.1   | NS     | NR     | <0.1   | <0.1   | <0.1   | <0.10  | NR     | <0.1   | <0.1   | 5.00                   |
|                  | Aug-05       | <0.1   | <0.1   | NR     | <0.1   | <0.1   | <0.1   | <0.1   | NR     | <0.1   | <0.1   |                        |
|                  | Aug-04       | <0.1   | NS     | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   |                        |
|                  | Aug-03       | <0.1   | <0.1   | NR     | <0.1   | <0.1   | <0.1   | <0.1   | NR     | <0.1   | <0.1   |                        |
| Zinc             | Aug-06       | 0.047  | NS     | NR     | 0.044  | 0.051  | 0.036  | 0.061  | NR     | 0.048  | 0.005  | 10.00                  |
|                  | Aug-05       | <0.005 | 0.018  | NR     | 0.014  | 0.014  | 0.022  | 0.0088 | NR     | 0.17   | 0.0066 |                        |
|                  | Aug-04       | 0.021  | NS     | 0.0096 | 0.022  | 63     | 0.035  | 0.021  | 0.028  | 0.013  | 0.011  |                        |
|                  | Aug-03       | 0.12   | 0.094  | NR     | 0.13   | 0.18   | 0.088  | 0.09   | NR     | 0.19   | 0.037  |                        |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |              |        |        |        |        |        |        |        |        |        |        |                        |
|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------------|
| mg/L             | DATE SAMPLED | MW #29 | MW #30 | MW #31 | MW #32 | MW #33 | MW #34 | MW #35 | MW #36 | MW #37 | MW #38 | WQCC 20 NIMAC 6.2:3103 |
| Arsenic          | Aug-06       | NR     | NR     | NR     | <0.02  | <0.02  | <0.02  | 0.027  | <0.02  | <0.02  | <0.02  | 0.10                   |
|                  | Aug-05       | NR     | NR     | NR     | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  |                        |
|                  | Aug-04       | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  |                        |
|                  | Aug-03       | NR     | NR     | NR     | <0.02  | <0.02  | <0.02  | <0.02  | NR     | <0.02  | <0.02  |                        |
| Barium           | Aug-06       | NR     | NR     | NR     | 0.032  | 0.017  | 0.44   | 0.71   | 0.16   | 0.3    | 0.093  | 1.00                   |
|                  | Aug-05       | NR     | NR     | NR     | 0.026  | 0.019  | 0.77   | 0.54   | 0.26   | 0.38   | 0.18   |                        |
|                  | Aug-04       | 0.025  | 0.13   | 0.35   | 0.022  | 0.02   | 0.78   | 0.71   | 0.59   | 0.28   | 0.19   |                        |
|                  | Aug-03       | NR     | NR     | NR     | 0.35   | 0.02   | 1.5    | 1      | NR     | 1.5    | 0.37   |                        |
| Cadmium          | Aug-06       | NR     | NR     | NR     | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.01                   |
|                  | Aug-05       | NR     | NR     | NR     | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |                        |
|                  | Aug-04       | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |                        |
|                  | Aug-03       | NR     | NR     | NR     | <0.002 | <0.002 | <0.002 | <0.002 | NR     | <0.002 | <0.002 |                        |
| Calcium          | Aug-06       | NR     | NR     | NR     | 260    | 320    | 61     | 110    | 110    | 180    | 210    |                        |
|                  | Aug-05       | NR     | NR     | NR     | 200    | 340    | 110    | 120    | 110    | 120    | 200    |                        |
|                  | Aug-04       | 55     | 350    | 220    | 170    | 350    | 110    | 130    | 150    | 100    | 180    |                        |
|                  | Aug-03       | NR     | NR     | NR     | 370    | 330    | 110    | 130    | NR     | 100    | 170    |                        |
| Cr               | Aug-06       | NR     | NR     | NR     | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | 0.05                   |
|                  | Aug-05       | NR     | NR     | NR     | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |                        |
|                  | Aug-04       | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |                        |
|                  | Aug-03       | NR     | NR     | NR     | <0.006 | <0.006 | <0.006 | <0.006 | NR     | <0.006 | <0.006 |                        |
| Copper           | Aug-06       | NR     | NR     | NR     | <0.006 | <0.006 | 0.0065 | <0.006 | <0.006 | <0.006 | <0.006 | 1.00                   |
|                  | Aug-05       | NR     | NR     | NR     | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |                        |
|                  | Aug-04       | <0.006 | 0.0061 | <0.006 | <0.006 | 0.0062 | 0.015  | 0.0065 | <0.006 | <0.006 | <0.006 |                        |
|                  | Aug-03       | NR     | NR     | NR     | <0.006 | <0.006 | <0.006 | <0.006 | NR     | <0.006 | <0.006 |                        |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010G |              |        |        |        |        |        |        |        |        |        |        |                       |
|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|
| mg/L             | DATE SAMPLED | MW #29 | MW #30 | MW #31 | MW #32 | MW #33 | MW #34 | MW #35 | MW #36 | MW #37 | MW #38 | WQCC 20 NMAC 6.2:3103 |
| Iron             | Aug-06       | NR     | NR     | NR     | <0.02  | <0.020 | 3      | 2.8    | 0.75   | 1.3    | 3.1    | 1.00                  |
|                  | Aug-05       | NR     | NR     | NR     | <0.02  | <0.02  | 4.9    | 5.9    | 0.78   | 2.5    | 7.1    |                       |
|                  | Aug-04       | <0.005 | 4.7    | 0.46   | 0.056  | 0.11   | 5.6    | 7.2    | 3.1    | 1.5    | 8      |                       |
|                  | Aug-03       | NR     | NR     | NR     | 0.031  | <0.005 | 5.5    | 6.3    | NR     | 0.6    | 7.5    |                       |
| Lead             | Aug-06       | NR     | NR     | NR     | <0.005 | <0.005 | <0.005 | <0.005 | 0.0053 | <0.005 | <0.005 | 0.05                  |
|                  | Aug-05       | NR     | NR     | NR     | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |                       |
|                  | Aug-04       | <0.005 | 0.0051 | <0.005 | <0.005 | <0.005 | <0.005 | 0.0063 | <0.005 | <0.005 | <0.005 |                       |
|                  | Aug-03       | NR     | NR     | NR     | <0.005 | <0.005 | <0.005 | <0.005 | NR     | <0.005 | <0.005 |                       |
| Mg               | Aug-06       | NR     | NR     | NR     | 38     | 47     | 12     | 26     | 25     | 44     | 36     |                       |
|                  | Aug-05       | NR     | NR     | NR     | 32     | 48     | 20     | 22     | 23     | 20     | 32     |                       |
|                  | Aug-04       | 15     | 88     | 67     | 26     | 54     | 20     | 23     | 30     | 19     | 32     |                       |
|                  | Aug-03       | NR     | NR     | NR     | 56     | 51     | 21     | 22     | NR     | 20     | 28     |                       |
| Mn               | Aug-06       | NR     | NR     | NR     | <0.002 | 0.0077 | 2.4    | 2.9    | 3.6    | 2.9    | 3.5    | 0.20                  |
|                  | Aug-05       | NR     | NR     | NR     | <0.002 | 0.0065 | 4.2    | 3      | 1.7    | 1.4    | 3.7    |                       |
|                  | Aug-04       | 0.82   | 2.1    | 0.58   | <0.002 | 0.013  | 4.3    | 3.1    | 4.1    | 1.3    | 3.6    |                       |
|                  | Aug-03       | NR     | NR     | NR     | 0.0037 | 0.01   | 4.6    | 3.3    | NR     | 1.4    | 3      |                       |
| K                | Aug-06       | NR     | NR     | NR     | 3.1    | 4.6    | <1.0   | 2.1    | 2.7    | 3.5    | 4.3    |                       |
|                  | Aug-05       | NR     | NR     | NR     | 3      | 4.9    | 1.2    | 2.9    | 4.8    | 4.2    | 4.4    |                       |
|                  | Aug-04       | 2.7    | <10.0  | 4.8    | 2.7    | 5.3    | 1.3    | 3      | 7.2    | 5      | 4.7    |                       |
|                  | Aug-03       | NR     | NR     | NR     | 5      | 6.2    | 2.1    | 3.7    | NR     | 6.6    | 6.6    |                       |
| Se               | Aug-06       | NR     | NR     | NR     | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | 0.05                  |
|                  | Aug-05       | NR     | NR     | NR     | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  |                       |
|                  | Aug-04       | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  |                       |
|                  | Aug-03       | NR     | NR     | NR     | 0.05   | 0.023  | 0.15   | 0.15   | NR     | 0.13   | 0.11   |                       |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |              |        |        |        |        |        |        |        |        |        |        |                       |  |
|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------|--|
| mg/L             | DATE SAMPLED | MW #29 | MW #30 | MW #31 | MW #32 | MW #33 | MW #34 | MW #35 | MW #36 | MW #37 | MW #38 | WQGC 20 NMAC 6.2.3103 |  |
| Silver           | Aug-06       | NR     | NR     | NR     | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005                 |  |
|                  | Aug-05       | NR     | NR     | NR     | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |                       |  |
|                  | Aug-04       | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |                       |  |
|                  | Aug-03       | NR     | NR     | NR     | <0.005 | <0.005 | <0.005 | <0.005 | NR     | <0.005 | <0.005 |                       |  |
| Sodium           | Aug-06       | NR     | NR     | NR     | 700    | 660    | 310    | 410    | 190    | 550    | 290    |                       |  |
|                  | Aug-05       | NR     | NR     | NR     | 580    | 640    | 390    | 310    | 210    | 370    | 270    |                       |  |
|                  | Aug-04       | 100    | 750    | 640    | 550    | 670    | 400    | 300    | 180    | 350    | 250    |                       |  |
|                  | Aug-03       | NR     | NR     | NR     | 800    | 660    | 470    | 330    | NR     | 370    | 240    |                       |  |
| Uranium          | Aug-06       | NR     | NR     | NR     | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | 5.00                  |  |
|                  | Aug-05       | NR     | NR     | NR     | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   |                       |  |
|                  | Aug-04       | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   |                       |  |
|                  | Aug-03       | NR     | NR     | NR     | <0.1   | <0.1   | <0.1   | <0.1   | NR     | <0.1   | <0.1   |                       |  |
| Zinc             | Aug-06       | NR     | NR     | NR     | 0.046  | 0.12   | 0.11   | 0.061  | 0.04   | 0.032  | 0.059  | 10.00                 |  |
|                  | Aug-05       | NR     | NR     | NR     | 0.011  | 0.012  | 0.1    | 0.095  | 0.0051 | 0.13   | 0.016  |                       |  |
|                  | Aug-04       | 0.017  | 0.046  | 0.019  | 0.019  | 0.031  | 0.02   | 0.022  | 0.018  | 0.028  | 0.035  |                       |  |
|                  | Aug-03       | NR     | NR     | NR     | 0.095  | 0.0072 | 0.15   | 0.078  | NR     | 0.29   | 0.31   |                       |  |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |                 |           |           |           |           |          |           |           |           | WQCC 20<br>NIMAC 6.2.3103 |
|------------------|-----------------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|---------------------------|
| mg/L             | DATE<br>SAMPLED | MW<br>#39 | MW<br>#44 | MW<br>#48 | MW<br>#49 | RW<br>#3 | RW<br>#14 | RW<br>#15 | RW<br>#16 | RW<br>#18                 |
| Arsenic          | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | <0.02     | NR        |                           |
|                  | Aug-05          | NR        | NR        | <0.02     | <0.02     | NR       | NR        | NR        | NR        | <0.02                     |
|                  | Aug-04          | <0.02     | <0.02     | NW        | NW        | <0.02    | <0.02     | <0.02     | <0.02     | NR                        |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR                        |
| Barium           | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 1.3       | NR        |                           |
|                  | Aug-05          | NR        | NR        | 0.23      | 0.24      | NR       | NR        | NR        | NR        | 0.038                     |
|                  | Aug-04          | 0.15      | 0.046     | NW        | NW        | 0.12     | 1.7       | 1.2       | 0.35      | NR                        |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR                        |
| Cadmium          | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | <0.002    | NR        |                           |
|                  | Aug-05          | NR        | NR        | <0.002    | <0.002    | NR       | NR        | NR        | NR        | <0.002                    |
|                  | Aug-04          | <0.002    | <0.002    | NW        | NW        | <0.002   | <0.002    | <0.002    | <0.002    | NR                        |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR                        |
| Calcium          | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 140       | NR        |                           |
|                  | Aug-05          | NR        | NR        | 100       | 120       | NR       | NR        | NR        | NR        | 220                       |
|                  | Aug-04          | 290       | 520       | NW        | NW        | 85       | 180       | 160       | 100       | NR                        |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR                        |
| Cr               | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | <0.006    | NR        |                           |
|                  | Aug-05          | NR        | NR        | <0.006    | <0.006    | NR       | NR        | NR        | NR        | <0.006                    |
|                  | Aug-04          | <0.006    | 0.034     | NW        | NW        | <0.006   | <0.006    | <0.006    | <0.006    | NR                        |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR                        |
| Copper           | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | <0.006    | NR        |                           |
|                  | Aug-05          | NR        | NR        | <0.006    | <0.006    | NR       | NR        | NR        | NR        | <0.006                    |
|                  | Aug-04          | <0.006    | 0.027     | NW        | NW        | <0.006   | <0.006    | <0.006    | <0.006    | NR                        |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR                        |

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

NW = New Well After August 2004



# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |                 |           |           |           |           |          |           |           |           |           |  | WQCC 20<br>NMAC 6.2.3103 |
|------------------|-----------------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|--|--------------------------|
| mg/L             | DATE<br>SAMPLED | MW<br>#39 | MW<br>#44 | MW<br>#48 | MW<br>#49 | RW<br>#3 | RW<br>#14 | RW<br>#15 | RW<br>#16 | RW<br>#18 |  |                          |
| Iron             | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 9.9       | NR        | NR        |  | 1.00                     |
|                  | Aug-05          | NR        | NR        | <0.02     | 0.72      | NR       | NR        | NR        | NR        | 5         |  |                          |
|                  | Aug-04          | 0.18      | 76        | NW        | NW        | 0.48     | 8.5       | 6         | 1.9       | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR        |  |                          |
| Lead             | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 0.0094    | NR        | NR        |  | 0.05                     |
|                  | Aug-05          | NR        | NR        | 0.012     | <0.005    | NR       | NR        | NR        | NR        | <0.005    |  |                          |
|                  | Aug-04          | <0.005    | 0.015     | NW        | NW        | <0.005   | <0.005    | <0.005    | <0.005    | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR        |  |                          |
| Mg               | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 43        | NR        | NR        |  |                          |
|                  | Aug-05          | NR        | NR        | 20        | 29        | NR       | NR        | NR        | NR        | 64        |  |                          |
|                  | Aug-04          | 28        | 87        | NW        | NW        | 21       | 87        | 52        | 56        | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR        |  |                          |
| Mn               | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 3.2       | NR        | NR        |  | 0.20                     |
|                  | Aug-05          | NR        | NR        | 0.01      | 1.9       | NR       | NR        | NR        | NR        | 4.1       |  |                          |
|                  | Aug-04          | 0.3       | 1.7       | NW        | NW        | 1.1      | 3.6       | 3.3       | 1.7       | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR        |  |                          |
| K                | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | 3.2       | NR        | NR        |  |                          |
|                  | Aug-05          | NR        | NR        | 4         | 4.7       | NR       | NR        | NR        | NR        | 4.4       |  |                          |
|                  | Aug-04          | 8.7       | 44        | NW        | NW        | 3.4      | <10.0     | 3.7       | 3.3       | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR        |  |                          |
| Se               | Aug-06          | NR        | NR        | NR        | NR        | NR       | NR        | <0.050    | NR        | NR        |  | 0.05                     |
|                  | Aug-05          | NR        | NR        | 0.077     | <0.05     | NR       | NR        | NR        | NR        | <0.05     |  |                          |
|                  | Aug-04          | <0.05     | <0.05     | NW        | NW        | <0.05    | <0.05     | <0.05     | <0.05     | NR        |  |                          |
|                  | Aug-03          | NR        | NR        | NW        | NW        | NR       | NR        | NR        | NR        | NR        |  |                          |

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

NW = New Well After August 2004

# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |              |        |        |        |        |        |        |        |        |        |                        |
|------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------------|
| mg/L             | DATE SAMPLED | MW #39 | MW #44 | MW #48 | MW #49 | RW #3  | RW #14 | RW #15 | RW #16 | RW #18 | WQCC 20 NMAC 6.2.3.103 |
| Silver           | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | <0.005 | NR     | NR     | 0.05                   |
|                  | Aug-05       | NR     | NR     | <0.005 | <0.005 | NR     | NR     | NR     | NR     | <0.005 |                        |
|                  | Aug-04       | <0.005 | <0.005 | NW     | NW     | <0.005 | <0.005 | <0.005 | <0.005 | NR     |                        |
|                  | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |                        |
| Sodium           | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | 560    | NR     | NR     |                        |
|                  | Aug-05       | NR     | NR     | 510    | 360    | NR     | NR     | NR     | NR     | 500    |                        |
|                  | Aug-04       | 750    | 970    | NW     | NW     | 620    | 810    | 580    | 560    | NR     |                        |
|                  | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |                        |
| Uranium          | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | <0.10  | NR     | NR     | 5.00                   |
|                  | Aug-05       | NR     | NR     | <0.1   | <0.1   | NR     | NR     | NR     | NR     | <0.1   |                        |
|                  | Aug-04       | <0.10  | <0.10  | NW     | NW     | <0.10  | <0.10  | <0.10  | <0.10  | NR     |                        |
|                  | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |                        |
| Zinc             | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | 0.034  | NR     | NR     | 10.00                  |
|                  | Aug-05       | NR     | NR     | 0.012  | 0.0055 | NR     | NR     | NR     | NR     | 0.021  |                        |
|                  | Aug-04       | <0.005 | 0.084  | NW     | NW     | 0.036  | 0.044  | 0.043  | 0.029  | NR     |                        |
|                  | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |                        |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample



# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |              |        |        |                       |      |              |        |        |                       |
|------------------|--------------|--------|--------|-----------------------|------|--------------|--------|--------|-----------------------|
| mg/L             | DATE SAMPLED | O/F #2 | O/F #3 | WQCC 20 NMAG 6.2.3103 | mg/L | DATE SAMPLED | O/F #2 | O/F #3 | WQCC 20 NMAG 6.2.3103 |
| Arsenic          | Aug-06       | NS     | <0.02  | 0.10                  | Iron | Aug-06       | NS     | <0.02  | 1.00                  |
|                  | Aug-05       | <0.002 | <0.02  |                       |      | Aug-05       | <0.02  | <0.02  |                       |
|                  | Aug-04       | <0.02  | <0.02  |                       |      | Aug-04       | <0.02  | 0.024  |                       |
|                  | Aug-03       | NS     | <0.02  |                       |      | Aug-03       | NS     | <0.02  |                       |
| Barium           | Aug-06       | NS     | 0.063  | 1.00                  | Lead | Aug-06       | NS     | <0.005 | 0.05                  |
|                  | Aug-05       | 0.054  | 0.033  |                       |      | Aug-05       | <0.005 | <0.005 |                       |
|                  | Aug-04       | 0.048  | 0.03   |                       |      | Aug-04       | <0.005 | <0.005 |                       |
|                  | Aug-03       | NS     | 0.25   |                       |      | Aug-03       | NS     | <0.005 |                       |
| Cadmium          | Aug-06       | NS     | <0.002 | 0.01                  | Mg   | Aug-06       | NS     | 7.3    |                       |
|                  | Aug-05       | <0.002 | <0.002 |                       |      | Aug-05       | 22     | 25     |                       |
|                  | Aug-04       | <0.002 | <0.002 |                       |      | Aug-04       | 23     | 22     |                       |
|                  | Aug-03       | NS     | <0.002 |                       |      | Aug-03       | NS     | 18     |                       |
| Calcium          | Aug-06       | NS     | 41     |                       | Mn   | Aug-06       | NS     | <0.002 | 0.20                  |
|                  | Aug-05       | 96     | 110    |                       |      | Aug-05       | 0.0033 | 0.01   |                       |
|                  | Aug-04       | 95     | 98     |                       |      | Aug-04       | 0.0038 | 0.019  |                       |
|                  | Aug-03       | NS     | 79     |                       |      | Aug-03       | NS     | 0.017  |                       |
| Cr               | Aug-06       | NS     | <0.006 | 0.05                  | K    | Aug-06       | NS     | 1.8    |                       |
|                  | Aug-05       | 0.0076 | <0.006 |                       |      | Aug-05       | 2.2    | 1.9    |                       |
|                  | Aug-04       | 0.0071 | <0.006 |                       |      | Aug-04       | 2.3    | 1.8    |                       |
|                  | Aug-03       | NS     | <0.006 |                       |      | Aug-03       | NS     | 2.1    |                       |
| Copper           | Aug-06       | NS     | <0.006 | 1.00                  | Se   | Aug-06       | NS     | <0.05  | 0.05                  |
|                  | Aug-05       | <0.006 | <0.006 |                       |      | Aug-05       | <0.05  | <0.05  |                       |
|                  | Aug-04       | <0.006 | <0.006 |                       |      | Aug-04       | <0.05  | <0.05  |                       |
|                  | Aug-03       | NS     | <0.006 |                       |      | Aug-03       | NS     | 0.032  |                       |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

# DISSOLVED METALS

## Groundwater Analysis

| EPA Method 6010C |              |        |        |                           |  |  |
|------------------|--------------|--------|--------|---------------------------|--|--|
| mg/L             | DATE SAMPLED | O/F #2 | O/F #3 | WQCC 20<br>NMAC 6.2.3.103 |  |  |
| Silver           | Aug-06       | NS     | <0.005 | 0.05                      |  |  |
|                  | Aug-05       | <0.005 | <0.005 |                           |  |  |
|                  | Aug-04       | <0.005 | <0.005 |                           |  |  |
|                  | Aug-03       | NS     | <0.005 |                           |  |  |
| Sodium           | Aug-06       | NS     | 23     |                           |  |  |
|                  | Aug-05       | 85     | 100    |                           |  |  |
|                  | Aug-04       | 100    | 90     |                           |  |  |
|                  | Aug-03       | NS     | 88     |                           |  |  |
| Uranium          | Aug-06       | NS     | <0.1   | 5.00                      |  |  |
|                  | Aug-05       | <0.1   | <0.1   |                           |  |  |
|                  | Aug-04       | <0.1   | <0.1   |                           |  |  |
|                  | Aug-03       | NS     | <0.1   |                           |  |  |
| Zinc             | Aug-06       | NS     | 0.024  | 10.00                     |  |  |
|                  | Aug-05       | 0.0066 | 0.0066 |                           |  |  |
|                  | Aug-04       | 0.034  | 0.014  |                           |  |  |
|                  | Aug-03       | NS     | 0.04   |                           |  |  |

NR = Not Required to Sample

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

# TOTAL METALS

## Groundwater Analysis

| EPA Method 6010, EPA Method 7470: Mercury |              |         |        |        |        |        |        |        |        |        |        |       | 40CFR141.62 |
|-------------------------------------------|--------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------------|
| mg/L                                      | Date Sampled | MW #1   | MW #3  | MW #7  | MW #8  | MW #11 | MW #12 | MW #13 | MW #21 | MW #26 | MW #27 | MCL   |             |
| Arsenic                                   | Aug-06       | <0.020  | NS     | NR     | <0.020 | <0.02  | <0.02  | <0.02  | NR     | <0.02  | <0.02  | 0.01  |             |
|                                           | Aug-05       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |
|                                           | Aug-04       | <0.02   | NS     | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  |       |             |
|                                           | Aug-03       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |
| Barium                                    | Aug-06       | 0.023   | NS     | NR     | 0.018  | 0.69   | 0.04   | 0.025  | NR     | 2.2    | 0.038  | 2     |             |
|                                           | Aug-05       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |
|                                           | Aug-04       | 0.052   | NS     | <0.002 | 0.071  | 0.54   | 0.19   | 0.028  | 0.029  | 2      | 0.13   |       |             |
|                                           | Aug-03       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |
| Cadmium                                   | Aug-06       | <0.0020 | NS     | NR     | <0.002 | <0.002 | <0.002 | <0.002 | NR     | <0.002 | <0.002 | 0.005 |             |
|                                           | Aug-05       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |
|                                           | Aug-04       | <0.002  | NS     | <0.002 | <0.002 | <0.002 | 0.003  | <0.002 | <0.002 | <0.002 | <0.002 |       |             |
|                                           | Aug-03       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |
| Cr                                        | Aug-06       | <0.0060 | NS     | NR     | <0.006 | <0.006 | 0.0078 | <0.006 | NR     | <0.006 | <0.006 | 0.1   |             |
|                                           | Aug-05       | <0.006  | 0.016  | NR     | 0.33   | <0.006 | 4.1    | 0.012  | NR     | <0.006 | <0.006 |       |             |
|                                           | Aug-04       | <0.006  | NS     | <0.006 | 1.9    | <0.006 | 0.11   | 0.085  | <0.006 | <0.006 | 0.019  |       |             |
|                                           | Aug-03       | 0.013   | 0.029  | NR     | 0.72   | 0.011  | 0.51   | 0.45   | NR     | 0.017  | 0.014  |       |             |
| Lead                                      | Aug-06       | <0.0050 | NS     | NR     | <0.005 | <0.005 | <0.005 | 0.0078 | NR     | <0.005 | <0.005 | 0.015 |             |
|                                           | Aug-05       | <0.005  | <0.005 | NR     | <0.005 | 0.011  | 0.21   | <0.005 | NR     | <0.005 | <0.005 |       |             |
|                                           | Aug-04       | <0.005  | NS     | <0.005 | <0.005 | 0.027  | 0.18   | <0.005 | <0.005 | <0.005 | <0.005 |       |             |
|                                           | Aug-03       | <0.005  | 0.022  | NR     | <0.005 | 0.02   | 0.16   | <0.005 | NR     | 0.0084 | <0.005 |       |             |
| Se                                        | Aug-06       | <0.050  | NS     | NR     | <0.05  | <0.05  | <0.05  | <0.05  | NR     | <0.05  | <0.05  | 0.05  |             |
|                                           | Aug-05       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |
|                                           | Aug-04       | <0.05   | NS     | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  |       |             |
|                                           | Aug-03       | NR      | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |       |             |

NW = New Well After August 2004

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

# TOTAL METALS

## Groundwater Analysis

| EPA Method 6010, EPA Method 7470: Mercury |              |         |         |         |         |         |         |         |         |         |         |       | 40CFR141.62 |
|-------------------------------------------|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|-------------|
| mg/L                                      | Date Sampled | MW #1   | MW #3   | MW #7   | MW #8   | MW #11  | MW #12  | MW #13  | MW #21  | MW #26  | MW #27  | MCL   |             |
| Silver                                    | Aug-06       | <0.0050 | NS      | NR      | <0.005  | <0.005  | <0.005  | <0.005  | NR      | <0.005  | <0.005  |       |             |
|                                           | Aug-05       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
|                                           | Aug-04       | <0.005  | NS      | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  |       |             |
|                                           | Aug-03       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
| Mercury                                   | Aug-06       | <0.0002 | NS      | NR      | <0.0002 | <0.0002 | <0.0002 | <0.0002 | NR      | <0.0002 | <0.0002 | 0.002 |             |
|                                           | Aug-05       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
|                                           | Aug-04       | <0.0002 | NS      | <0.0002 | <0.0002 | <0.0002 | 0.0005  | <0.0002 | <0.0002 | <0.0002 | <0.0002 |       |             |
|                                           | Aug-03       | <0.0002 | <0.0002 | NR      | <0.0002 | 0.00026 | <0.0002 | <0.0002 | NR      | <0.0002 | <0.0002 |       |             |

# TOTAL METALS

## Groundwater Analysis

| EPA Method 6010 , EPA Method 7470: Mercury |              |        |        |        |        |        |        |        |        |        |        |      | 40CFR141.62 |
|--------------------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|-------------|
| mg/L                                       | Date Sampled | MW #29 | MW #30 | MW #31 | MW #32 | MW #33 | MW #34 | MW #35 | MW #36 | MW #37 | MW #38 | MCL  |             |
| Arsenic                                    | Aug-06       | NR     | NR     | NR     | <0.02  | <0.02  | <0.02  | 0.027  | <0.02  | <0.02  | <0.02  | 0.01 |             |
|                                            | Aug-05       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |      |             |
|                                            | Aug-04       | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  |      |             |
|                                            | Aug-03       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |      |             |
| Barium                                     | Aug-06       | NR     | NR     | NR     | 0.032  | 0.017  | 0.44   | 0.71   | 0.16   | 0.3    | 0.093  | 2    |             |
|                                            | Aug-05       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |      |             |
|                                            | Aug-04       | 0.039  | 0.24   | 0.35   | 0.049  | 0.038  | 0.94   | 1.2    | 2.6    | 1.3    | 0.74   |      |             |
|                                            | Aug-03       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |      |             |

NW = New Well After August 2004  
NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

# TOTAL METALS

## Groundwater Analysis

| EPA Method 6010 : EPA Method 7470 : Mercury |              |         |         |         |         |         |         |         |         |         |         |       | 40CFR141.62 |
|---------------------------------------------|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|-------------|
| mg/L                                        | Date Sampled | MW #29  | MW #30  | MW #31  | MW #32  | MW #33  | MW #34  | MW #35  | MW #36  | MW #37  | MW #38  | MCL   |             |
| Cadmium                                     | Aug-06       | NR      | NR      | NR      | <0.002  | <0.002  | <0.002  | <0.0020 | <0.002  | <0.002  | <0.002  | 0.005 |             |
|                                             | Aug-05       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
|                                             | Aug-04       | <0.002  | <0.002  | <0.002  | <0.002  | <0.002  | <0.002  | <0.002  | <0.002  | <0.002  | <0.002  |       |             |
|                                             | Aug-03       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
| Cr                                          | Aug-06       | NR      | NR      | NR      | <0.006  | <0.006  | <0.006  | <0.006  | <0.006  | <0.006  | <0.006  | 0.1   |             |
|                                             | Aug-05       | NR      | NR      | NR      | <0.006  | <0.006  | 0.011   | 0.017   | 0.022   | 0.082   | 0.34    |       |             |
|                                             | Aug-04       | <0.006  | 0.0073  | 0.0088  | <0.006  | <0.006  | <0.006  | <0.006  | 0.025   | 0.018   | 0.079   |       |             |
|                                             | Aug-03       | NR      | NR      | NR      | <0.006  | <0.006  | 0.018   | 0.011   | NR      | 0.18    | 0.31    |       |             |
| Lead                                        | Aug-05       | NR      | NR      | NR      | <0.005  | <0.005  | <0.005  | <0.005  | 0.0053  | <0.005  | <0.005  | 0.015 |             |
|                                             | Aug-05       | NR      | NR      | NR      | <0.005  | <0.005  | 0.0078  | 0.017   | <0.005  | 0.072   | 0.18    |       |             |
|                                             | Aug-04       | <0.005  | 0.011   | <0.005  | <0.005  | 0.0067  | <0.005  | 0.0067  | 0.0072  | 0.05    | 0.028   |       |             |
|                                             | Aug-03       | NR      | NR      | NR      | <0.005  | <0.005  | <0.005  | <0.005  | NR      | 0.18    | 0.21    |       |             |
| Se                                          | Aug-06       | NR      | NR      | NR      | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | 0.05  |             |
|                                             | Aug-05       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
|                                             | Aug-04       | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   |       |             |
|                                             | Aug-03       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
| Silver                                      | Aug-06       | NR      | NR      | NR      | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  |       |             |
|                                             | Aug-05       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
|                                             | Aug-04       | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  |       |             |
|                                             | Aug-03       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
| Mercury                                     | Aug-06       | NR      | NR      | NR      | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.002 |             |
|                                             | Aug-05       | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      | NR      |       |             |
|                                             | Aug-04       | <0.0002 | 0.00023 | 0.00022 | <0.0002 | 0.00069 | <0.0002 | <0.0002 | 0.00031 | 0.00044 | 0.0012  |       |             |
|                                             | Aug-03       | NR      | NR      | NR      | <0.0002 | <0.0002 | <0.0002 | <0.0002 | NR      | <0.0002 | <0.0002 |       |             |

NW = New Well After August 2004

NS = Well is Dry or Not Enough Water to Sample- No Sample

NR = Not Required to Sample

# TOTAL METALS

## Groundwater Analysis

| EPA Method 6010, EPA Method 7470, Mercury |              |        |        |        |        |        |        |        |        |        |  | 40CFR141.62 |
|-------------------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|-------------|
| mg/L                                      | Date Sampled | MW #39 | MW #44 | MW #48 | MW #49 | RW #3  | RW #14 | RW #15 | RW #16 | RW #18 |  | MCL         |
| Arsenic                                   | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | <0.020 | NR     | NR     |  | 0.01        |
|                                           | Aug-05       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | <0.02  |  |             |
|                                           | Aug-04       | <0.02  | <0.02  | NW     | NW     | <0.02  | <0.02  | <0.02  | <0.02  | NR     |  |             |
|                                           | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |  |             |
| Barium                                    | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | 1.3    | NR     | NR     |  | 2           |
|                                           | Aug-05       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | 0.038  |  |             |
|                                           | Aug-04       | 0.71   | 0.084  | NW     | NW     | 0.17   | 1.8    | 1.2    | 0.67   | NR     |  |             |
|                                           | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |  |             |
| Cadmium                                   | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | <0.002 | NR     | NR     |  | 0.005       |
|                                           | Aug-05       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | <0.002 |  |             |
|                                           | Aug-04       | <0.002 | <0.002 | NW     | NW     | <0.002 | <0.002 | <0.002 | <0.002 | NR     |  |             |
|                                           | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |  |             |
| Cr                                        | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | <0.006 | NR     | NR     |  | 0.1         |
|                                           | Aug-05       | NR     | NR     | <0.006 | 0.013  | NR     | NR     | NR     | NR     | 0.32   |  |             |
|                                           | Aug-04       | 0.59   | 0.1    | NW     | NW     | <0.006 | <0.006 | <0.006 | 0.012  | NR     |  |             |
|                                           | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |  |             |
| Lead                                      | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | 0.0094 | NR     | NR     |  | 0.015       |
|                                           | Aug-05       | NR     | NR     | 0.015  | 0.0075 | NR     | NR     | NR     | NR     | 0.16   |  |             |
|                                           | Aug-04       | 0.019  | 0.036  | NW     | NW     | 0.0068 | <0.005 | <0.005 | <0.005 | NR     |  |             |
|                                           | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |  |             |
| Se                                        | Aug-06       | NR     | NR     | NR     | NR     | NR     | NR     | <0.050 | NR     | NR     |  | 0.05        |
|                                           | Aug-05       | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     | NR     |  |             |
|                                           | Aug-04       | <0.05  | <0.05  | NW     | NW     | <0.05  | <0.05  | <0.05  | <0.05  | NR     |  |             |
|                                           | Aug-03       | NR     | NR     | NW     | NW     | NR     | NR     | NR     | NR     | NR     |  |             |

NW = New Well After August 2004

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample

# TOTAL METALS

## Groundwater Analysis

| EPA Method 6010C, EPA Method 7470: Mercury |              |         |         |        |        |         |         |         |         |        |  | 40CFR141.62 |
|--------------------------------------------|--------------|---------|---------|--------|--------|---------|---------|---------|---------|--------|--|-------------|
| mg/L                                       | Date Sampled | MW #39  | MW #44  | MW #48 | MW #49 | RW #3   | RW #14  | RW #15  | RW #16  | RW #18 |  | MCL         |
| Silver                                     | Aug-06       | NR      | NR      | NR     | NR     | NR      | NR      | <0.0050 | NR      | NR     |  |             |
|                                            | Aug-05       | NR      | NR      | NR     | NR     | NR      | NR      | NR      | NR      | NR     |  |             |
|                                            | Aug-04       | <0.005  | <0.005  | NW     | NW     | <0.005  | <0.005  | <0.005  | <0.005  | NR     |  |             |
|                                            | Aug-03       | NR      | NR      | NW     | NW     | NR      | NR      | NR      | NR      | NR     |  |             |
| Mercury                                    | Aug-06       | NR      | NR      | NR     | NR     | NR      | NR      | <0.0002 | NR      | NR     |  | 0.002       |
|                                            | Aug-05       | NR      | NR      | NR     | NR     | NR      | NR      | NR      | NR      | NR     |  |             |
|                                            | Aug-04       | 0.00021 | 0.00033 | NW     | NW     | <0.0002 | <0.0002 | <0.0002 | <0.0002 | NR     |  |             |
|                                            | Aug-03       | NR      | NR      | NW     | NW     | NR      | NR      | NR      | NR      | NR     |  |             |

NW = New Well After August 2004

NR = Not Required to Sample

NS = Well is Dry or Not Enough Water to Sample- No Sample



# TOTAL METALS

## Groundwater Analysis

| EPA Method 6010, EPA Method 7470: Mercury |              |         |         |  |  |  | 40CFR141.62 MCL |  |  |  |
|-------------------------------------------|--------------|---------|---------|--|--|--|-----------------|--|--|--|
| mg/L                                      | Date Sampled | O/F #2  | O/F #3  |  |  |  |                 |  |  |  |
| Arsenic                                   | Aug-06       | NS      | <0.02   |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | <0.02   | <0.02   |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | NR      |  |  |  |                 |  |  |  |
| Barium                                    | Aug-06       | NS      | 0.063   |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | 0.055   | 0.032   |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | NR      |  |  |  |                 |  |  |  |
| Cadmium                                   | Aug-06       | NS      | <0.002  |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | <0.002  | <0.002  |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | NR      |  |  |  |                 |  |  |  |
| Cr                                        | Aug-06       | NS      | <0.006  |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | 0.0069  | <0.006  |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | <0.006  |  |  |  |                 |  |  |  |
| Lead                                      | Aug-06       | NS      | <0.005  |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | <0.005  | <0.005  |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | <0.005  |  |  |  |                 |  |  |  |
|                                           |              |         |         |  |  |  | 40CFR141.62 MCL |  |  |  |
| mg/L                                      | Date Sampled | O/F #2  | O/F #3  |  |  |  |                 |  |  |  |
| Se                                        | Aug-06       | NS      | <0.05   |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | <0.05   | <0.05   |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | NR      |  |  |  |                 |  |  |  |
| Silver                                    | Aug-06       | NS      | <0.005  |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | <0.005  | <0.005  |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | NR      |  |  |  |                 |  |  |  |
| Mercury                                   | Aug-06       | NS      | <0.0002 |  |  |  |                 |  |  |  |
|                                           | Aug-05       | NR      | NR      |  |  |  |                 |  |  |  |
|                                           | Aug-04       | <0.0002 | <0.0002 |  |  |  |                 |  |  |  |
|                                           | Aug-03       | NR      | <0.0002 |  |  |  |                 |  |  |  |

NW = New Well - Not Sampled before 2005



# RIVER ANALYSIS - 2006

## General Chemistry

|                  |             |                 |                    |                    |                         |                           | WQCC<br>20 NMAC<br>6:2:3103 |
|------------------|-------------|-----------------|--------------------|--------------------|-------------------------|---------------------------|-----------------------------|
| EPA Method 300.0 | mg/L        | DATE<br>Sampled | North of<br>MW #46 | North of<br>MW #45 | Upstream of<br>Refinery | Downstream<br>of Refinery |                             |
|                  | Fluoride    | 10/23/06        | 0.17               | 0.18               | 0.18                    | 0.14                      | 1.60                        |
|                  |             | 07/18/06        | 0.1                | 0.11               | <0.10                   | 0.11                      |                             |
|                  |             | 04/14/06        | 0.16               | 0.16               | 0.16                    | 0.16                      |                             |
|                  |             | 01/06/06        | 0.1                | <0.10              | 0.11                    | 0.17                      |                             |
|                  | Chloride    | 10/23/06        | 2.9                | 2.8                | 3.00                    | 4.1                       | 250                         |
|                  |             | 07/18/06        | 2.5                | 2.4                | 2.3                     | 2.4                       |                             |
|                  |             | 04/14/06        | 2.9                | 2.9                | 2.9                     | 3.5                       |                             |
|                  |             | 01/06/06        | 2.7                | 2.6                | 2.4                     | 3.9                       |                             |
|                  | Nitrite     | 10/23/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |                             |
|                  |             | 07/18/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |                             |
|                  |             | 04/14/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |                             |
|                  |             | 01/06/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |                             |
|                  | Bromide     | 10/23/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  |             | 07/18/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  |             | 04/14/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  |             | 01/06/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  | Nitrogen    | 10/23/06        | <0.10              | 0.19               | 0.12                    | <0.10                     | 10                          |
|                  |             | 07/18/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |                             |
|                  |             | 04/14/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |                             |
|                  |             | 01/06/06        | 0.11               | <0.10              | <0.10                   | <0.10                     |                             |
|                  | Phosphorous | 10/23/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  |             | 07/18/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  |             | 04/14/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  |             | 01/06/06        | <0.50              | <0.50              | <0.50                   | <0.50                     |                             |
|                  | Sulfate     | 10/23/06        | 65                 | 66                 | 68                      | 100                       | 600                         |
|                  |             | 07/18/06        | 47                 | 46                 | 45                      | 49                        |                             |
|                  |             | 04/14/06        | 84                 | 85                 | 83                      | 110                       |                             |
|                  |             | 01/06/06        | 62                 | 61                 | 58                      | 84                        |                             |
| EPA 160.1        | TDS         | 10/23/06        | 230                | 220                | 230                     | 290                       | 1000                        |
|                  |             | 07/18/06        | 140                | 150                | 140                     | 150                       |                             |
|                  |             | 04/14/06        | 240                | 230                | 250                     | 290                       |                             |
|                  |             | 01/06/06        | 190                | 190                | 180                     | 240                       |                             |

# RIVER ANALYSIS - 2006

## General Chemistry

|           | mg/L       | DATE<br>Sampled | North of<br>MW #46 | North of<br>MW #45 | Upstream of<br>Refinery | Downstream<br>of Refinery | WQCC<br>20 NMAC<br>6.2.3103 |
|-----------|------------|-----------------|--------------------|--------------------|-------------------------|---------------------------|-----------------------------|
| EPA 310.1 | CO3        | 10/23/06        | <2.0               | <2.0               | <2.0                    | <2.0                      |                             |
|           |            | 07/18/06        | <2.0               | <2.0               | <2.0                    | <2.0                      |                             |
|           |            | 04/14/06        | <2.0               | <2.0               | <2.0                    | <2.0                      |                             |
|           |            | 01/06/06        | <2.0               | <2.0               | <2.0                    | <2.0                      |                             |
|           | ALK        | 10/23/06        | 86                 | 84                 | 86                      | 94                        |                             |
|           |            | 07/18/06        | 78                 | 77                 | 78                      | 78                        |                             |
|           |            | 04/14/06        | 88                 | 88                 | 89                      | 99                        |                             |
|           |            | 01/06/06        | 83                 | 81                 | 82                      | 86                        |                             |
| EPA 120.1 | E.C.       | 10/23/06        | 320                | 310                | 310                     | 410                       |                             |
|           | (umhos/cm) | 07/18/06        | 270                | 270                | 260                     | 280                       |                             |
|           |            | 04/14/06        | 360                | 360                | 360                     | 430                       |                             |
|           |            | 01/06/06        | 300                | 300                | 290                     | 370                       |                             |

# RIVER ANALYSIS - 2006

## Organics

|                  | mg/L     | DATE<br>Sampled | North of<br>MW #46 | North of<br>MW #45 | Upstream of<br>Refinery | Downstream<br>of Refinery | WQCC<br>20 NMAC<br>6.2.3103 |
|------------------|----------|-----------------|--------------------|--------------------|-------------------------|---------------------------|-----------------------------|
|                  |          |                 |                    |                    |                         |                           |                             |
| EPA Method 8021B | Benzene  | 10/23/06        | <0.001             | <0.001             | <0.001                  | <0.001                    | 0.01                        |
|                  |          | 07/18/06        | <0.001             | <0.001             | <0.001                  | <0.001                    |                             |
|                  |          | 04/14/06        | <0.001             | <0.001             | <0.001                  | <0.001                    |                             |
|                  |          | 01/06/06        | <0.0005            | <0.0005            | <0.0005                 | <0.0005                   |                             |
|                  | Toluene  | 10/23/06        | <0.001             | <0.001             | <0.001                  | <0.001                    | 0.75                        |
|                  |          | 07/18/06        | <0.001             | <0.001             | <0.001                  | <0.001                    |                             |
|                  |          | 04/14/06        | <0.001             | <0.001             | <0.001                  | <0.001                    |                             |
|                  |          | 01/06/06        | <0.0005            | <0.0005            | <0.0005                 | <0.0005                   |                             |
|                  | EthylBen | 10/23/06        | <0.001             | <0.001             | <0.001                  | <0.001                    | 0.75                        |
|                  |          | 07/18/06        | <0.001             | <0.001             | <0.001                  | <0.001                    |                             |
|                  |          | 04/14/06        | <0.001             | <0.001             | <0.001                  | <0.001                    |                             |
|                  |          | 01/06/06        | <0.0005            | <0.0005            | <0.0005                 | <0.0005                   |                             |
|                  | Xylene   | 10/23/06        | <0.003             | <0.003             | <0.003                  | <0.003                    | 0.62                        |
|                  |          | 07/18/06        | <0.003             | <0.003             | <0.003                  | <0.003                    |                             |
|                  |          | 04/14/06        | <0.003             | <0.003             | <0.003                  | <0.003                    |                             |
|                  |          | 01/06/06        | <0.0005            | <0.0005            | <0.0005                 | <0.0005                   |                             |
| EPA Method 8015B | MTBE     | 10/23/06        | <0.0015            | <0.0015            | <0.0015                 | <0.0015                   |                             |
|                  |          | 07/18/06        | <0.0025            | <0.0025            | <0.0025                 | <0.0025                   |                             |
|                  |          | 04/14/06        | <0.0025            | <0.0025            | <0.0025                 | <0.0025                   |                             |
|                  |          | 01/06/06        | <0.0025            | <0.0025            | <0.0025                 | <0.0025                   |                             |
|                  | DRO      | 10/23/06        | <1.0               | <1.0               | <1.0                    | <1.0                      |                             |
|                  |          | 07/18/06        | <1.0               | <1.0               | <1.0                    | <1.0                      |                             |
|                  |          | 04/14/06        | <1.0               | <1.0               | <1.0                    | <1.0                      |                             |
|                  |          | 01/06/06        | <1.0               | <1.0               | <1.0                    | <1.0                      |                             |
|                  | MRO      | 10/23/06        | <5.0               | <5.0               | <5.0                    | <5.0                      |                             |
|                  |          | 07/18/06        | <5.0               | <5.0               | <5.0                    | <5.0                      |                             |
|                  |          | 04/14/06        | <5.0               | <5.0               | <5.0                    | <5.0                      |                             |
|                  |          | 01/06/06        | <5.0               | <5.0               | <5.0                    | <5.0                      |                             |
|                  | GRO      | 10/23/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                             |
|                  |          | 07/18/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                             |
|                  |          | 04/14/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                             |
|                  |          | 01/06/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                             |

# RIVER ANALYSIS - 2006

## TOTAL METALS

| EPA Method 6010 , EPA Method 7470: Mercury |                 |                    |                    |                         |                            | 40CFR141.62 |
|--------------------------------------------|-----------------|--------------------|--------------------|-------------------------|----------------------------|-------------|
| mg/L                                       | DATE<br>Sampled | North of<br>MW #46 | North of<br>MW #45 | Upstream of<br>Refinery | Down stream<br>of Refinery | MCL         |
| <b>Arsenic</b>                             | 10/23/06        | <0.020             | <0.020             | <0.020                  | <0.020                     | 0.01        |
|                                            | 07/18/06        | <0.020             | <0.020             | <0.020                  | <0.020                     |             |
|                                            | 04/14/06        | <0.020             | <0.020             | <0.020                  | <0.020                     |             |
|                                            | 01/06/06        | <0.0020            | <0.0020            | <0.020                  | <0.020                     |             |
| <b>Barium</b>                              | 10/23/06        | 0.062              | 0.061              | 0.056                   | 0.062                      | 2           |
|                                            | 07/18/06        | 0.078              | 0.081              | 0.076                   | 0.076                      |             |
|                                            | 04/14/06        | 0.069              | 0.068              | 0.070                   | 0.068                      |             |
|                                            | 01/06/06        | 0.064              | 0.063              | 0.063                   | 0.063                      |             |
| <b>Cadmium</b>                             | 10/23/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                    | 0.005       |
|                                            | 07/18/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                    |             |
|                                            | 04/14/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                    |             |
|                                            | 01/06/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                    |             |
| <b>Cr</b>                                  | 10/23/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                    | 0.1         |
|                                            | 07/18/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                    |             |
|                                            | 04/14/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                    |             |
|                                            | 01/06/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                    |             |
| <b>Lead</b>                                | 10/23/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    | 0.015       |
|                                            | 07/18/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    |             |
|                                            | 04/14/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    |             |
|                                            | 01/06/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    |             |
| <b>Se</b>                                  | 10/23/06        | <0.050             | <0.050             | <0.050                  | <0.050                     | 0.05        |
|                                            | 07/18/06        | <0.050             | <0.050             | <0.050                  | <0.050                     |             |
|                                            | 04/14/06        | <0.050             | <0.050             | <0.050                  | <0.050                     |             |
|                                            | 01/06/06        | <0.050             | <0.050             | <0.050                  | <0.050                     |             |
| <b>Silver</b>                              | 10/23/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    |             |
|                                            | 07/18/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    |             |
|                                            | 04/14/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    |             |
|                                            | 01/06/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                    |             |
| <b>Mercury</b>                             | 10/23/06        | <0.00020           | <0.00020           | <0.00020                | <0.00020                   | 0.002       |
|                                            | 07/18/06        | <0.00020           | <0.00020           | <0.00020                | 0.00078                    |             |
|                                            | 04/14/06        | <0.00020           | <0.00020           | <0.00020                | <0.00020                   |             |
|                                            | 01/06/06        | <0.00020           | <0.00020           | <0.00020                | <0.00020                   |             |

# RIVER ANALYSIS - 2006

## DISSOLVED METALS

| EPA Method 6010C |                 |                    |                    |                         |                           | WQCC                |
|------------------|-----------------|--------------------|--------------------|-------------------------|---------------------------|---------------------|
| mg/L             | DATE<br>Sampled | North of<br>MW #46 | North of<br>MW #45 | Upstream of<br>Refinery | Downstream<br>of Refinery | 20 NMAG<br>6.2-3103 |
| Arsenic          | 10/23/06        | <0.020             | <0.020             | <0.020                  | <0.020                    |                     |
|                  | 07/18/06        | <0.020             | <0.020             | <0.020                  | <0.020                    |                     |
|                  | 04/14/06        | <0.020             | <0.020             | <0.020                  | <0.020                    |                     |
|                  | 01/06/06        | <0.020             | <0.020             | <0.020                  | <0.020                    |                     |
| Barium           | 10/23/06        | 0.062              | 0.061              | 0.056                   | 0.062                     |                     |
|                  | 07/18/06        | 0.063              | 0.064              | 0.065                   | 0.065                     |                     |
|                  | 04/14/06        | 0.061              | 0.061              | 0.061                   | 0.06                      |                     |
|                  | 01/06/06        | 0.060              | 0.060              | 0.061                   | 0.058                     |                     |
| Cadmium          | 10/23/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                   |                     |
|                  | 07/18/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                   |                     |
|                  | 04/14/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                   |                     |
|                  | 01/06/06        | <0.0020            | <0.0020            | <0.0020                 | <0.0020                   |                     |
| Calcium          | 10/23/06        | 33                 | 33                 | 34                      | 42                        |                     |
|                  | 07/18/06        | 30                 | 30                 | 32                      | 31                        |                     |
|                  | 04/14/06        | 37                 | 37                 | 36                      | 43                        |                     |
|                  | 01/06/06        | 36                 | 35                 | 35                      | 40                        |                     |
| Cr               | 10/23/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
|                  | 07/18/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
|                  | 04/14/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
|                  | 01/06/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
| Copper           | 10/23/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
|                  | 07/18/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
|                  | 04/14/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
|                  | 01/06/06        | <0.0060            | <0.0060            | <0.0060                 | <0.0060                   |                     |
| Iron             | 10/23/06        | 0.075              | 0.14               | 0.12                    | 0.11                      |                     |
|                  | 07/18/06        | 0.021              | <0.020             | <0.020                  | <0.020                    |                     |
|                  | 04/14/06        | 0.023              | 0.025              | <0.020                  | 0.037                     |                     |
|                  | 01/06/06        | <0.020             | 0.025              | <0.020                  | 0.03                      |                     |

| EPA Method 6010C |                 |                    |                    |                         |                           | WQCC                |
|------------------|-----------------|--------------------|--------------------|-------------------------|---------------------------|---------------------|
| mg/L             | DATE<br>Sampled | North of<br>MW #46 | North of<br>MW #45 | Upstream of<br>Refinery | Downstream<br>of Refinery | 20 NMAG<br>6.2-3103 |
| Lead             | 10/23/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
|                  | 07/18/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
|                  | 04/14/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
|                  | 01/06/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
| Mg               | 10/23/06        | 5.3                | 5.4                | 5.7                     | 6.4                       |                     |
|                  | 07/18/06        | 5.2                | 5.2                | 5.5                     | 5.3                       |                     |
|                  | 04/14/06        | 6.2                | 6.2                | 6.1                     | 6.9                       |                     |
|                  | 01/06/06        | 6.2                | 6.1                | 6.1                     | 6.7                       |                     |
| Mn               | 10/23/06        | 0.013              | 0.016              | 0.019                   | 0.078                     |                     |
|                  | 07/18/06        | 0.011              | 0.011              | 0.01                    | 0.017                     |                     |
|                  | 04/14/06        | 0.071              | 0.071              | 0.074                   | 0.14                      |                     |
|                  | 01/06/06        | 0.021              | 0.022              | 0.022                   | 0.07                      |                     |
| K                | 10/23/06        | 1.6                | 1.7                | 1.7                     | 2.1                       |                     |
|                  | 07/18/06        | 1.6                | 1.4                | 1.5                     | 1.4                       |                     |
|                  | 04/14/06        | 1.8                | 1.8                | 1.8                     | 1.9                       |                     |
|                  | 01/06/06        | <0.050             | 1.90               | 1.90                    | 2.00                      |                     |
| Se               | 10/23/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                     |
|                  | 07/18/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                     |
|                  | 04/14/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                     |
|                  | 01/06/06        | <0.050             | <0.050             | <0.050                  | <0.050                    |                     |
| Silver           | 10/23/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
|                  | 07/18/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
|                  | 04/14/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
|                  | 01/06/06        | <0.0050            | <0.0050            | <0.0050                 | <0.0050                   |                     |
| Sodium           | 10/23/06        | 20                 | 21                 | 25                      | 30                        |                     |
|                  | 07/18/06        | 15                 | 15                 | 15                      | 15                        |                     |
|                  | 04/14/06        | 28                 | 28                 | 28                      | 36                        |                     |
|                  | 01/06/06        | 20                 | 20                 | 20                      | 27                        |                     |

# RIVER ANALYSIS - 2006

## DISSOLVED METALS

| EPA Method 6010C |                 |                    |                    |                         |                           |  | WQCC                 |
|------------------|-----------------|--------------------|--------------------|-------------------------|---------------------------|--|----------------------|
| mg/L             | DATE<br>Sampled | North of<br>MW #46 | North of<br>MW #45 | Upstream of<br>Refinery | Downstream<br>of Refinery |  | 20 NIMAC<br>6.2.3103 |
| Uranium          | 10/23/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |  |                      |
|                  | 07/18/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |  |                      |
|                  | 04/14/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |  |                      |
|                  | 01/06/06        | <0.10              | <0.10              | <0.10                   | <0.10                     |  |                      |
| Zinc             | 10/23/06        | 0.026              | 0.031              | 0.022                   | 0.032                     |  |                      |
|                  | 07/18/06        | 0.16               | 0.11               | 0.089                   | 0.14                      |  |                      |
|                  | 04/14/06        | 0.046              | 0.42               | 0.062                   | 0.024                     |  |                      |
|                  | 01/06/06        | 0.067              | 0.11               | 0.12                    | 0.056                     |  |                      |

# Tank #33 Summary

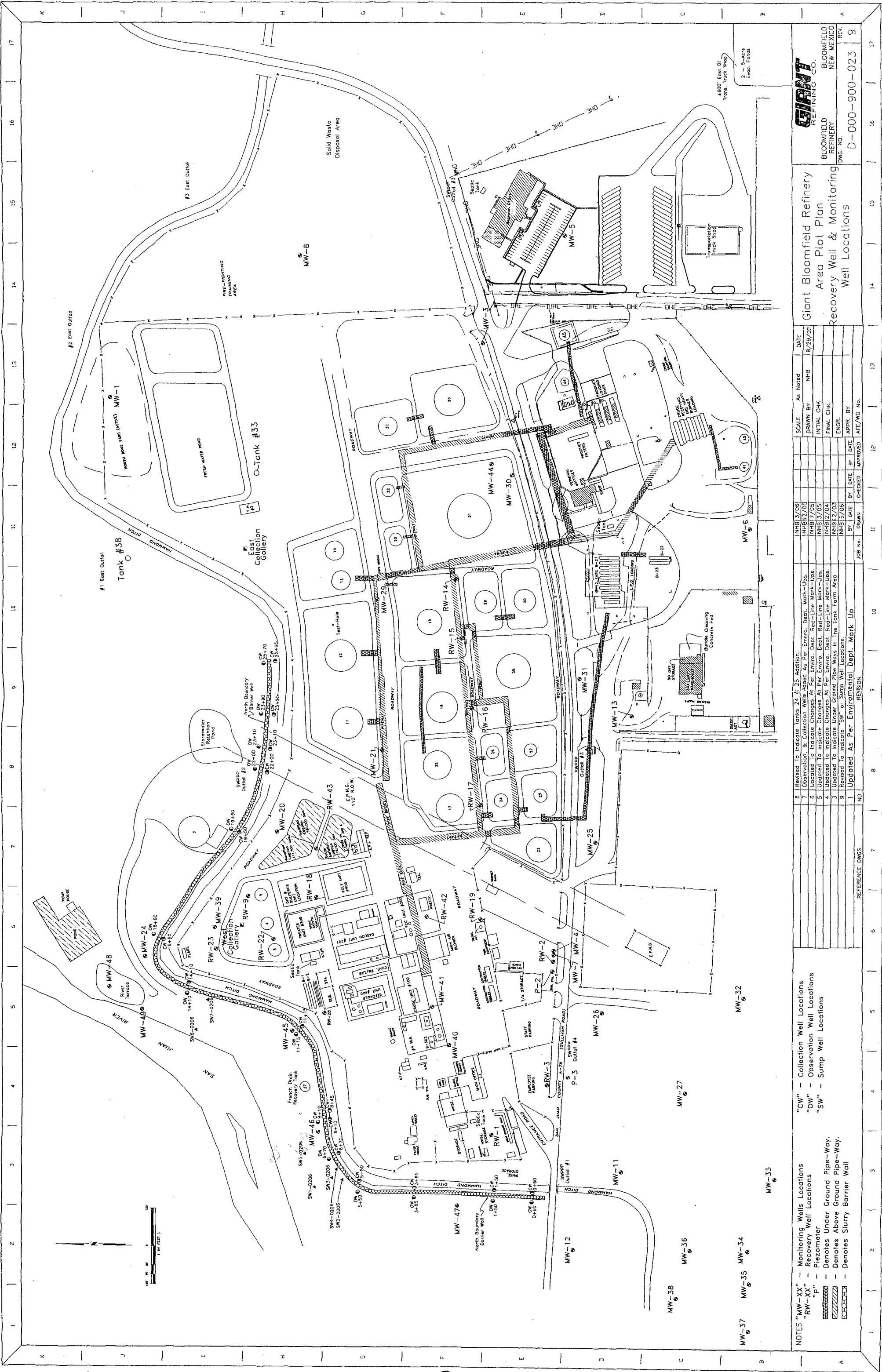
2006

|                  | mg/L            | Date<br>Sampled | Tk #33 | WQCC 20 NMAC<br>6.2.3103 |
|------------------|-----------------|-----------------|--------|--------------------------|
|                  |                 |                 |        |                          |
| EPA Method 8021B | <b>Benzene</b>  | 1/30/2006       | <0.001 | 0.01                     |
|                  |                 | 6/15/2006       | <0.001 |                          |
|                  |                 | 9/13/2006       | <0.001 |                          |
|                  |                 | 10/17/2006      | <0.001 |                          |
|                  | <b>Toluene</b>  | 1/30/2006       | <0.001 | 0.75                     |
|                  |                 | 6/15/2006       | <0.001 |                          |
|                  |                 | 9/13/2006       | <0.001 |                          |
|                  |                 | 10/17/2006      | <0.001 |                          |
|                  | <b>EthylBen</b> | 1/30/2006       | <0.001 | 0.75                     |
|                  |                 | 6/15/2006       | <0.001 |                          |
|                  |                 | 9/13/2006       | <0.001 |                          |
|                  |                 | 10/17/2006      | <0.001 |                          |
|                  | <b>Xylene</b>   | 1/30/2006       | <0.003 | 0.62                     |
|                  |                 | 6/15/2006       | <0.003 |                          |
|                  |                 | 9/13/2006       | <0.003 |                          |
|                  |                 | 10/17/06        | <0.003 |                          |

## Section 10.0 List of Figures

| <u>Title</u>                                               | <u>Figure</u> |
|------------------------------------------------------------|---------------|
| Vicinity Map.....                                          | Figures 1     |
| Facility Site Plan (11X17).....                            | Figure 2      |
| Facility Site Plan.....                                    | Figure 3      |
| Groundwater Elevation and Flow Direction – April.....      | Figure 4      |
| Groundwater Elevation and Flow Direction – August.....     | Figure 5      |
| Groundwater Dissolved Phase Constituents Map – April.....  | Figure 6      |
| Groundwater Dissolved Phase Constituents Map – August..... | Figure 7      |
| Product Thickness Map – April.....                         | Figure 8      |
| Product Thickness Map – August.....                        | Figure 9      |





**Groundwater Elevation and Flow Direction – August 2006**

**Anticipated Receipt by May 15, 2007**

**Groundwater Dissolved Phase Constituents – April 2006**

**Anticipated Receipt by May 15, 2007**

**Groundwater Dissolved Phase Constituents – August 2006**

**Anticipated Receipt by May 15, 2007**

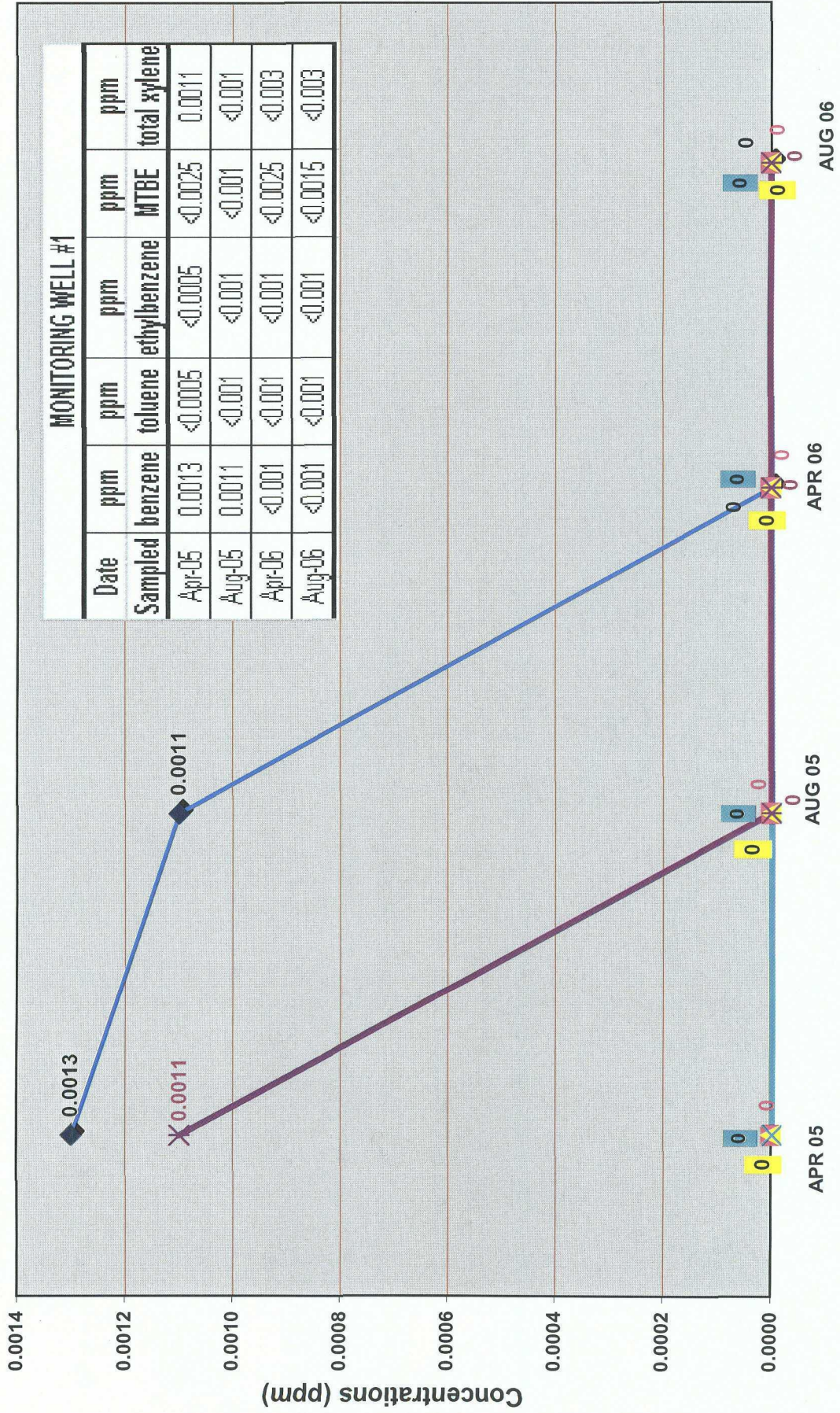
**Product Thickness – August 2006**

**Anticipated Receipt by May 15, 2007**

## Section 11.0 BTEX & MTBE Concentration vs Time



# Monitoring Well #1

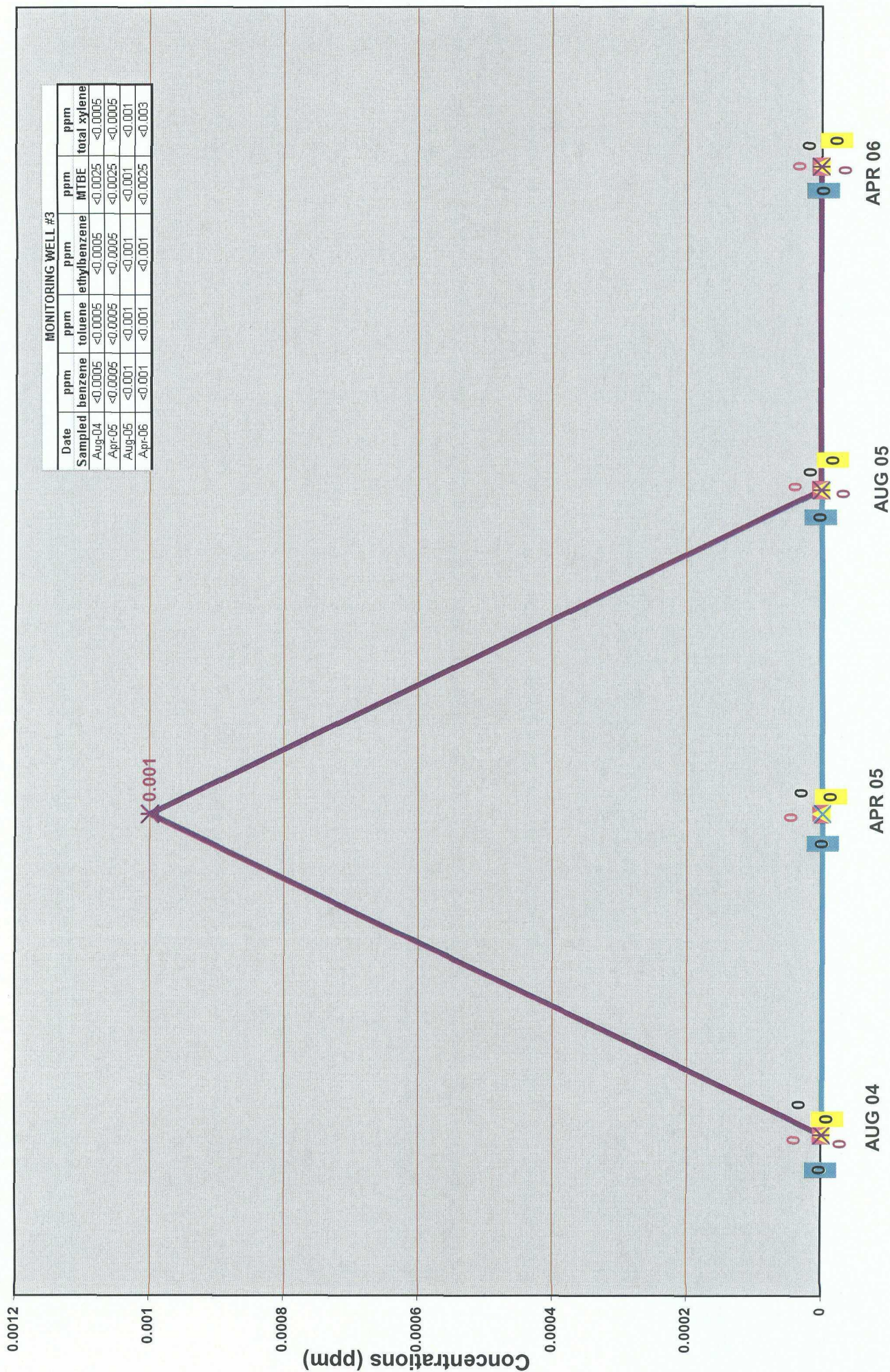




# Monitoring Well #3

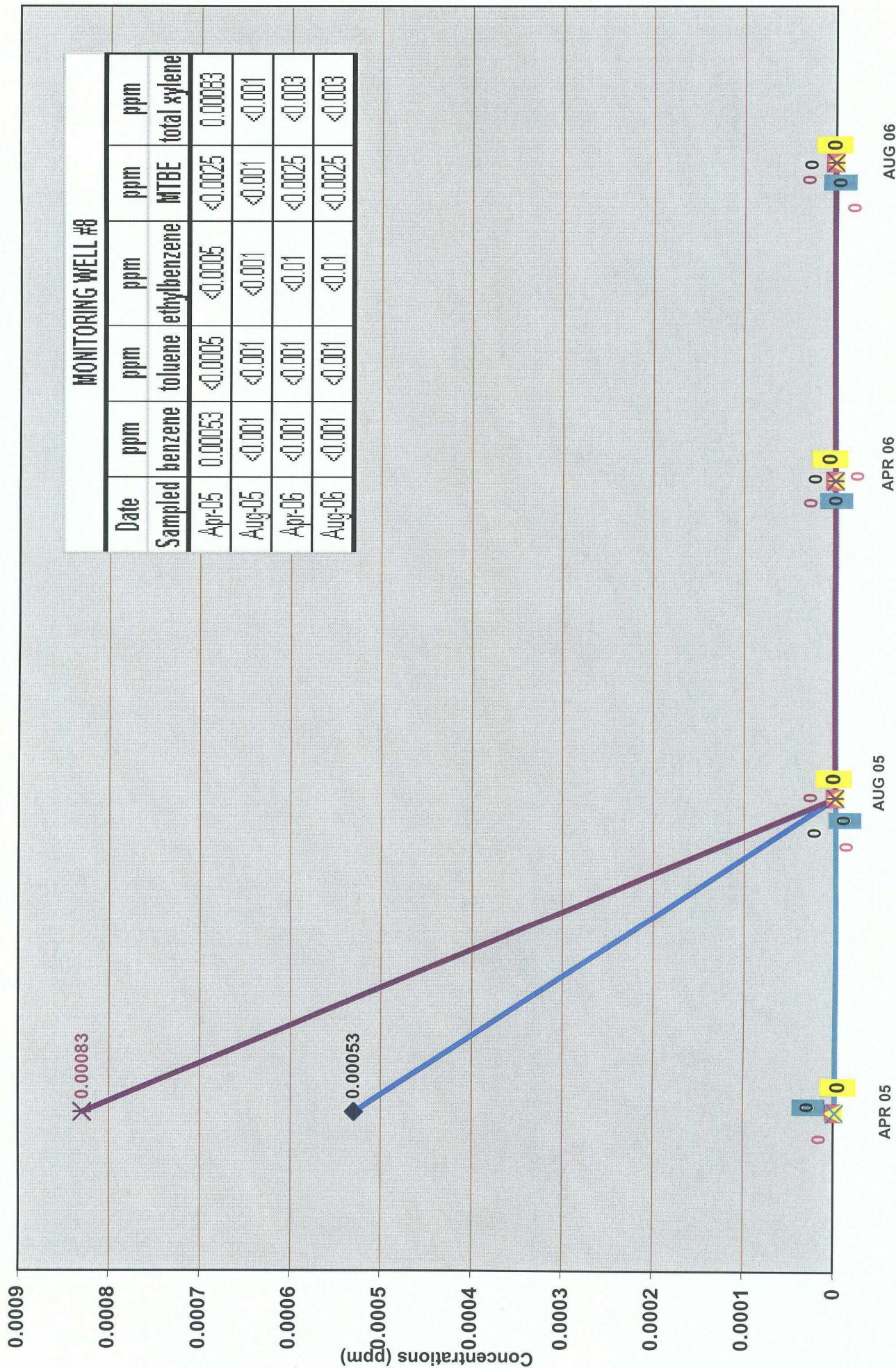
Legend:

- Benzene
- Toluene
- Ethylbenzene
- MTBE
- Total Xylene





# Monitoring Well #8



AUG 06

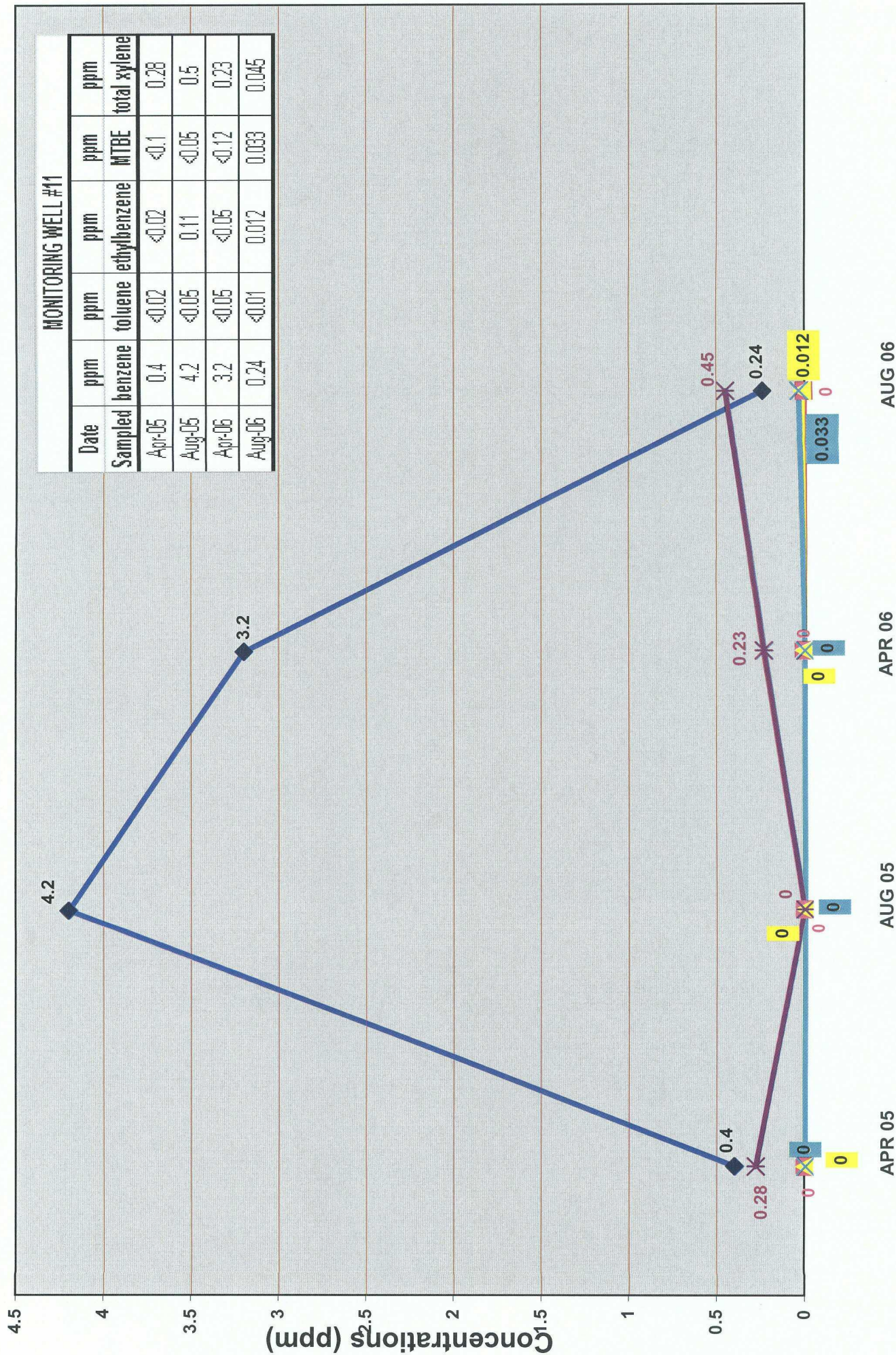
APR 06

AUG 05

APR 05



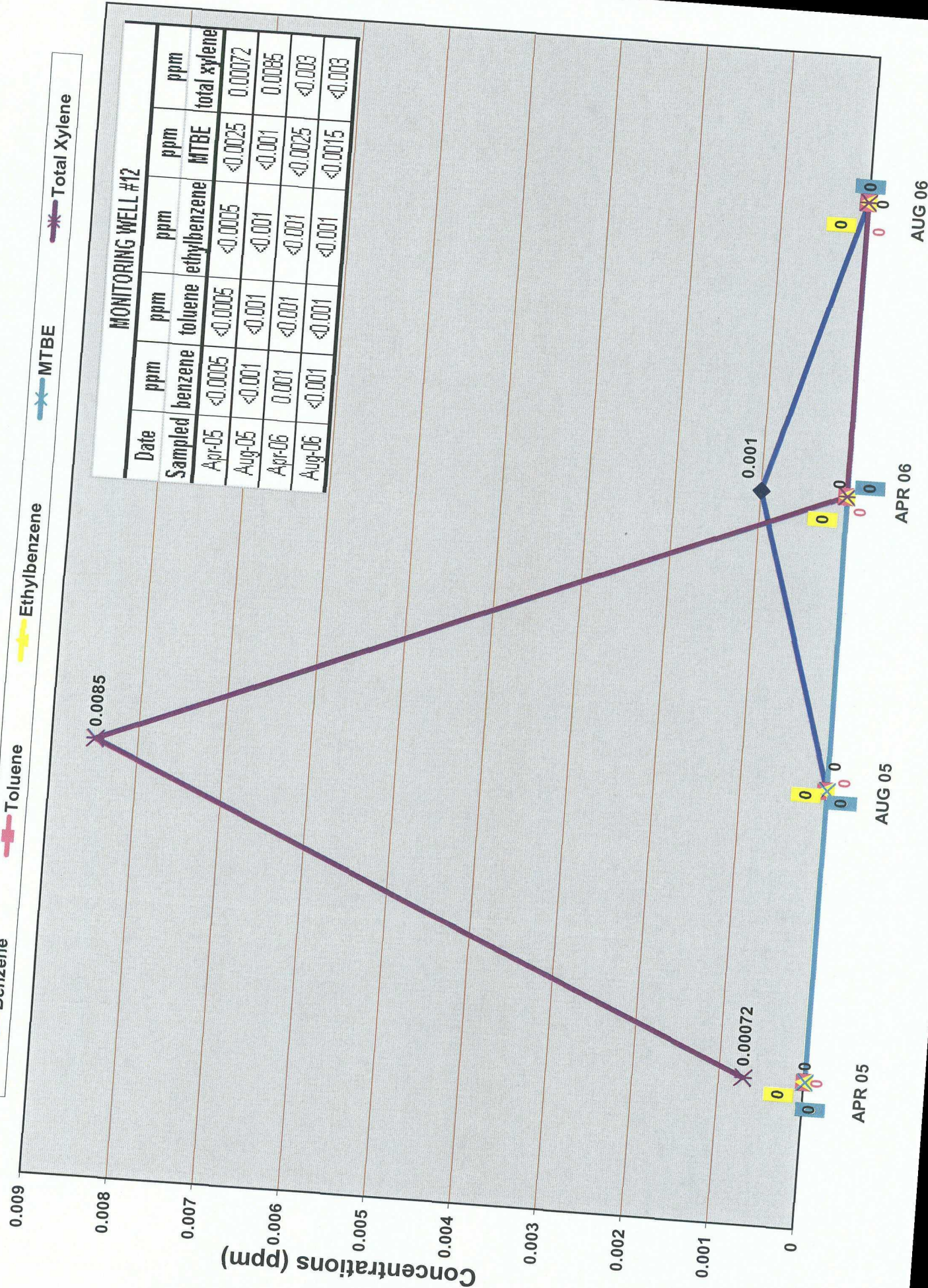
# Monitoring Well #11



| MONITORING WELL #11 |      |         |         |              |       |              |
|---------------------|------|---------|---------|--------------|-------|--------------|
| Date                | ppm  | benzene | toluene | ethylbenzene | MTBE  | total xylene |
| Apr-05              | 0.4  | <0.02   | <0.02   | <0.02        | <0.1  | 0.28         |
| Aug-05              | 4.2  | <0.05   | <0.05   | 0.11         | <0.05 | 0.5          |
| Apr-06              | 3.2  | <0.05   | <0.05   | <0.05        | <0.12 | 0.23         |
| Aug-06              | 0.24 | <0.01   | <0.01   | 0.012        | 0.033 | 0.045        |

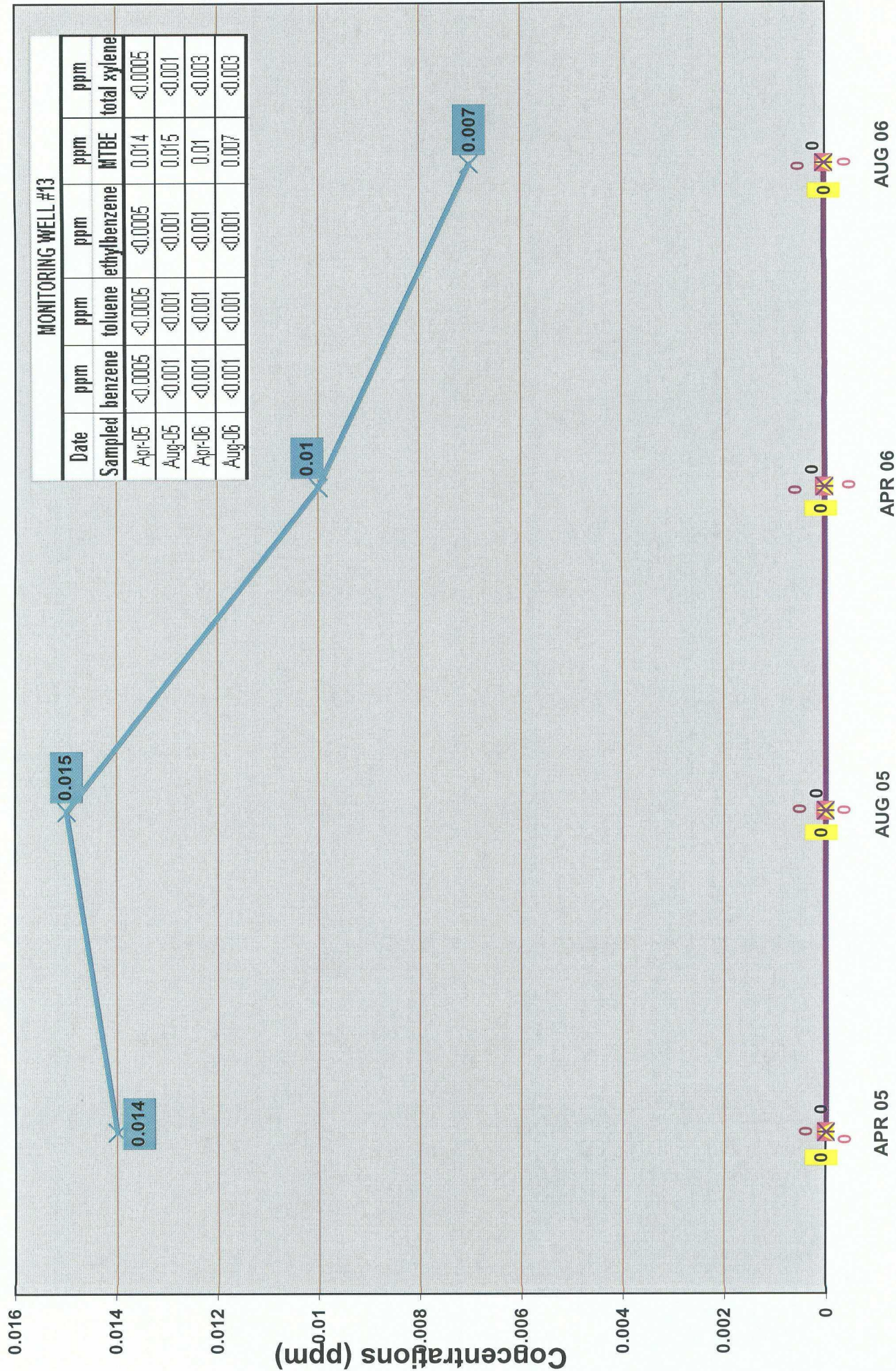


# Monitoring Well #12



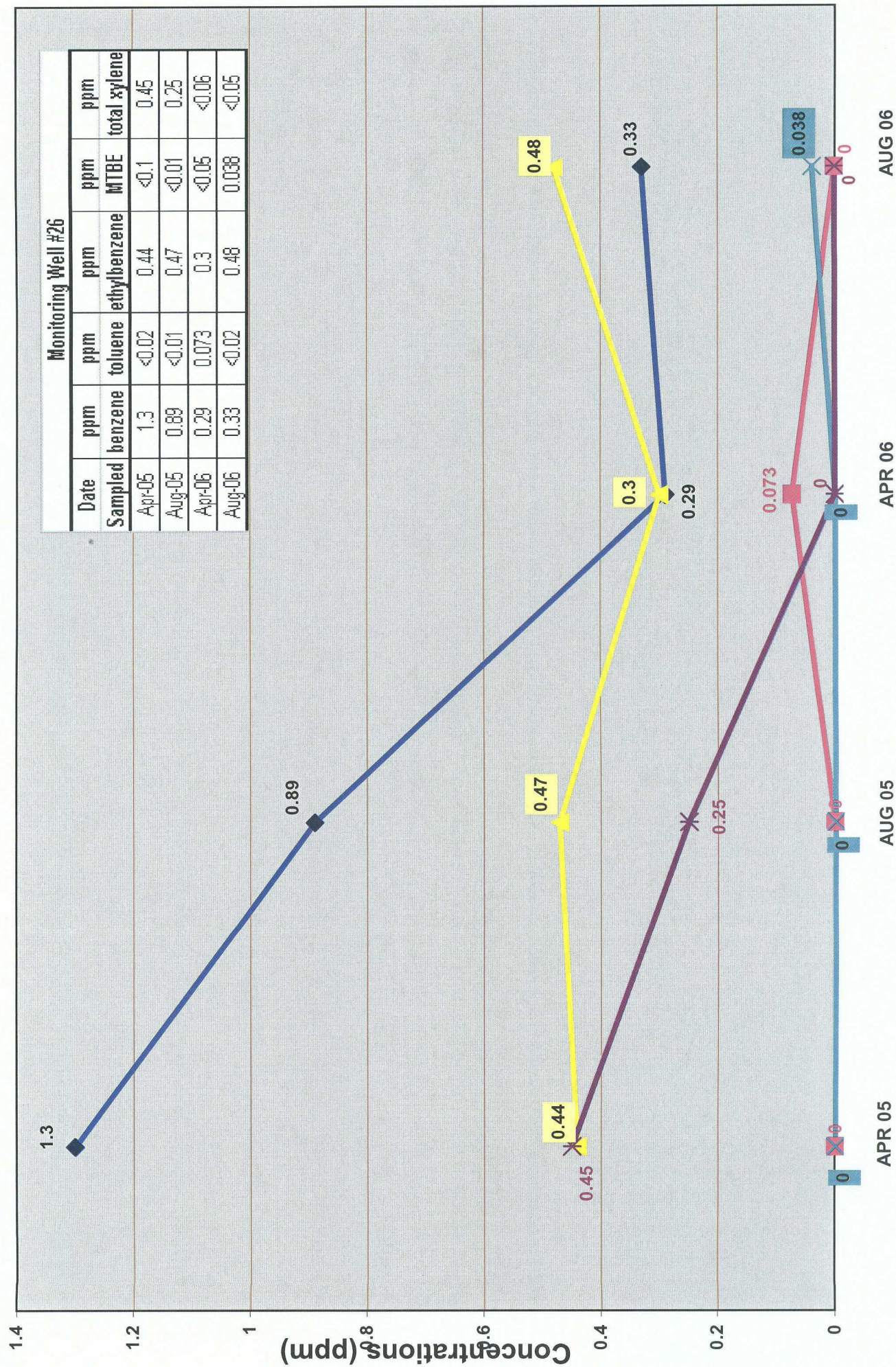


# Monitoring Well #13



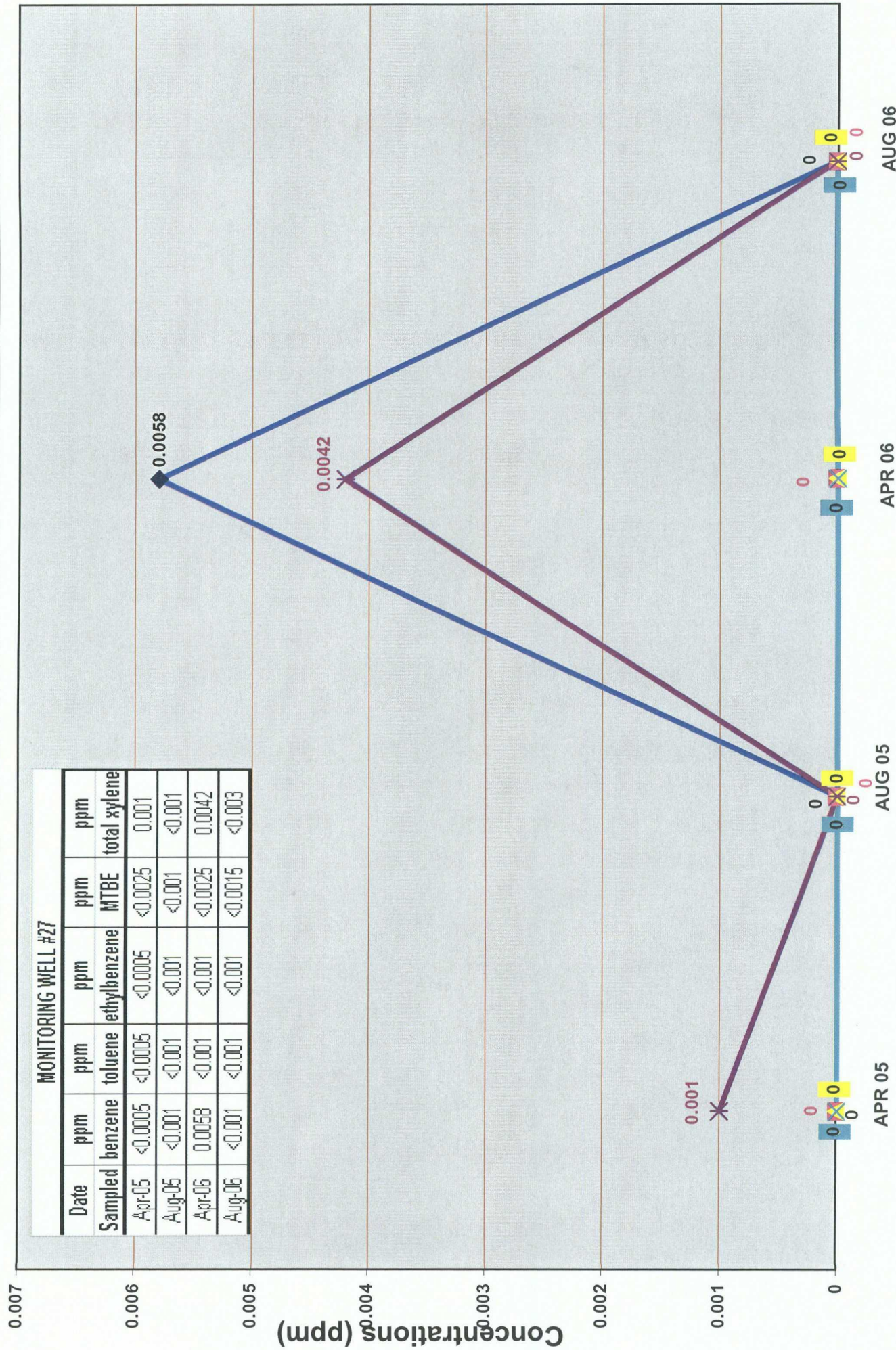


# Monitoring Well #26



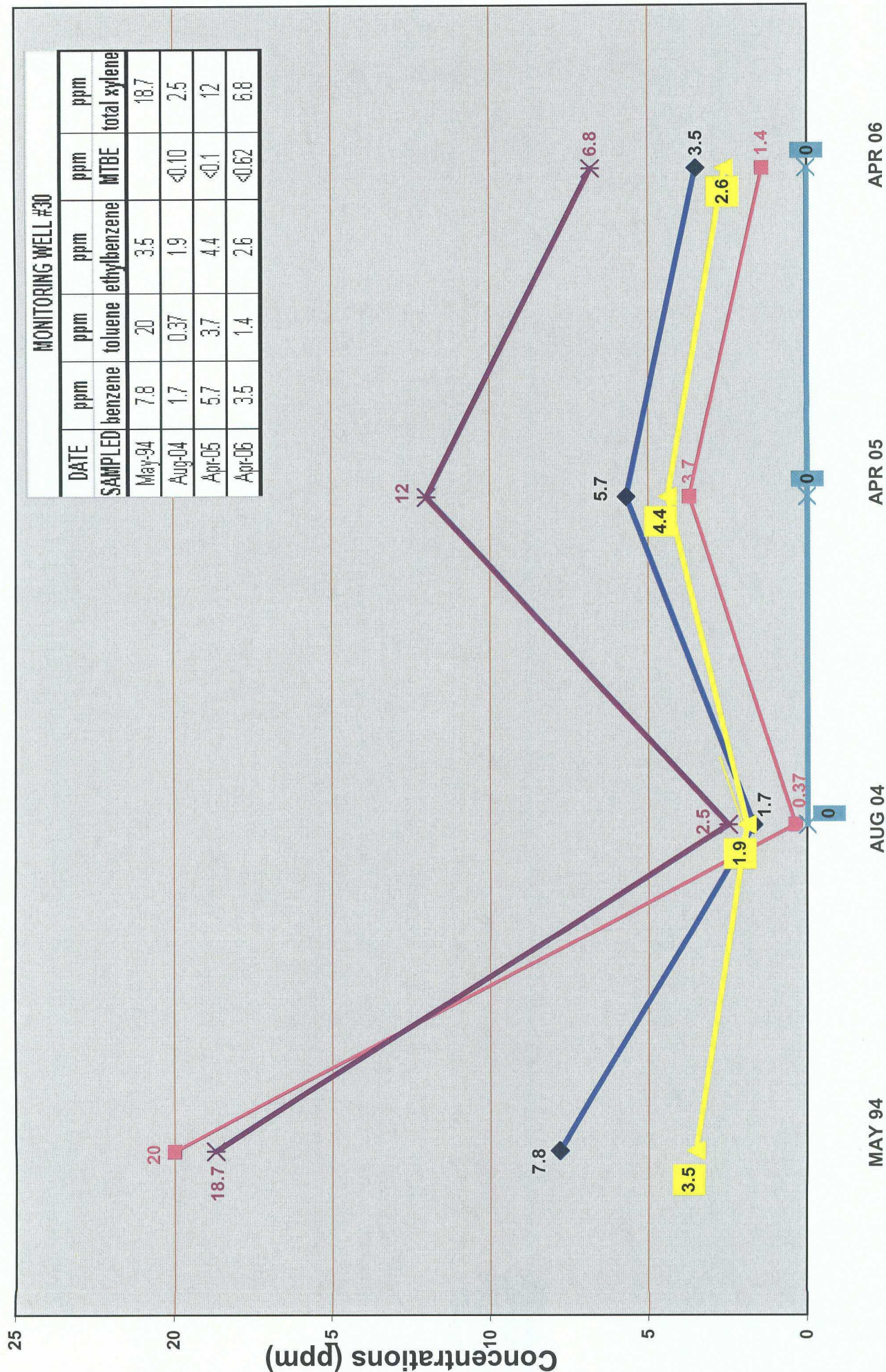


# Monitoring Well #27



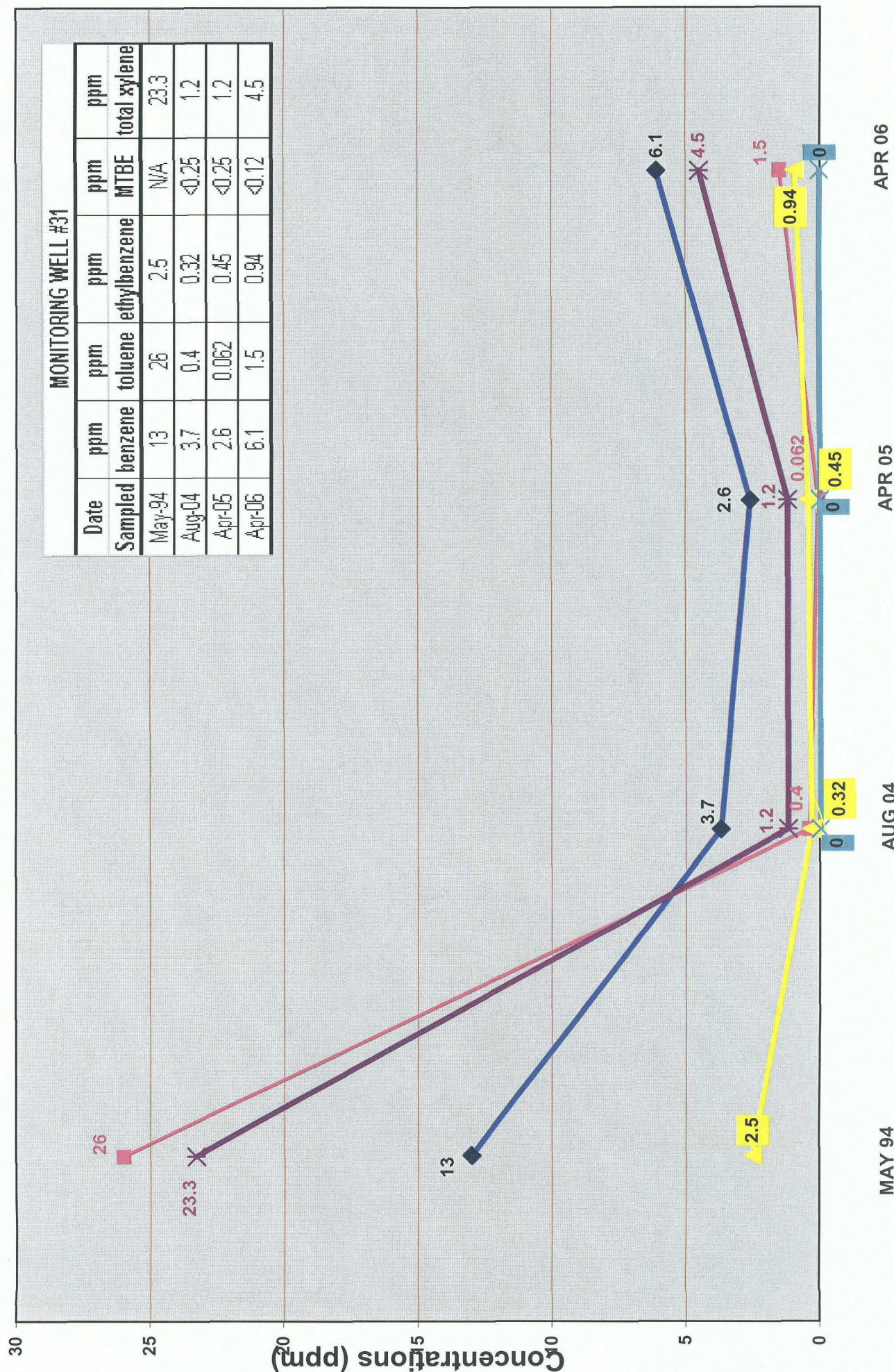


# Monitoring Well #30





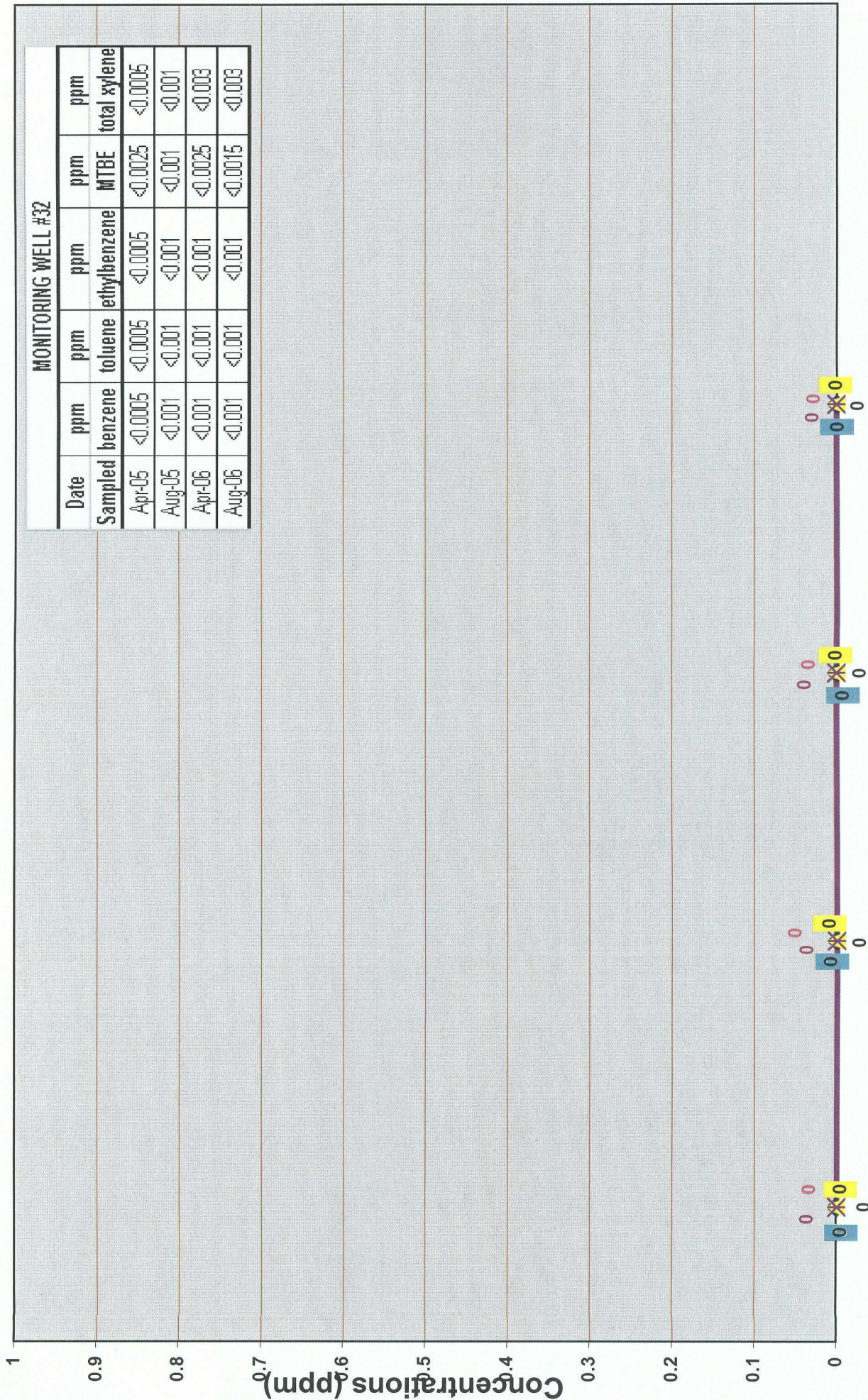
# Monitoring Well #31



| MONITORING WELL #31 |         |         |              |       |              |     |
|---------------------|---------|---------|--------------|-------|--------------|-----|
| Date                | benzene | toluene | ethylbenzene | MTBE  | total xylene | ppm |
| May-94              | 13      | 26      | 2.5          | N/A   | 23.3         |     |
| Aug-04              | 3.7     | 0.4     | 0.32         | <0.25 | 1.2          |     |
| Apr-05              | 2.6     | 0.062   | 0.45         | <0.25 | 1.2          |     |
| Apr-06              | 6.1     | 1.5     | 0.94         | <0.12 | 4.5          |     |



# Monitoring Well #32



MONITORING WELL #32

AUG 06

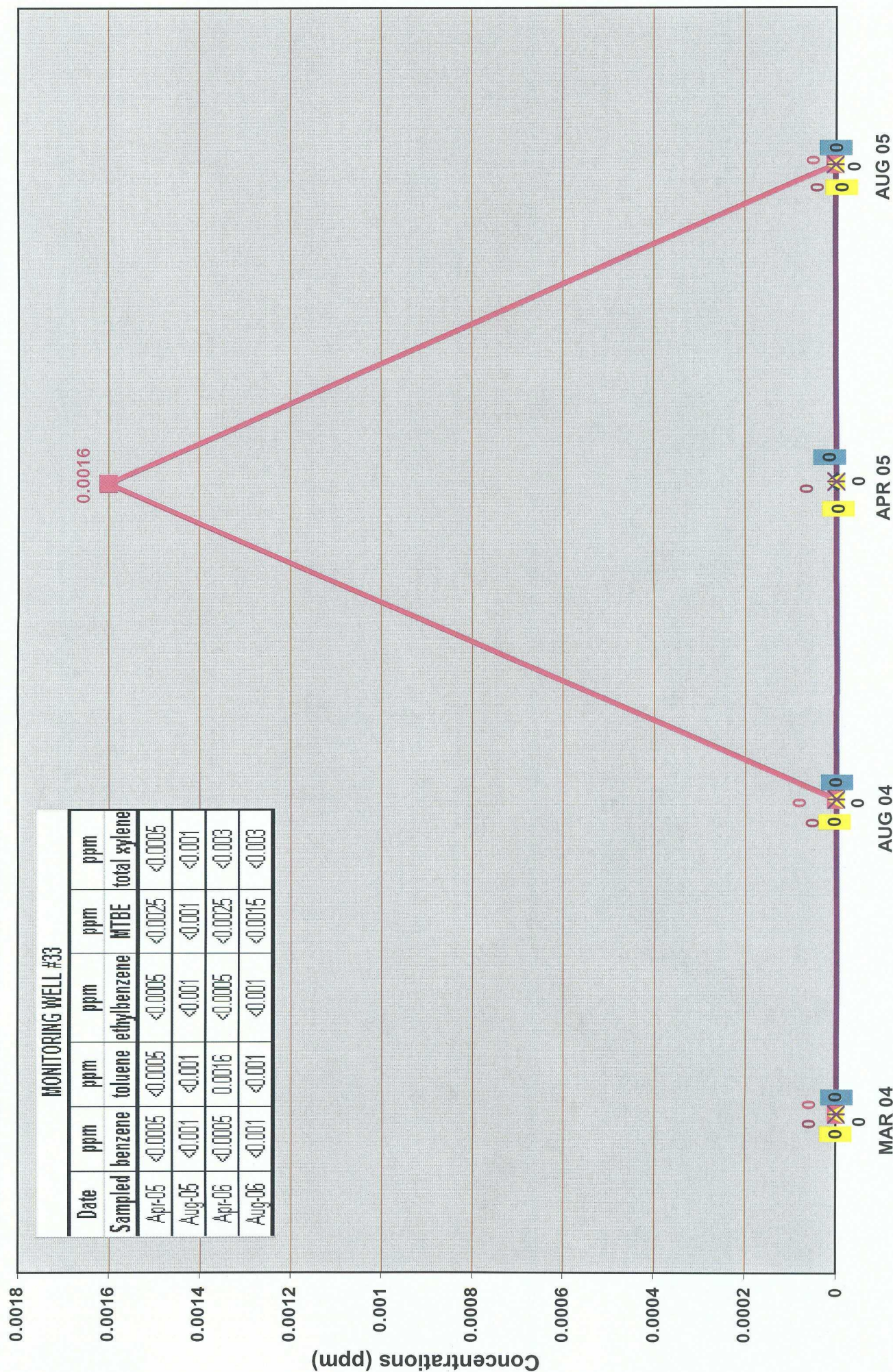
APR 06

AUG 05

APR 05

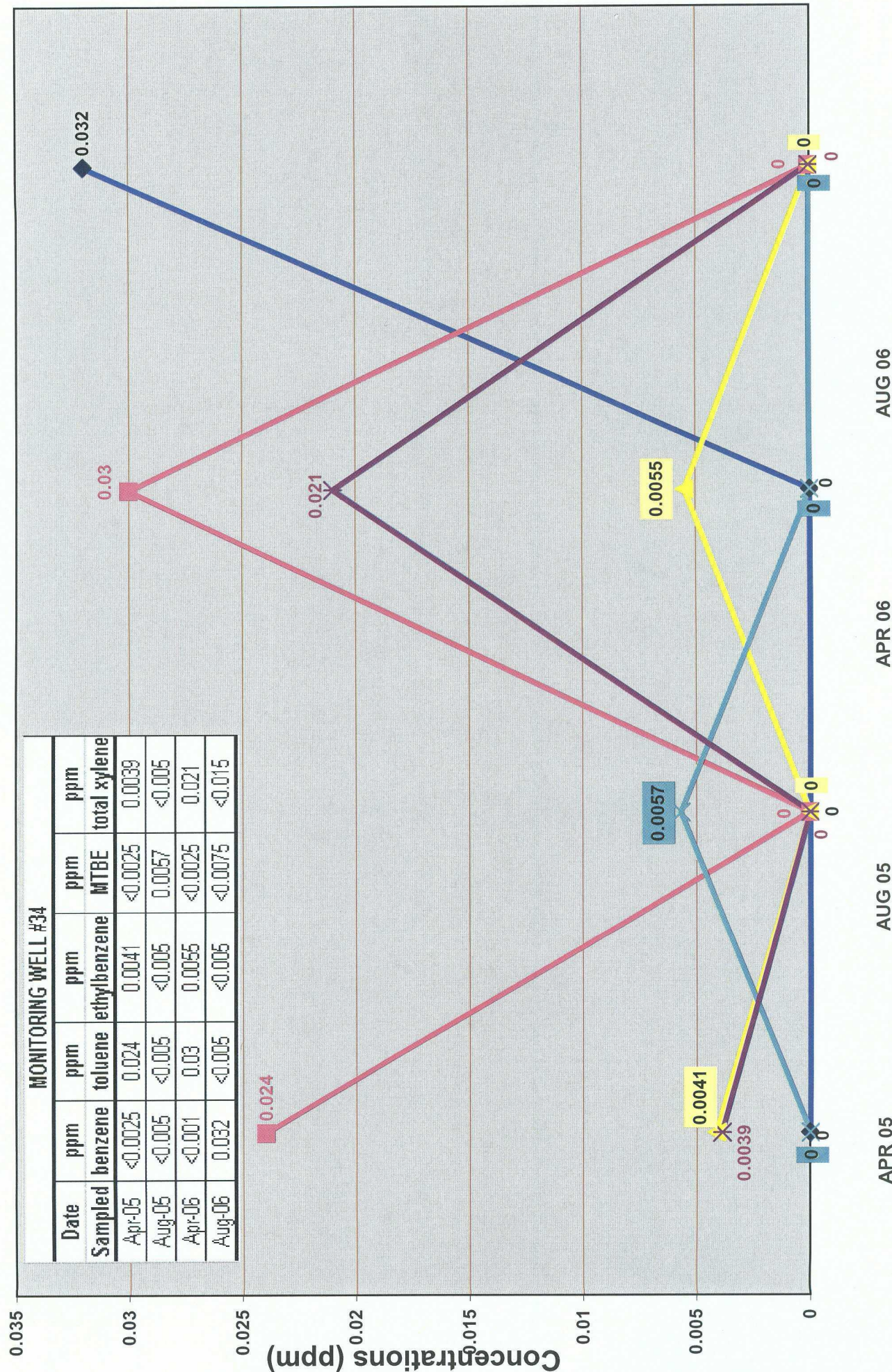


# Monitoring Well #33



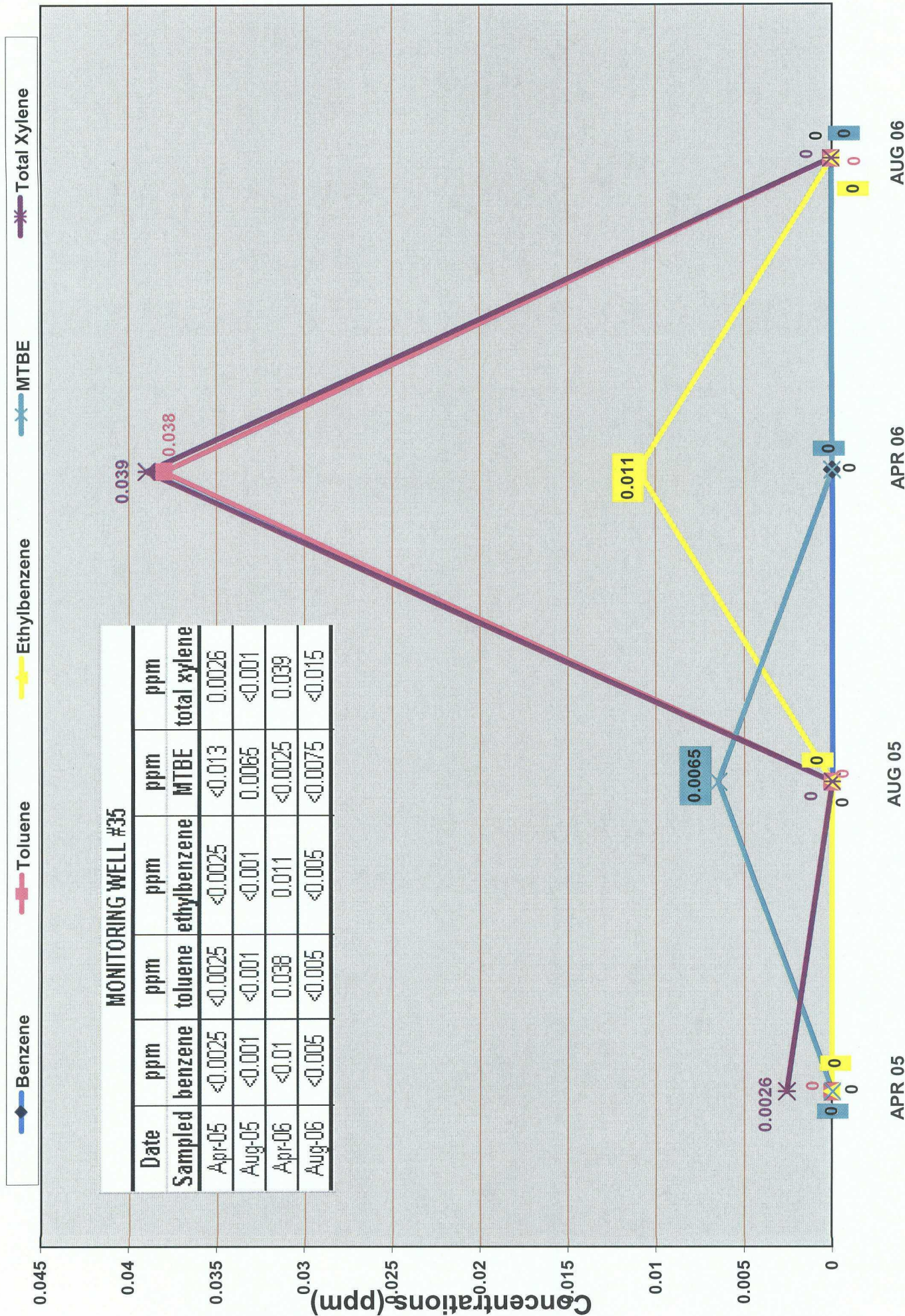


# Monitoring Well #34





# Monitoring Well #35

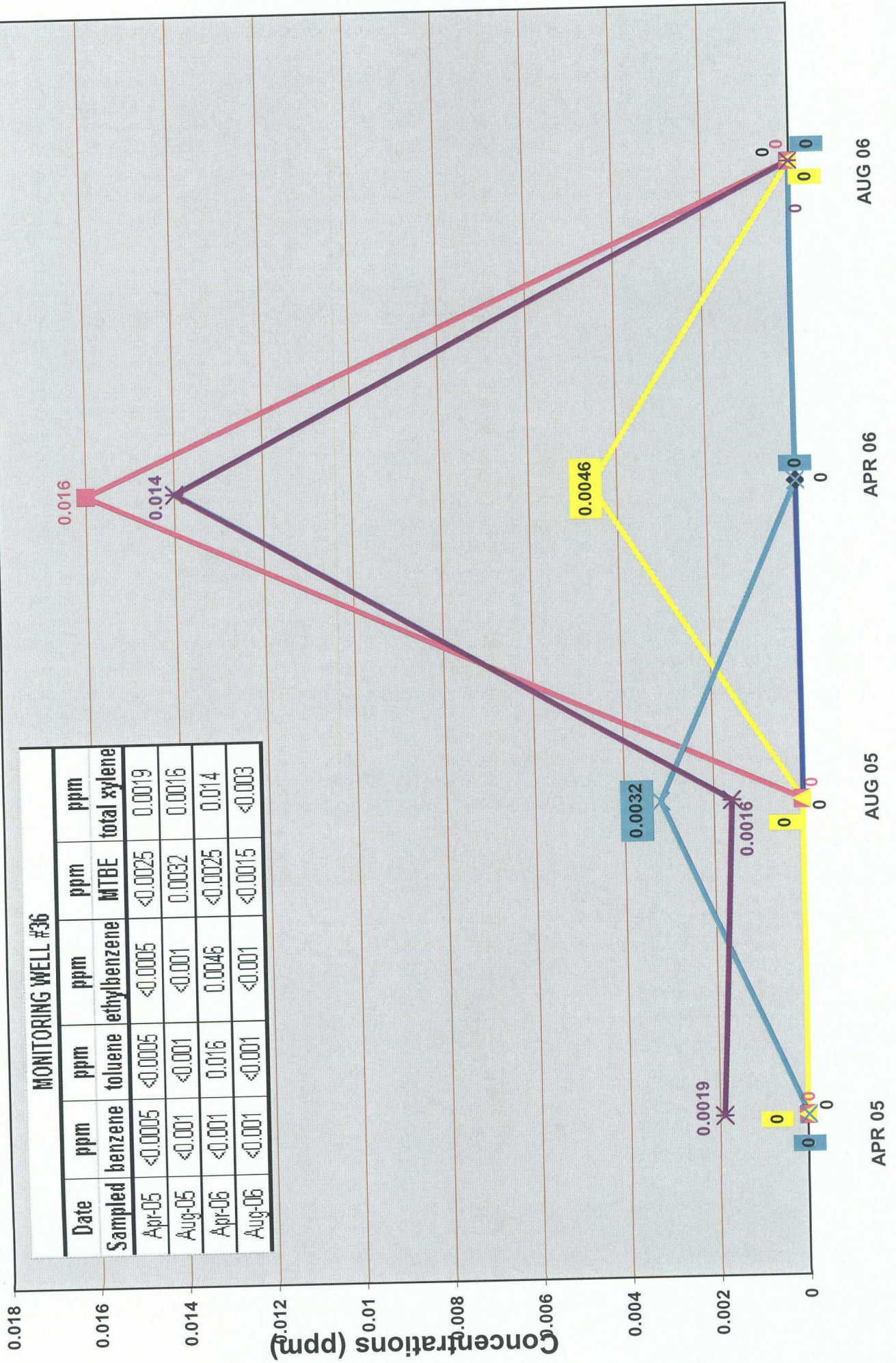




# Monitoring Well #36

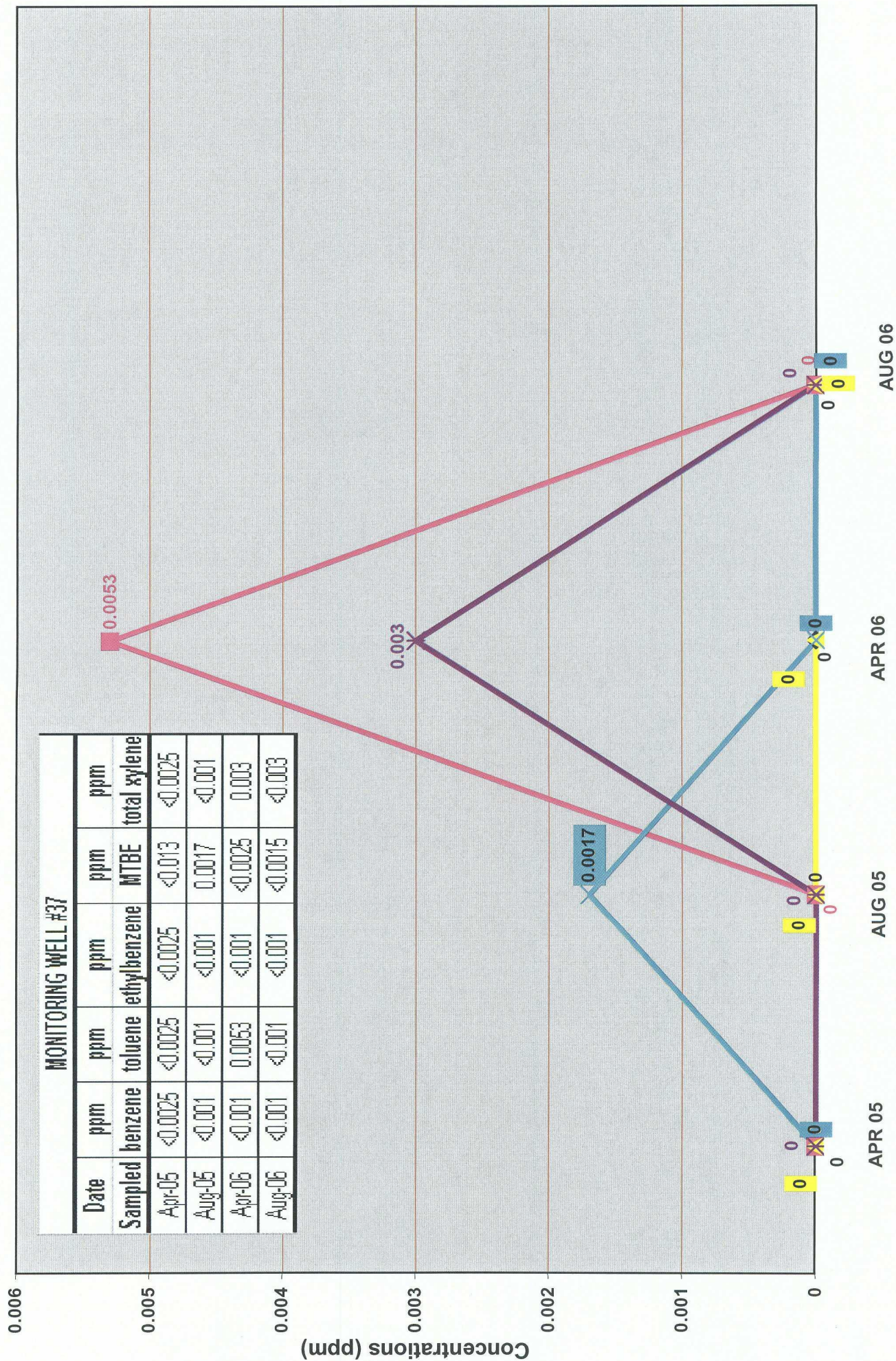


| MONITORING WELL #36 |         |         |              |         |              |
|---------------------|---------|---------|--------------|---------|--------------|
| Date                | ppm     | ppm     | ppm          | ppm     | ppm          |
| Sampled             | benzene | toluene | ethylbenzene | MTBE    | total xylene |
| Apr-05              | <0.0005 | <0.0005 | <0.0005      | <0.0025 | 0.0019       |
| Aug-05              | <0.001  | <0.001  | <0.001       | 0.0032  | 0.0016       |
| Apr-06              | <0.001  | 0.016   | 0.0046       | <0.0025 | 0.014        |
| Aug-06              | <0.001  | <0.001  | <0.001       | <0.0015 | <0.003       |



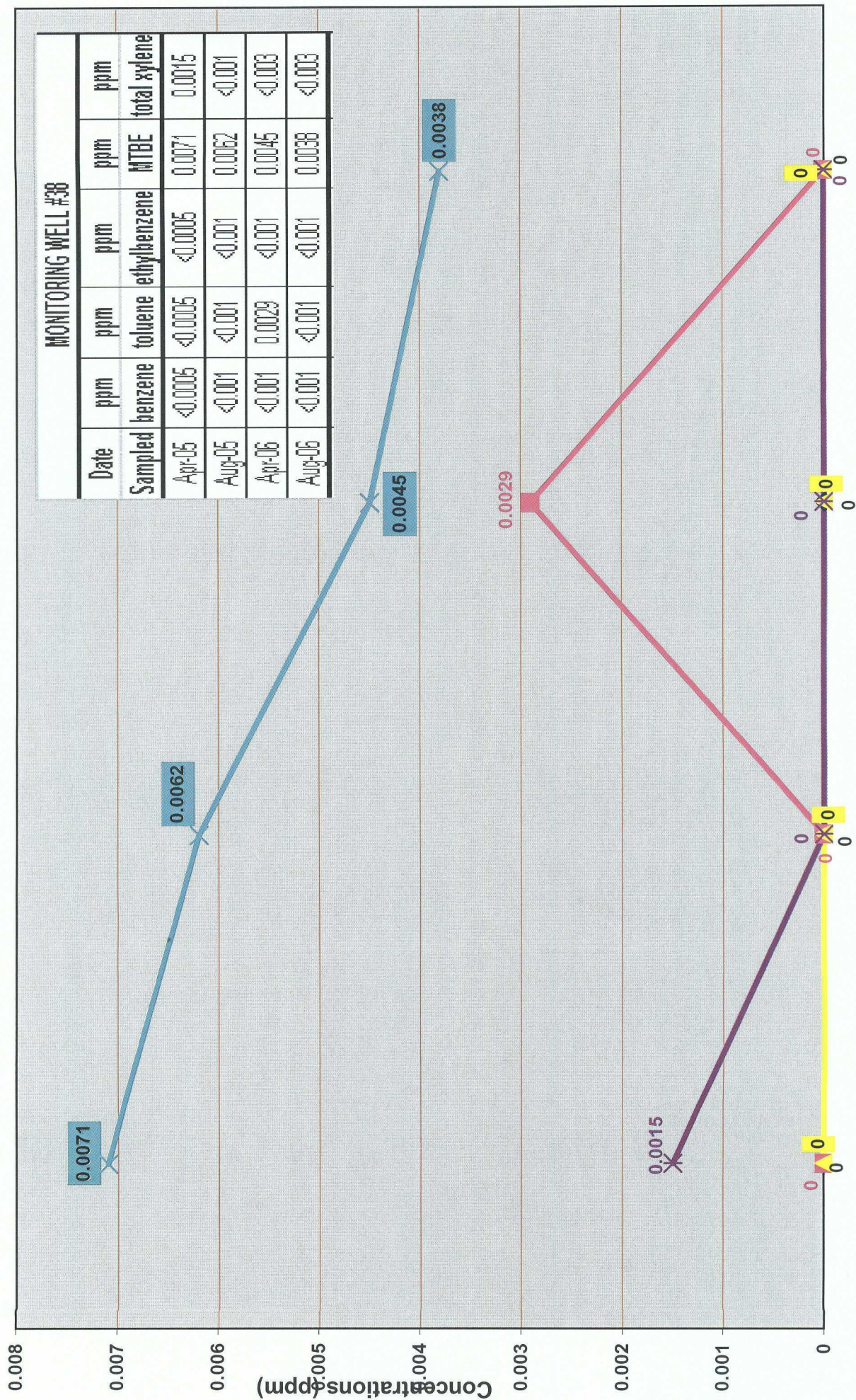


# Monitoring Well #37





# Monitoring Well #38



APR 05

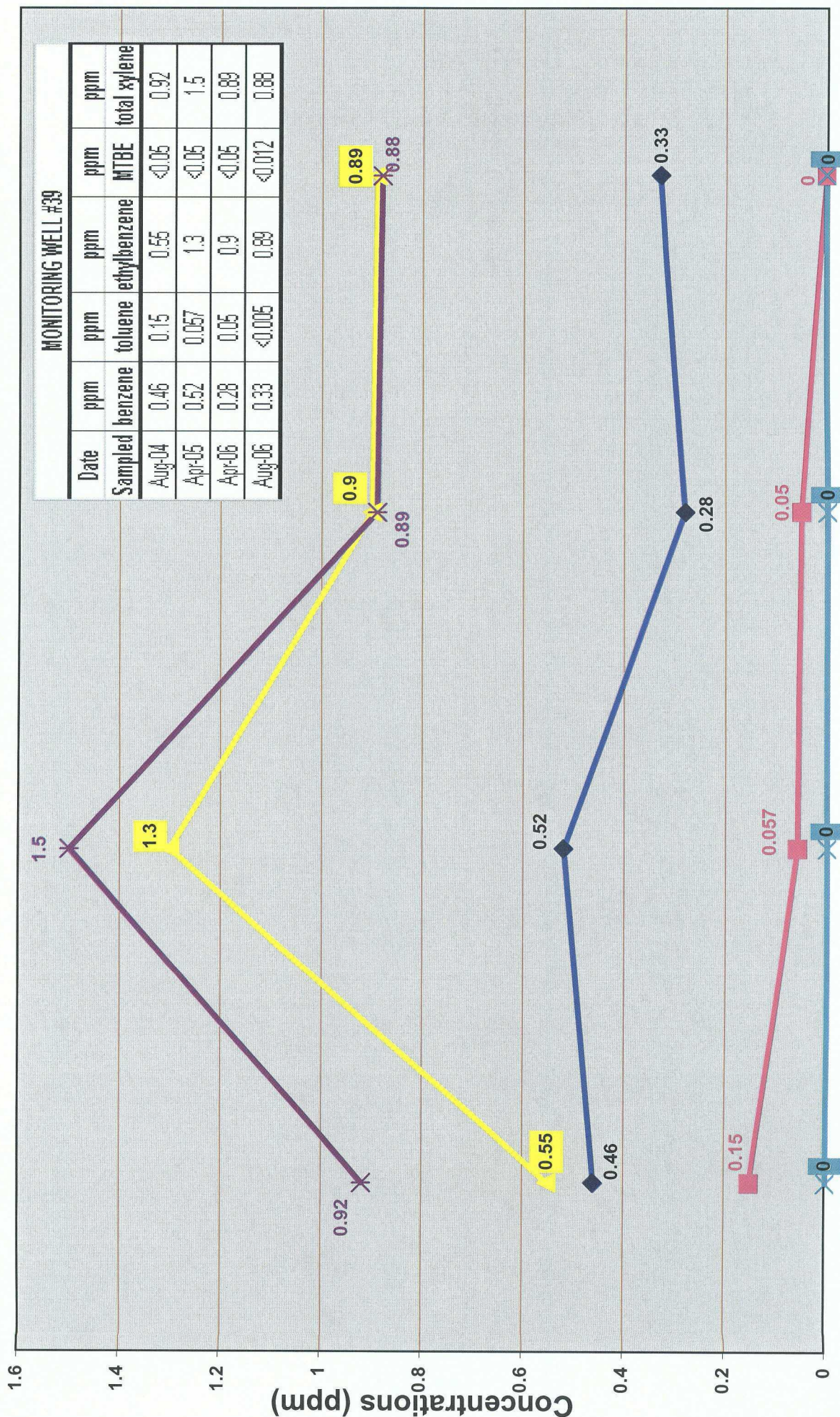
AUG 05

APR 06

AUG 06



# Monitoring Well #39



AUG 06

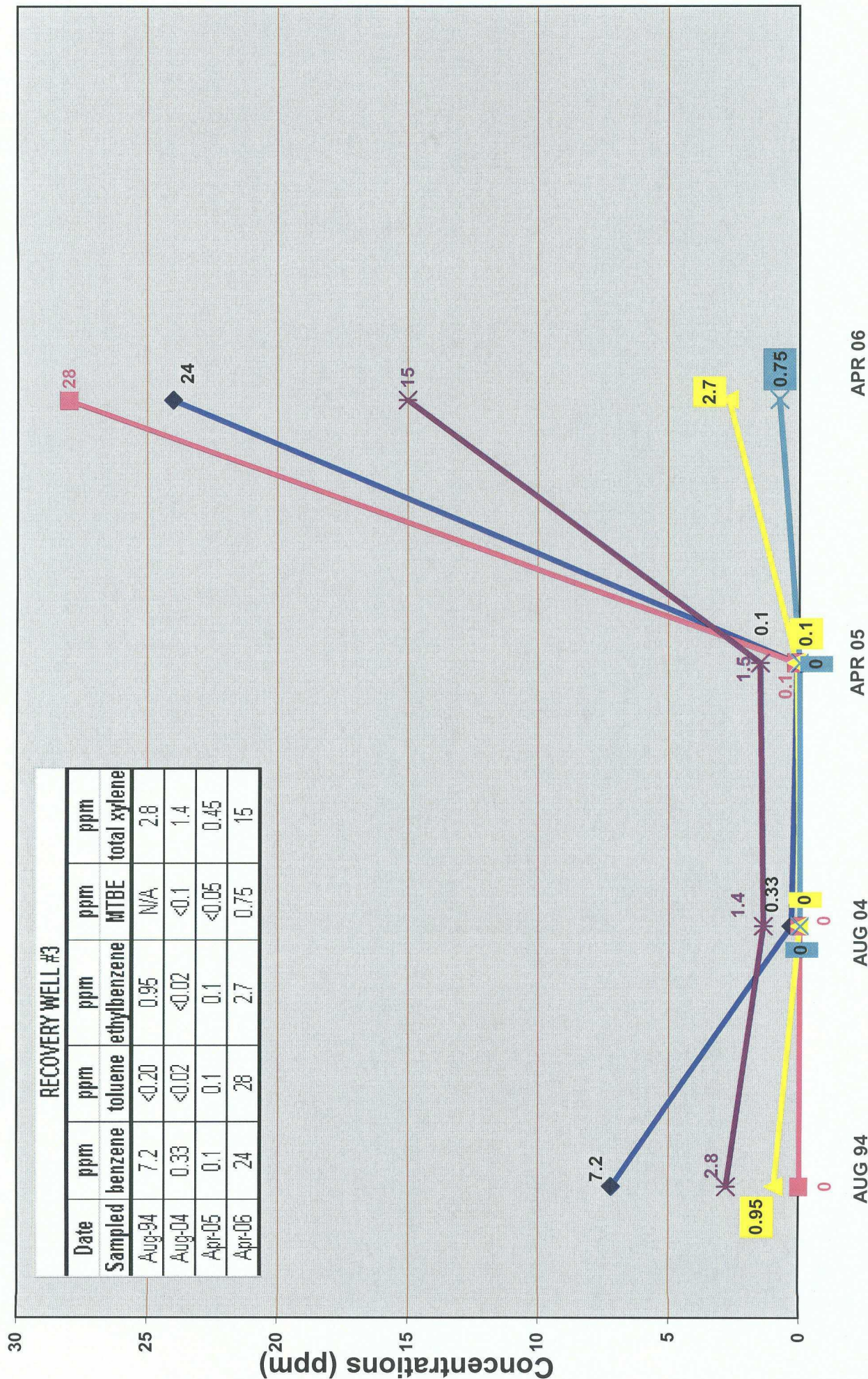
APR 06

APR 05

AUG 04



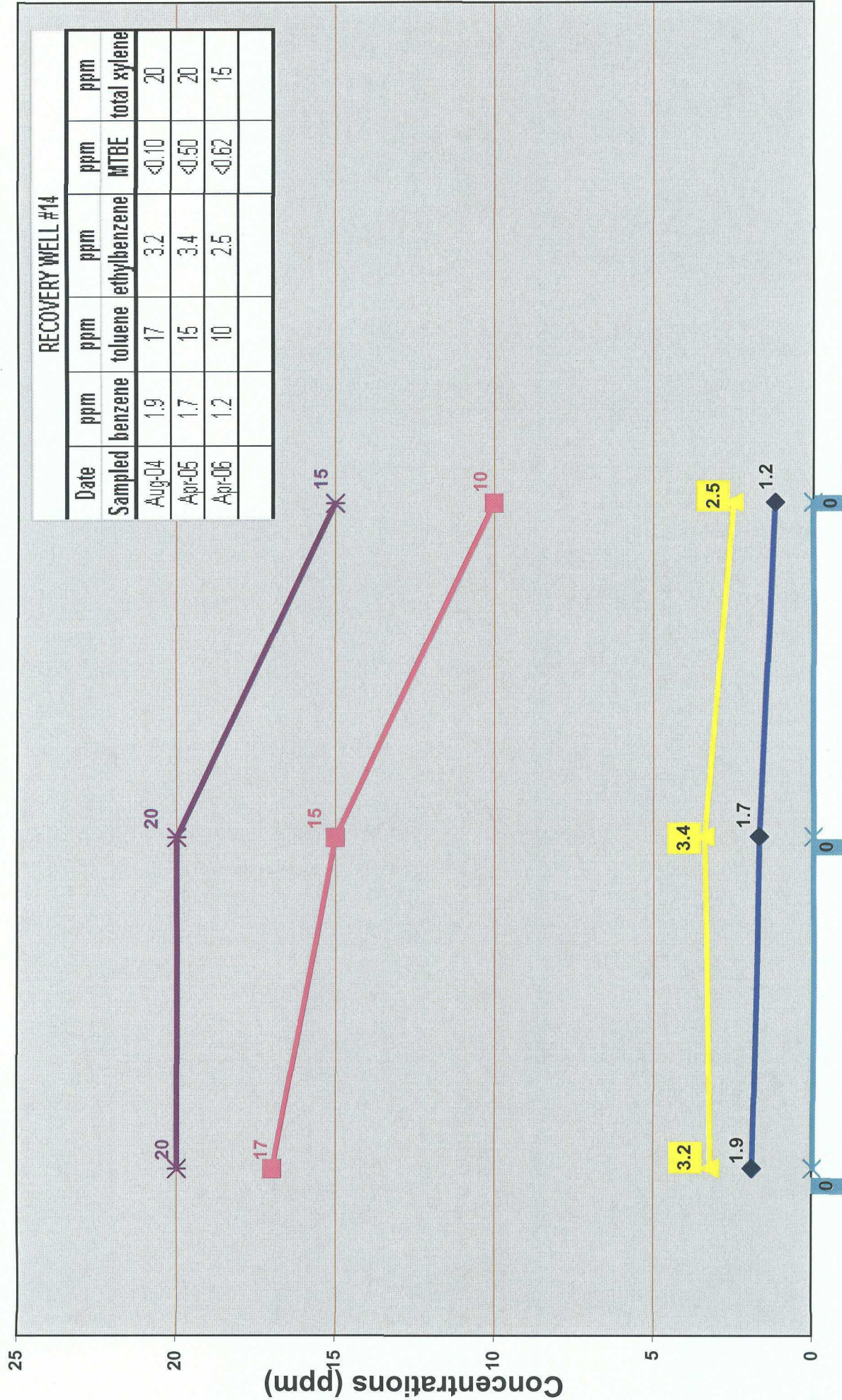
# Recovery Well #3



| RECOVERY WELL #3 |         |         |              |       |              |     |
|------------------|---------|---------|--------------|-------|--------------|-----|
| Date             | ppm     | ppm     | ppm          | ppm   | ppm          | ppm |
| Sampled          | benzene | toluene | ethylbenzene | MTBE  | total xylene |     |
| Aug-94           | 7.2     | <0.20   | 0.95         | N/A   | 2.8          |     |
| Aug-04           | 0.33    | <0.02   | <0.02        | <0.1  | 1.4          |     |
| Apr-05           | 0.1     | 0.1     | 0.1          | <0.05 | 0.45         |     |
| Apr-06           | 24      | 28      | 2.7          | 0.75  | 15           |     |



# Recovery Well #14



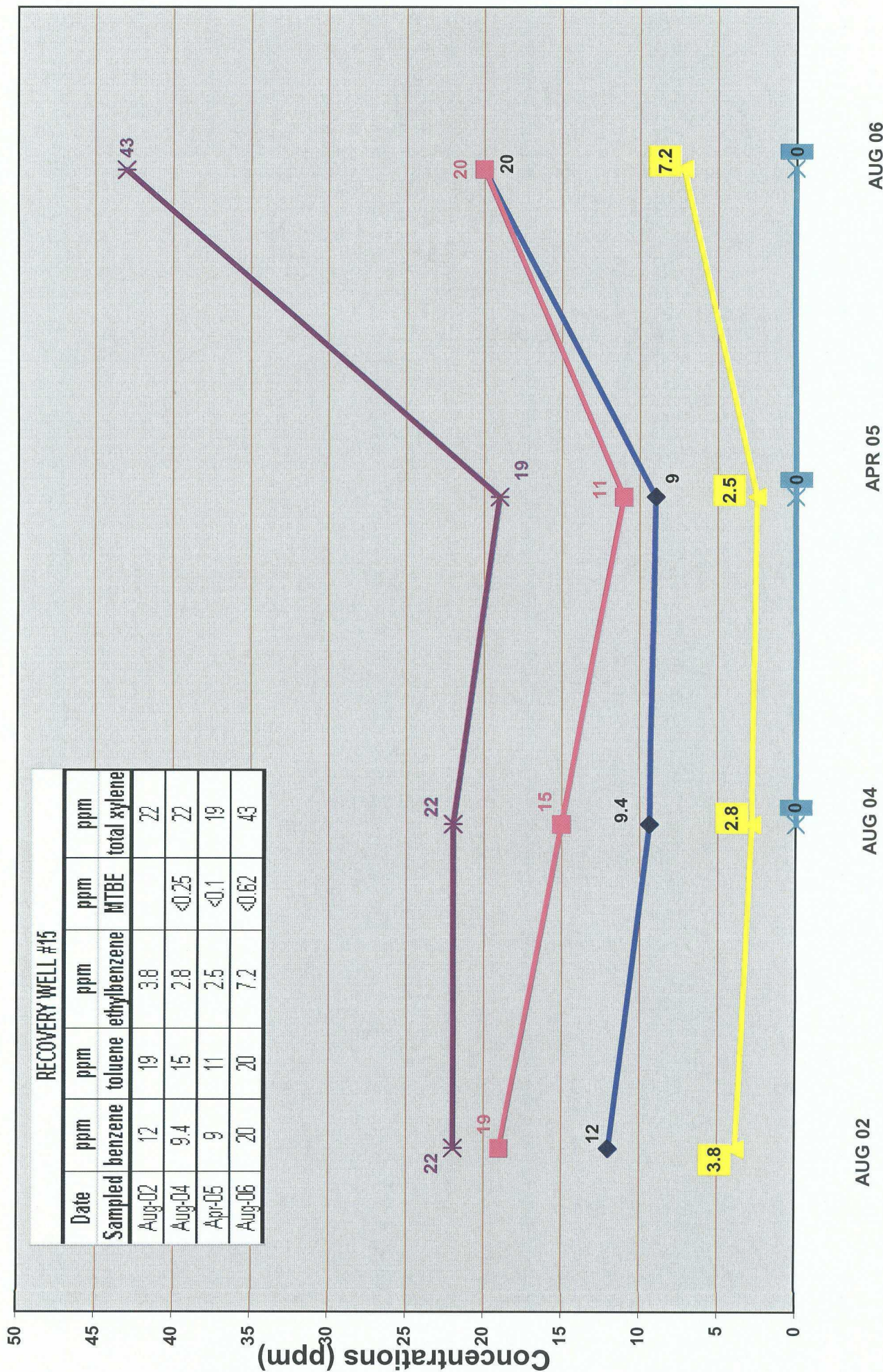
APR 06

APR 05

AUG 04

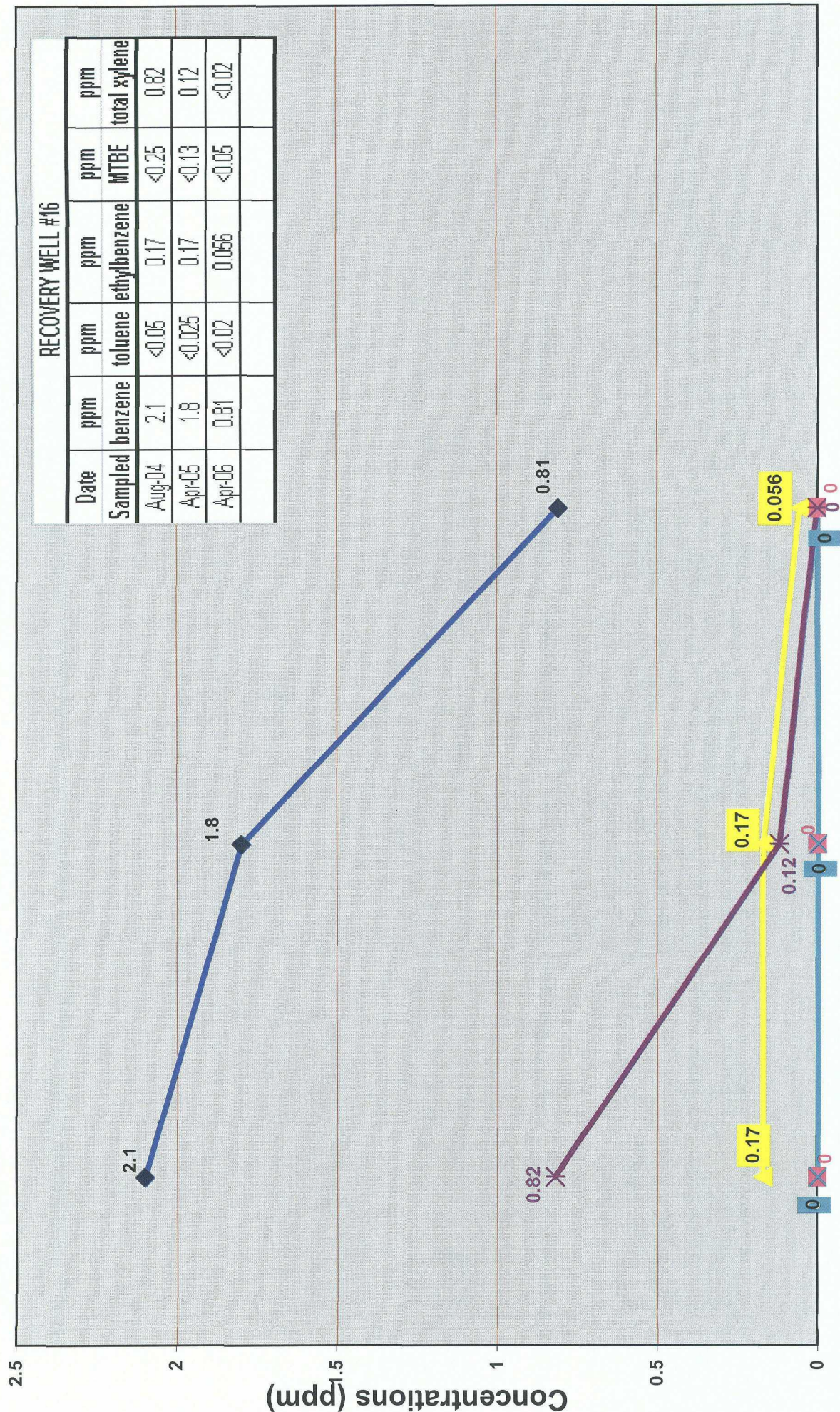


# Recovery Well #15





# Recovery Well #16

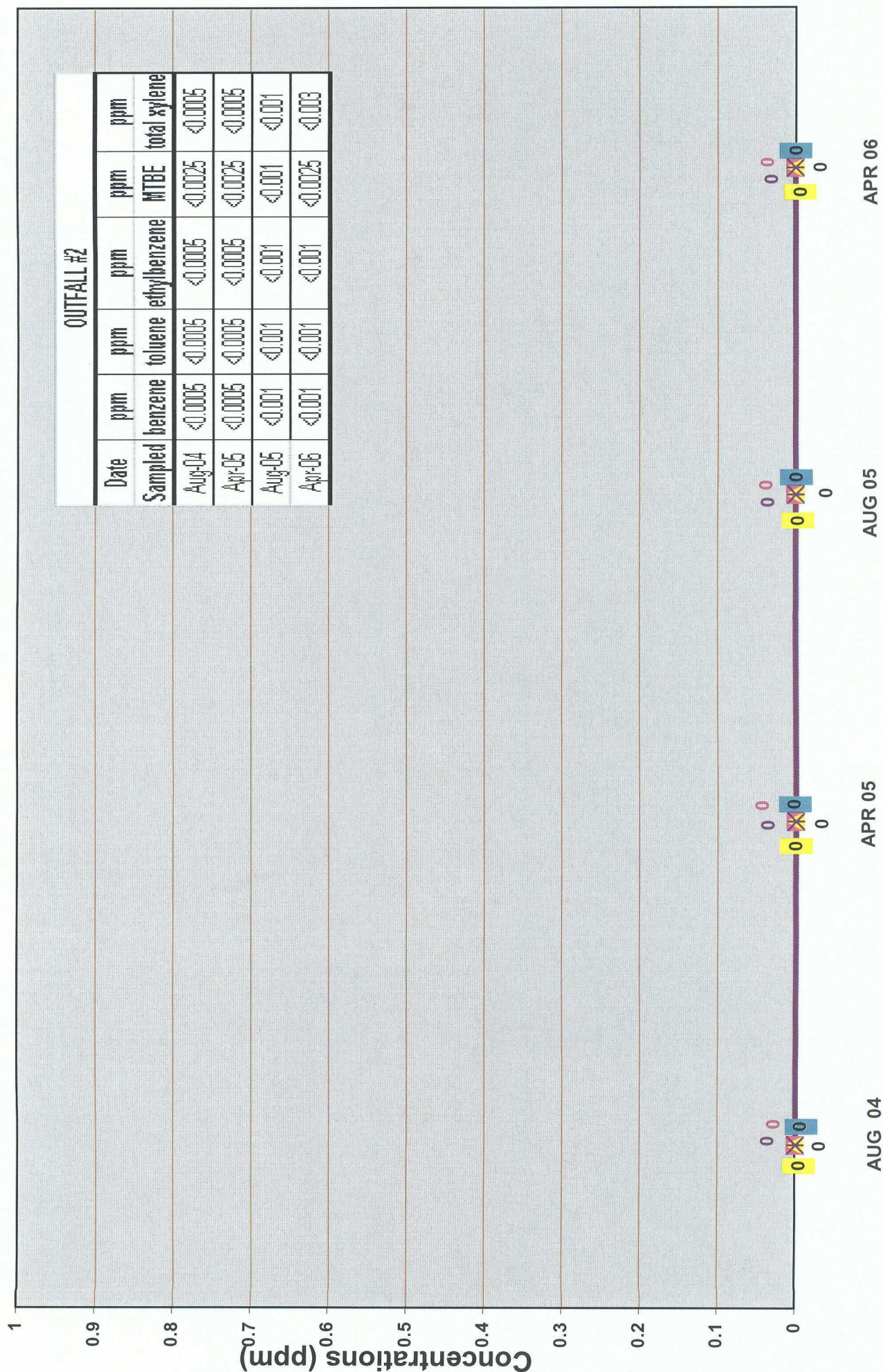


| RECOVERY WELL #16 |         |         |              |       |              |
|-------------------|---------|---------|--------------|-------|--------------|
| Date              | benzene | toluene | ethylbenzene | MTBE  | total xylene |
| Aug-04            | 2.1     | <0.05   | 0.17         | <0.25 | 0.82         |
| Apr-05            | 1.8     | <0.025  | 0.17         | <0.13 | 0.12         |
| Apr-06            | 0.81    | <0.02   | 0.056        | <0.05 | <0.02        |

AUG 04      APR 05      APR 06

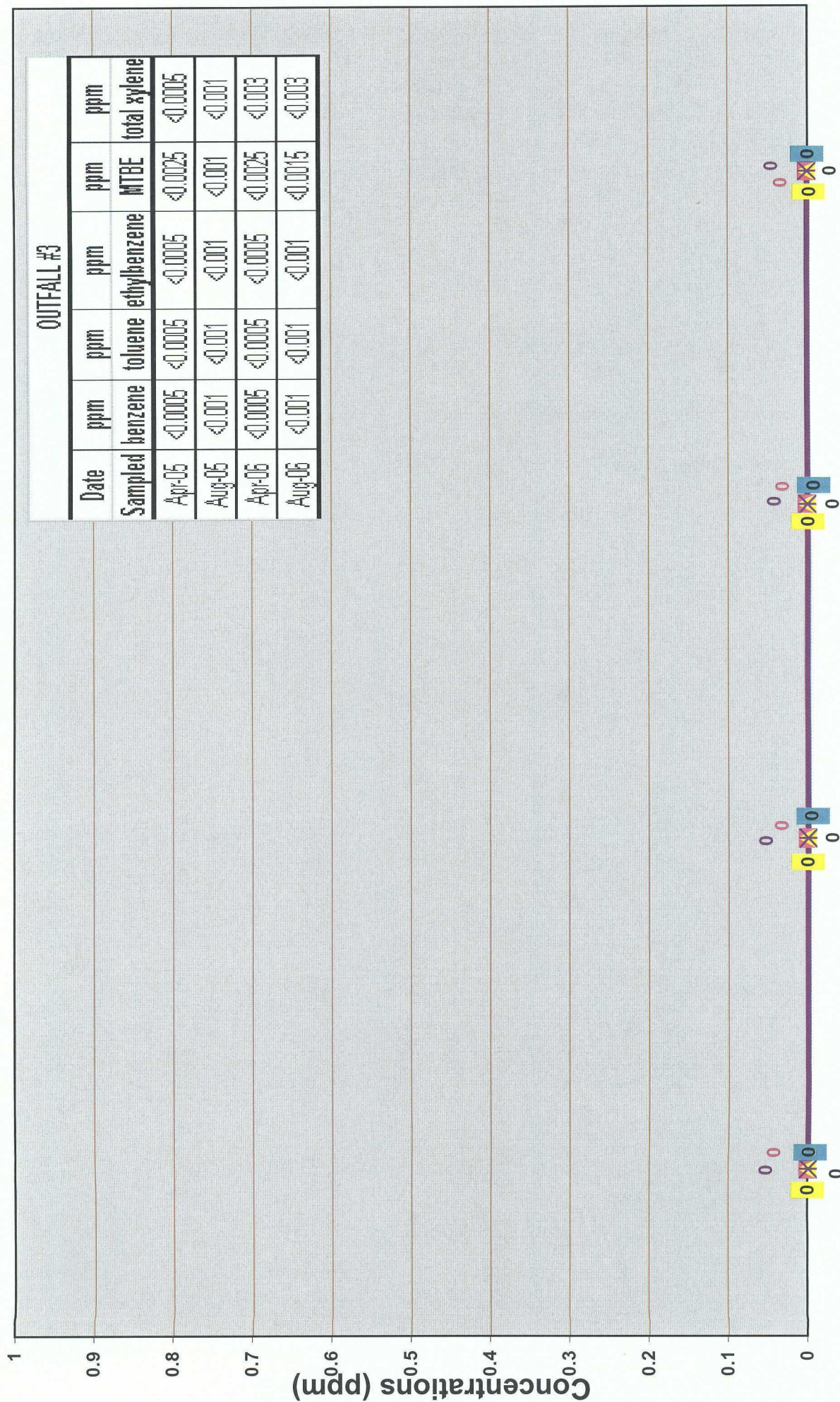


| Legend                                                                                      | Legend                                                                                      | Legend                                                                                         | Legend                                                                                         |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|  Benzene |  Toluene |  Ethylbenzene |  MTBE         |
|                                                                                             |                                                                                             |                                                                                                |  Total Xylene |





# OUTFALL #3



APRIL 05

AUG 05

APR 06

AUG 06



## Section 12.0 Field Methods

## Field Methods

### Groundwater Elevation

All water/product levels are determined to an accuracy of 0.01 foot using a Geotech Interface Meter. The technician records separate phase hydrocarbon, depth to water, and total well depth using this probe.

### Water Quality/Groundwater Sampling

Prior to purging, the YSI 550A Dissolved Oxygen Probe is used to determine dissolved oxygen (DO) levels. Water quality parameters are measured using an Ultrameter 6P by the Myron L Company. Electrical conductance, oxidation-reduction potential (ORP), pH, and temperature are monitored during purging.

### Well Purging Technique

At least three well volumes are purged from the well. Purge volumes are determined using the following equation:

Well Depth – Casing Height – Depth to Liquid X Conversion Factor X Three.

The conversion factor is determined by the diameter of the well casing.

| <u>Casing</u> | <u>Conversion Factor</u> |
|---------------|--------------------------|
| 6"            | 1.50 gal/ft              |
| 5"            | 1.02 gal/ft              |
| 4"            | 0.74 gal/ft              |
| 3"            | 0.367 gal/ft             |
| 2"            | 0.163 gal/ft             |

Typically disposable bailers are used for purging and sampling. Each bailer holds one liter of liquid. Three well volumes can be calculated by counting the number of times a well is bailed.

On occasion, the submersible pump is used for purging wells that have a large volume of water. All purged water is poured/pumped into a 55-gallon drum designated for sampling events.

### Well Sampling and Sample Handling Procedure

Equipment and supplies needed for collecting representative groundwater samples include:

- Interface Meter
- YSI 550A Dissolved Oxygen Probe
- Ultrameter 6P
- Distilled Water
- Disposable Latex Gloves
- Disposable Bailers
- Submersible pump and Generator (if needed)
- String/Twine
- Cooler with Ice



- Bottle kits with Preservatives (provided by the contract laboratory)
- Disposable 0.45 micron Field Filters and Syringes
- Glass Jar (usually 4 oz.)
- Sharpie Permanent Marker
- Field Paperwork/Logsheet
- Two 5-gallon buckets
- Trash container (plastic garbage bag)
- Ziploc Bags
- Paper towels

After sufficient purging, samples are collected with the bailer and poured into the appropriate sample containers. Two people are usually utilized for sampling. Sampling takes place over a bucket to insure that spills are contained

For dissolved metals, sample water is poured into a jar and then extracted with a syringe. The syringe is then used to push water through a field filter into the proper sample bottle to collect the dissolved metals sample. Volatile organic analysis samples are collected as to allow no head space in the container.

Samples are labeled immediately with location, date, time, analysis, preservative, and sampler. Then they are put in a Ziploc and placed in a cooler holding sufficient ice to keep them cool. The field logsheet is reviewed to verify all entries.

#### **Purge and Decontamination Water Disposal**

The Ultrameter 6P, the YSI 550A Dissolved Oxygen Probe, and the interface probe are rinsed with distilled water after every well. The rinse procedure takes place over a bucket to insure that spills are contained.

All rinse and purge water is contained and then disposed of through the refinery wastewater system.

The submersible pump is decontaminated by placing it in a 55-gallon barrel filled with plant water and some Alconox. The pump is activated and will pump down the barrel twice. External areas are washed down and rinsed, also. All wash and rinse water is on containment and runs to the refinery wastewater system.

Any glassware used is taken to the refinery laboratory and washed with Alconox and water and rinsed with reverse osmosis water. Laboratory wastewater runs through the refinery system.

#### **Instrument Calibration**

Calibration of the YSI 550A Dissolved Oxygen Instrument occurs at the beginning of each day of sampling. The probe is powered on and allowed to stabilize, which usually takes 15 minutes. Enter the calibration menu. The LCD will prompt you to enter the local altitude in hundreds of feet. When the proper altitude appears on the LCD, press the **ENTER** key.

The LCD will then prompt you to enter the salinity of the water you are about to analyze. After entering the correct salinity, the instrument will return to normal operation.

The Ultrameter 6P instrument calibration occurs at the beginning of each day of sampling. For Conductivity and TDS calibration, the cell is rinsed three times with a 3000 umhos/cm NaCl Standard. The cell cup is refilled with the standard. Either the **COND** or the **TDS** button is pressed and then the **CAL** button is pushed. Press the up or down arrow until the display agrees with the standard. The **CAL** button is pressed to accept the value.

The Ultrameter 6P has an electronic ORP calibration which is automatically calibrated with the 7 pH. The pH sensor well is rinsed three times with 7.0 buffer solution and then refilled again with that buffer. The **pH** button is pressed then the **CAL** button. The up or down arrow is adjusted until the display agrees with the buffer value. The **CAL** button is pushed to accept that value. Repeat the calibration steps using an acid buffer solution and then again with a base buffer solution.

#### **Remediation System Measurement**

Recovery well flows are measured using a 500 ml graduated cylinder. The discharge line of the pump is disconnected and placed in the graduated cylinder. During a pump cycle, a measurement is taken over time and then calculated to a gallon per day rate.

Recovery rates at Tk #37 (Hammond Ditch French Drain) and Tk #38 (#1 East Outfall) are determined through flow meters installed in those systems. Refinery personnel record the rates periodically.

## Section 13.0 Waste Disposition



# Waste Disposition

## Summary

Bloomfield Refinery conducted a major Turnaround in March 2006 which entailed emptying, de-gassing, cleaning, and then internally and visually inspecting every tower, exchanger, and vessel within the process units. This produced 41,660 pounds of hazardous waste (exchanger bundle sludge, desalter sludge, etc.) that was characteristic for benzene, chromium, lead, or mercury. This waste was incinerated at the Philip Reclamation Center located in Houston, Texas.

The annual API Separator clean-out produced 486,040 pounds of waste that was sent to the Norco Refinery in Norco, Louisiana for fuels blending.

Tank #27, the heavy burner fuel storage tank, was opened, cleaned out, and inspected. 572,400 pounds of waste was sent to Green America Recycling, L.L.C. in Hannibal, Missouri for energy recovery.

Tank #17, the reduced crude storage tank, was opened, cleaned out, and inspected. 305,820 pounds of waste was sent to Green America Recycling, L.L.C. in Hannibal, Missouri for energy recovery.

The Reactor in the Diesel Hydro- treating Unit was opened, cleaned out, and inspected. 36,980 pounds of Criterion 444 catalyst (metal oxide) from the reactor was shipped to U.S. Ecology Nevada, Inc in Beatty, Nevada for chemical oxidation treatment and disposal.

## Section 14.0 Below Grade Testing

## 2006 Below Grade Testing

| System ID                                                        | Test Date | Test Method                                                          | Pass/Fail | Comments                                    |
|------------------------------------------------------------------|-----------|----------------------------------------------------------------------|-----------|---------------------------------------------|
| Tank #24                                                         | 28-Feb-06 | Internal and Hydrotest                                               | Pass      | New tank built in 2006                      |
| Tank #25                                                         | 27-Feb-06 | Internal and Hydrotest                                               | Pass      | New tank built in 2006                      |
| All Vessels,<br>Reactors, & Heaters<br>during 2006<br>Turnaround | March-06  | Emptied, de-gassed,<br>cleaned, and internally<br>visually inspected | Pass      | Reinspect during next<br>Turnaround in 2010 |
| All Exchangers<br>during 2006<br>Turnaround                      | March-06  | Emptied, Hydroblasted<br>clean, and Hydrotested                      | Pass      | Reinspect during next<br>Turnaround in 2010 |
| API Separator                                                    | 7-Sep-06  | Internal Inspection                                                  | Pass      | Reinspect in 2007                           |
| Tank #27                                                         | 21-Aug-06 | After Floor Replacement -<br>Hydrotested                             | Pass      |                                             |
| Tank #17                                                         | 24-Oct-06 | Internal<br>Inspection/Ultrasonnd<br>Thickness Test of Floor         | Pass      |                                             |



## Section 15.0 North Boundary Barrier Wall

| <u>Title</u>                                                | <u>Tab</u> |
|-------------------------------------------------------------|------------|
| <u>North Boundary Barrier Measured Depth to Groundwater</u> |            |
| May 2006.....                                               | 9          |
| June 2006.....                                              | 10         |
| July 2006.....                                              | 11         |
| August 2006.....                                            | 12         |
| September 2006.....                                         | 13         |
| October 2006.....                                           | 14         |
| November 2006.....                                          | 15         |
| December 2006.....                                          | 16         |
| <u>North Boundary Barrier Analytical Data</u>               |            |
| Collection Well Data.....                                   | 17         |
| Observation Well Data.....                                  | 18         |
| Monitoring Well Data.....                                   | 19         |

# Observation Well Fluids Monitoring May 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60 | 5/3/2006  | 5506.62                   | 12.26            | NPP                    | 11.29                | 5495.33                         | NPP                                  |
|         | 5/17/2006 | 5506.62                   | 12.26            | NPP                    | 11.23                | 5495.39                         | NPP                                  |
|         | 5/30/2006 | 5506.62                   | 12.26            | NPP                    | 11.21                | 5495.41                         | NPP                                  |
| OW 1+50 | 5/3/2006  | 5508.03                   | 14.36            | 13.25                  | 13.30                | 5494.77                         | 0.05                                 |
|         | 5/17/2006 | 5508.03                   | 14.36            | 13.26                  | 13.31                | 5494.76                         | 0.05                                 |
|         | 5/30/2006 | 5508.03                   | 14.36            | 13.30                  | 13.31                | 5494.73                         | 0.01                                 |
| OW 3+85 | 5/3/2006  | 5507.31                   | 15.06            | 12.71                  | 12.90                | 5494.56                         | 0.19                                 |
|         | 5/17/2006 | 5507.31                   | 15.06            | 12.75                  | 13.01                | 5494.51                         | 0.26                                 |
|         | 5/30/2006 | 5507.31                   | 15.06            | 12.40                  | 13.70                | 5494.65                         | 1.30                                 |
| OW 5+50 | 5/3/2006  | 5507.59                   | 13.67            | 13.45                  | 13.46                | 5494.14                         | 0.01                                 |
|         | 5/17/2006 | 5507.59                   | 13.67            | NPP                    | 13.49                | 5494.10                         | NPP                                  |
|         | 5/30/2006 | 5507.59                   | 13.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 6+70 | 5/3/2006  | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 5/17/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 5/30/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 8+10 | 5/3/2006  | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 5/17/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 5/30/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring May 2006

| Well ID      | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|--------------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 11+<br>15 | 5/3/2006  | 5506.70                   | 16.59            | 11.81                  | 11.82                | 5494.89                         | 0.01                                 |
|              | 5/17/2006 | 5506.70                   | 16.59            | NPP                    | 12.87                | 5493.83                         | NPP                                  |
|              | 5/30/2006 | 5506.70                   | 16.59            | NPP                    | 11.84                | 5494.86                         | NPP                                  |
| OW 14+<br>10 | 5/3/2006  | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|              | 5/17/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|              | 5/30/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 16+<br>60 | 5/3/2006  | 5508.43                   | 15.21            | 12.46                  | 12.47                | 5495.97                         | 0.01                                 |
|              | 5/17/2006 | 5508.43                   | 15.21            | 12.49                  | 12.55                | 5495.93                         | 0.06                                 |
|              | 5/30/2006 | 5508.43                   | 15.21            | 12.60                  | 12.61                | 5495.83                         | 0.01                                 |
| OW 19+<br>50 | 5/3/2006  | 5508.03                   | 13.00            | 12.83                  | 12.84                | 5495.20                         | 0.01                                 |
|              | 5/17/2006 | 5508.03                   | 13.00            | NPP                    | 12.57                | 5495.46                         | NPP                                  |
|              | 5/30/2006 | 5508.03                   | 13.00            | NPP                    | 12.71                | 5495.32                         | NPP                                  |
| OW 22+<br>00 | 5/3/2006  | 5506.91                   | 14.16            | 11.55                  | 11.57                | 5495.36                         | 0.02                                 |
|              | 5/17/2006 | 5506.91                   | 14.16            | NPP                    | 11.71                | 5495.20                         | NPP                                  |
|              | 5/30/2006 | 5506.91                   | 14.16            | NPP                    | 11.81                | 5495.10                         | NPP                                  |
| OW 23+<br>10 | 5/3/2006  | 5514.12                   | 18.34            | NPP                    | 16.31                | 5497.81                         | NPP                                  |
|              | 5/17/2006 | 5514.12                   | 18.34            | NPP                    | 16.28                | 5497.84                         | NPP                                  |
|              | 5/30/2006 | 5514.12                   | 18.34            | NPP                    | 16.29                | 5497.83                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring May 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 23+ 90 | 5/3/2006  | 5515.18                   | 18.01            | 17.10                  | 17.12                | 5498.08                         | 0.02                                 |
|           | 5/17/2006 | 5515.18                   | 18.01            | NPP                    | 17.11                | 5498.07                         | NPP                                  |
|           | 5/30/2006 | 5515.18                   | 18.01            | NPP                    | 17.14                | 5498.04                         | NPP                                  |
| OW 25+ 70 | 5/3/2006  | 5509.00                   | 13.98            | NPP                    | 10.73                | 5498.27                         | NPP                                  |
|           | 5/17/2006 | 5509.00                   | 13.98            | NPP                    | 10.72                | 5498.28                         | NPP                                  |
|           | 5/30/2006 | 5509.00                   | 13.98            | NPP                    | 10.75                | 5498.25                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present



# Collection Well Fluids Monitoring May 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60 | 5/3/2006  | 5506.68                   | 14.09            | NPP                    | 7.94                 | 5498.74                         | NPP                                  |
|         | 5/17/2006 | 5506.68                   | 14.09            | NPP                    | 7.95                 | 5498.73                         | NPP                                  |
|         | 5/30/2006 | 5506.68                   | 14.09            | NPP                    | 7.92                 | 5498.76                         | NPP                                  |
| CW 1+50 | 5/3/2006  | 5505.13                   | 13.74            | NPP                    | 6.29                 | 5498.84                         | NPP                                  |
|         | 5/17/2006 | 5505.13                   | 13.74            | NPP                    | 6.28                 | 5498.85                         | NPP                                  |
|         | 5/30/2006 | 5505.13                   | 13.74            | NPP                    | 6.31                 | 5498.82                         | NPP                                  |
| CW 3+85 | 5/3/2006  | 5503.87                   | 13.11            | NPP                    | 5.36                 | 5498.51                         | NPP                                  |
|         | 5/17/2006 | 5503.87                   | 13.11            | NPP                    | 5.39                 | 5498.48                         | NPP                                  |
|         | 5/30/2006 | 5503.87                   | 13.11            | NPP                    | 5.93                 | 5497.94                         | NPP                                  |
| CW 5+50 | 5/3/2006  | 5503.76                   | 12.27            | NPP                    | 6.19                 | 5497.57                         | NPP                                  |
|         | 5/17/2006 | 5503.76                   | 12.27            | NPP                    | 6.22                 | 5497.54                         | NPP                                  |
|         | 5/30/2006 | 5503.76                   | 12.27            | NPP                    | 6.19                 | 5497.57                         | NPP                                  |
| CW 6+70 | 5/3/2006  | 5503.84                   | 11.45            | NPP                    | 6.64                 | 5497.20                         | NPP                                  |
|         | 5/17/2006 | 5503.84                   | 11.45            | NPP                    | 6.63                 | 5497.21                         | NPP                                  |
|         | 5/30/2006 | 5503.84                   | 11.45            | NPP                    | 6.61                 | 5497.23                         | NPP                                  |
| CW 8+10 | 5/3/2006  | 5504.02                   | 11.63            | NPP                    | 7.39                 | 5496.63                         | NPP                                  |
|         | 5/17/2006 | 5504.02                   | 11.63            | NPP                    | 7.37                 | 5496.65                         | NPP                                  |
|         | 5/30/2006 | 5504.02                   | 11.63            | NPP                    | 7.33                 | 5496.69                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring May 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 8+45  | 5/3/2006  | 5503.80                   | 12.6             | NPP                    | 7.35                 | 5496.45                         | NPP                                  |
|          | 5/17/2006 | 5503.80                   | 12.6             | NPP                    | 7.49                 | 5496.31                         | NPP                                  |
|          | 5/30/2006 | 5503.80                   | 12.6             | NPP                    | 7.41                 | 5496.39                         | NPP                                  |
| CW 11+15 | 5/3/2006  | 5503.95                   | 12.27            | NPP                    | 5.67                 | 5498.28                         | NPP                                  |
|          | 5/17/2006 | 5503.95                   | 12.27            | NPP                    | 5.69                 | 5498.26                         | NPP                                  |
|          | 5/30/2006 | 5503.95                   | 12.27            | NPP                    | 5.71                 | 5498.24                         | NPP                                  |
| CW 14+10 | 5/3/2006  | 5504.39                   | 13.05            | NPP                    | 6.44                 | 5497.95                         | NPP                                  |
|          | 5/17/2006 | 5504.39                   | 13.05            | NPP                    | 6.43                 | 5497.96                         | NPP                                  |
|          | 5/30/2006 | 5504.39                   | 13.05            | NPP                    | 6.41                 | 5497.98                         | NPP                                  |
| CW 16+60 | 5/3/2006  | 5504.32                   | 12.86            | NPP                    | 6.32                 | 5498.00                         | NPP                                  |
|          | 5/17/2006 | 5504.32                   | 12.86            | NPP                    | 6.3                  | 5498.02                         | NPP                                  |
|          | 5/30/2006 | 5504.32                   | 12.86            | NPP                    | 6.28                 | 5498.04                         | NPP                                  |
| CW 19+50 | 5/3/2006  | 5504.52                   | 9.99             | NPP                    | 6.26                 | 5498.26                         | NPP                                  |
|          | 5/17/2006 | 5504.52                   | 9.99             | NPP                    | 6.29                 | 5498.23                         | NPP                                  |
|          | 5/30/2006 | 5504.52                   | 9.99             | NPP                    | 6.23                 | 5498.29                         | NPP                                  |
| CW 22+00 | 5/3/2006  | 5508.04                   | 12.34            | NPP                    | 9.12                 | 5498.92                         | NPP                                  |
|          | 5/17/2006 | 5508.04                   | 12.34            | NPP                    | 9.14                 | 5498.90                         | NPP                                  |
|          | 5/30/2006 | 5508.04                   | 12.34            | NPP                    | 9.12                 | 5498.92                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring May 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 23+ 10 | 5/3/2006  | 5510.04                   | 14.65            | NPP                    | 10.73                | 5499.31                         | NPP                                  |
|           | 5/17/2006 | 5510.04                   | 14.65            | NPP                    | 10.76                | 5499.28                         | NPP                                  |
|           | 5/30/2006 | 5510.04                   | 14.65            | NPP                    | 10.74                | 5499.30                         | NPP                                  |
| CW 23+ 90 | 5/3/2006  | 5507.32                   | 11.72            | NPP                    | 8.26                 | 5499.06                         | NPP                                  |
|           | 5/17/2006 | 5507.32                   | 11.72            | NPP                    | 8.28                 | 5499.04                         | NPP                                  |
|           | 5/30/2006 | 5507.32                   | 11.72            | NPP                    | 8.23                 | 5499.09                         | NPP                                  |
| CW 25+ 95 | 5/3/2006  | 5505.90                   | 12.25            | NPP                    | 7.19                 | 5498.71                         | NPP                                  |
|           | 5/17/2006 | 5505.90                   | 12.25            | NPP                    | 7.15                 | 5498.75                         | NPP                                  |
|           | 5/30/2006 | 5505.90                   | 12.25            | NPP                    | 7.19                 | 5498.71                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Monitoring Well Fluids Monitoring May 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 5/3/2006  | 5510.31                   | 22.94            | NPP                    | 10.77                | 5499.54                         | NPP                                  |
|         | 5/17/2006 | 5510.31                   | 22.94            | NPP                    | 10.61                | 5499.70                         | NPP                                  |
|         | 5/30/2006 | 5510.31                   | 22.94            | NPP                    | 10.5                 | 5499.81                         | NPP                                  |
| MW #12  | 5/3/2006  | 5501.61                   | 14.98            | NPP                    | 9.76                 | 5491.85                         | NPP                                  |
|         | 5/17/2006 | 5501.61                   | 14.98            | NPP                    | 9.85                 | 5491.76                         | NPP                                  |
|         | 5/30/2006 | 5501.61                   | 14.98            | NPP                    | 9.88                 | 5491.73                         | NPP                                  |
| MW #20  | 5/3/2006  | 5519.90                   | 27.13            | 20.67                  | 20.68                | 5499.23                         | 0.01                                 |
|         | 5/17/2006 | 5519.90                   | 27.13            | 20.68                  | 20.82                | 5499.19                         | 0.14                                 |
|         | 5/30/2006 | 5519.90                   | 27.13            | 20.71                  | 20.81                | 5499.17                         | 0.10                                 |
| MW #21  | 5/3/2006  | 5521.99                   | 30.38            | 21.80                  | 21.89                | 5500.17                         | 0.09                                 |
|         | 5/17/2006 | 5521.99                   | 30.38            | 21.79                  | 21.86                | 5500.19                         | 0.07                                 |
|         | 5/30/2006 | 5521.99                   | 30.38            | 21.18                  | 21.88                | 5500.67                         | 0.70                                 |
| MW #39  | 5/3/2006  | 5520.83                   | 38.34            | NPP                    | 30.81                | 5490.02                         | NPP                                  |
|         | 5/17/2006 | 5520.83                   | 38.34            | NPP                    | 29.19                | 5491.64                         | NPP                                  |
|         | 5/30/2006 | 5520.83                   | 38.34            | NPP                    | 28.92                | 5491.91                         | NPP                                  |
| MW #45  | 5/3/2006  | 5506.36                   | 16.92            | 11.23                  | 11.24                | 5495.13                         | 0.01                                 |
|         | 5/17/2006 | 5506.36                   | 16.92            | 11.24                  | 11.31                | 5495.11                         | 0.07                                 |
|         | 5/30/2006 | 5506.36                   | 16.92            | 11.26                  | 11.36                | 5495.08                         | 0.10                                 |

NPP = No Product Present      NWP = No Water Present



# Monitoring Well Fluids Monitoring May 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #46  | 5/3/2006  | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 5/17/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 5/30/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 5/3/2006  | 5506.77                   | 14.28            | 12.00                  | 13.00                | 5494.57                         | 1.00                                 |
|         | 5/17/2006 | 5506.77                   | 14.28            | 12.01                  | 13.15                | 5494.53                         | 1.14                                 |
|         | 5/30/2006 | 5506.77                   | 14.28            | 12.01                  | 13.10                | 5494.54                         | 1.09                                 |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring June 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60  | 6/12/2006 | 5506.62                   | 12.26            | NPP                    | 11.34                | 5495.28                         | NPP                                  |
|          | 6/26/2006 | 5506.62                   | 12.26            | NPP                    | 11.39                | 5495.23                         | NPP                                  |
| OW 1+50  | 6/12/2006 | 5508.03                   | 14.36            | 13.36                  | 13.41                | 5494.66                         | 0.05                                 |
|          | 6/26/2006 | 5508.03                   | 14.36            | 13.50                  | 13.56                | 5494.52                         | 0.06                                 |
| OW 3+85  | 6/12/2006 | 5507.31                   | 15.06            | 12.69                  | 13.61                | 5494.44                         | 0.92                                 |
|          | 6/26/2006 | 5507.31                   | 15.06            | 12.75                  | 13.76                | 5494.36                         | 1.01                                 |
| OW 5+50  | 6/12/2006 | 5507.59                   | 13.67            | NPP                    | 13.51                | 5494.08                         | NPP                                  |
|          | 6/26/2006 | 5507.59                   | 13.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 6+70  | 6/12/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 6/26/2006 | 5504.78                   | 14.67            | NPP                    | 13.47                | 5491.31                         | NPP                                  |
| OW 8+10  | 6/12/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 6/26/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 11+15 | 6/12/2006 | 5506.70                   | 16.59            | NPP                    | 11.84                | 5494.86                         | NPP                                  |
|          | 6/26/2006 | 5506.70                   | 16.59            | NPP                    | 11.88                | 5494.82                         | NPP                                  |
| OW 14+10 | 6/12/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 6/26/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring June 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 16+ 60 | 6/12/2006 | 5508.43                   | 15.21            | 12.60                  | 12.76                | 5495.80                         | 0.16                                 |
|           | 6/26/2006 | 5508.43                   | 15.21            | 12.60                  | 12.99                | 5495.75                         | 0.39                                 |
| OW 19+ 50 | 6/12/2006 | 5508.03                   | 13.00            | NPP                    | 12.74                | 5495.29                         | NPP                                  |
|           | 6/26/2006 | 5508.03                   | 13.00            | NPP                    | 12.94                | 5495.09                         | NPP                                  |
| OW 22+ 00 | 6/12/2006 | 5506.91                   | 14.16            | NPP                    | 11.99                | 5494.92                         | NPP                                  |
|           | 6/26/2006 | 5506.91                   | 14.16            | NPP                    | 12.09                | 5494.82                         | NPP                                  |
| OW 23+ 10 | 6/12/2006 | 5514.12                   | 18.34            | NPP                    | 17.50                | 5496.62                         | NPP                                  |
|           | 6/26/2006 | 5514.12                   | 18.34            | NPP                    | 16.29                | 5497.83                         | NPP                                  |
| OW 23+ 90 | 6/12/2006 | 5515.18                   | 18.01            | NPP                    | 17.19                | 5497.99                         | NPP                                  |
|           | 6/26/2006 | 5515.18                   | 18.01            | NPP                    | 17.19                | 5497.99                         | NPP                                  |
| OW 25+ 70 | 6/12/2006 | 5509.00                   | 13.98            | NPP                    | 10.79                | 5498.21                         | NPP                                  |
|           | 6/26/2006 | 5509.00                   | 13.98            | NPP                    | 10.79                | 5498.21                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring June 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60  | 6/12/2006 | 5506.68                   | 14.09            | NPP                    | 7.96                 | 5498.72                         | NPP                                  |
|          | 6/26/2006 | 5506.68                   | 14.09            | NPP                    | 7.96                 | 5498.72                         | NPP                                  |
| CW 1+50  | 6/12/2006 | 5505.13                   | 13.74            | NPP                    | 6.34                 | 5498.79                         | NPP                                  |
|          | 6/26/2006 | 5505.13                   | 13.74            | NPP                    | 6.29                 | 5498.84                         | NPP                                  |
| CW 3+85  | 6/12/2006 | 5503.87                   | 13.11            | NPP                    | 5.41                 | 5498.46                         | NPP                                  |
|          | 6/26/2006 | 5503.87                   | 13.11            | NPP                    | 5.39                 | 5498.48                         | NPP                                  |
| CW 5+50  | 6/12/2006 | 5503.76                   | 12.27            | NPP                    | 6.19                 | 5497.57                         | NPP                                  |
|          | 6/26/2006 | 5503.76                   | 12.27            | NPP                    | 6.24                 | 5497.52                         | NPP                                  |
| CW 6+70  | 6/12/2006 | 5503.84                   | 11.45            | NPP                    | 6.64                 | 5497.20                         | NPP                                  |
|          | 6/26/2006 | 5503.84                   | 11.45            | NPP                    | 6.62                 | 5497.22                         | NPP                                  |
| CW 8+10  | 6/12/2006 | 5504.02                   | 11.63            | NPP                    | 7.36                 | 5496.66                         | NPP                                  |
|          | 6/26/2006 | 5504.02                   | 11.63            | NPP                    | 7.38                 | 5496.64                         | NPP                                  |
| CW 8+45  | 6/12/2006 | 5503.80                   | 12.6             | 7.34                   | 7.36                 | 5496.46                         | 0.02                                 |
|          | 6/26/2006 | 5503.80                   | 12.6             | 7.40                   | 7.43                 | 5496.39                         | 0.03                                 |
| CW 11+15 | 6/12/2006 | 5503.95                   | 12.27            | NPP                    | 5.56                 | 5498.39                         | NPP                                  |
|          | 6/26/2006 | 5503.95                   | 12.27            | NPP                    | 5.74                 | 5498.21                         | NPP                                  |
| CW 14+10 | 6/12/2006 | 5504.39                   | 13.05            | NPP                    | 6.45                 | 5497.94                         | NPP                                  |
|          | 6/26/2006 | 5504.39                   | 13.05            | NPP                    | 6.42                 | 5497.97                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present



# Collection Well Fluids Monitoring June 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 16+ 60 | 6/12/2006 | 5504.32                   | 12.86            | NPP                    | 6.31                 | 5498.01                         | NPP                                  |
|           | 6/26/2006 | 5504.32                   | 12.86            | NPP                    | 6.26                 | 5498.06                         | NPP                                  |
| CW 19+ 50 | 6/12/2006 | 5504.52                   | 9.99             | NPP                    | 6.32                 | 5498.20                         | NPP                                  |
|           | 6/26/2006 | 5504.52                   | 9.99             | NPP                    | 6.21                 | 5498.31                         | NPP                                  |
| CW 22+ 00 | 6/12/2006 | 5508.04                   | 12.34            | NPP                    | 9.14                 | 5498.90                         | NPP                                  |
|           | 6/26/2006 | 5508.04                   | 12.34            | NPP                    | 9.12                 | 5498.92                         | NPP                                  |
| CW 23+ 10 | 6/12/2006 | 5510.04                   | 14.65            | NPP                    | 10.23                | 5499.81                         | NPP                                  |
|           | 6/26/2006 | 5510.04                   | 14.65            | 10.70                  | 10.93                | 5499.29                         | 0.23                                 |
| CW 23+ 90 | 6/12/2006 | 5507.32                   | 11.72            | NPP                    | 8.24                 | 5499.08                         | NPP                                  |
|           | 6/26/2006 | 5507.32                   | 11.72            | NPP                    | 8.21                 | 5499.11                         | NPP                                  |
| CW 25+ 95 | 6/12/2006 | 5505.90                   | 12.25            | NPP                    | 7.23                 | 5498.67                         | NPP                                  |
|           | 6/26/2006 | 5505.90                   | 12.25            | NPP                    | 7.19                 | 5498.71                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Monitoring Well Fluids Monitoring June 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 6/12/2006 | 5510.31                   | 22.94            | NPP                    | 10.56                | 5499.75                         | NPP                                  |
|         | 6/26/2006 | 5510.31                   | 22.94            | NPP                    | 10.54                | 5499.77                         | NPP                                  |
| MW #12  | 6/12/2006 | 5501.61                   | 14.98            | NPP                    | 9.89                 | 5491.72                         | NPP                                  |
|         | 6/26/2006 | 5501.61                   | 14.98            | NPP                    | 10.01                | 5491.60                         | NPP                                  |
| MW #20  | 6/12/2006 | 5519.90                   | 27.13            | 20.72                  | 20.82                | 5499.16                         | 0.10                                 |
|         | 6/26/2006 | 5519.90                   | 27.13            | 20.73                  | 20.83                | 5499.15                         | 0.10                                 |
| MW #21  | 6/12/2006 | 5521.99                   | 30.38            | 21.82                  | 21.86                | 5500.16                         | 0.04                                 |
|         | 6/26/2006 | 5521.99                   | 30.38            | 21.84                  | 21.91                | 5500.14                         | 0.07                                 |
| MW #39  | 6/12/2006 | 5520.83                   | 38.34            | NPP                    | 27.59                | 5493.24                         | NPP                                  |
|         | 6/26/2006 | 5520.83                   | 38.34            | NPP                    | 27.15                | 5493.68                         | NPP                                  |
| MW #45  | 6/12/2006 | 5506.36                   | 16.92            | 11.25                  | 11.35                | 5495.09                         | 0.10                                 |
|         | 6/26/2006 | 5506.36                   | 16.92            | 11.27                  | 11.35                | 5495.07                         | 0.08                                 |
| MW #46  | 6/12/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 6/26/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 6/12/2006 | 5506.77                   | 14.28            | 12.15                  | 13.15                | 5494.42                         | 1.00                                 |
|         | 6/26/2006 | 5506.77                   | 14.28            | 12.07                  | 13.22                | 5494.47                         | 1.15                                 |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring July 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60  | 7/12/2006 | 5506.62                   | 12.26            | NPP                    | 11.12                | 5495.50                         | NPP                                  |
|          | 7/24/2006 | 5506.62                   | 12.26            | NPP                    | 10.95                | 5495.67                         | NPP                                  |
| OW 1+50  | 7/12/2006 | 5508.03                   | 14.36            | NPP                    | 12.92                | 5495.11                         | NPP                                  |
|          | 7/24/2006 | 5508.03                   | 14.36            | 12.85                  | 13.03                | 5495.14                         | 0.18                                 |
| OW 3+85  | 7/12/2006 | 5507.31                   | 15.06            | 12.44                  | 12.59                | 5494.84                         | 0.15                                 |
|          | 7/24/2006 | 5507.31                   | 15.06            | 12.38                  | 12.99                | 5494.81                         | 0.61                                 |
| OW 5+50  | 7/12/2006 | 5507.59                   | 13.67            | 13.64                  | 13.66                | 5493.95                         | 0.02                                 |
|          | 7/24/2006 | 5507.59                   | 13.67            | NPP                    | 13.46                | 5494.13                         | NPP                                  |
| OW 6+70  | 7/12/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 7/24/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 8+10  | 7/12/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 7/24/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 11+15 | 7/12/2006 | 5506.70                   | 16.59            | NPP                    | 11.81                | 5494.89                         | NPP                                  |
|          | 7/24/2006 | 5506.70                   | 16.59            | NPP                    | 11.77                | 5494.93                         | NPP                                  |
| OW 14+10 | 7/12/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 7/24/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 16+60 | 7/12/2006 | 5508.43                   | 15.21            | 12.69                  | 12.91                | 5495.70                         | 0.22                                 |
|          | 7/24/2006 | 5508.43                   | 15.21            | 12.66                  | 12.86                | 5495.73                         | 0.20                                 |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring July 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 19+50 | 7/12/2006 | 5508.03                   | 13.00            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 7/24/2006 | 5508.03                   | 13.00            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 22+00 | 7/12/2006 | 5506.91                   | 14.16            | NPP                    | 11.74                | 5495.17                         | NPP                                  |
|          | 7/24/2006 | 5506.91                   | 14.16            | NPP                    | 11.89                | 5495.02                         | NPP                                  |
| OW 23+10 | 7/12/2006 | 5514.12                   | 18.34            | 16.24                  | 16.34                | 5497.86                         | 0.10                                 |
|          | 7/24/2006 | 5514.12                   | 18.34            | 16.26                  | 16.31                | 5497.85                         | 0.05                                 |
| OW 23+90 | 7/12/2006 | 5515.18                   | 18.01            | NPP                    | 17.09                | 5498.09                         | NPP                                  |
|          | 7/24/2006 | 5515.18                   | 18.01            | NPP                    | 17.19                | 5497.99                         | NPP                                  |
| OW 25+70 | 7/12/2006 | 5509.00                   | 13.98            | NPP                    | 10.68                | 5498.32                         | NPP                                  |
|          | 7/24/2006 | 5509.00                   | 13.98            | NPP                    | 10.81                | 5498.19                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present



# Collection Well Fluids Monitoring July 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60  | 7/12/2006 | 5506.68                   | 14.09            | NPP                    | 7.75                 | 5498.93                         | NPP                                  |
|          | 7/24/2006 | 5506.68                   | 14.09            | NPP                    | 7.78                 | 5498.90                         | NPP                                  |
| CW 1+50  | 7/12/2006 | 5505.13                   | 13.74            | NPP                    | 6.21                 | 5498.92                         | NPP                                  |
|          | 7/24/2006 | 5505.13                   | 13.74            | NPP                    | 6.19                 | 5498.94                         | NPP                                  |
| CW 3+85  | 7/12/2006 | 5503.87                   | 13.11            | NPP                    | 5.46                 | 5498.41                         | NPP                                  |
|          | 7/24/2006 | 5503.87                   | 13.11            | NPP                    | 5.35                 | 5498.52                         | NPP                                  |
| CW 5+50  | 7/12/2006 | 5503.76                   | 12.27            | NPP                    | 6.19                 | 5497.57                         | NPP                                  |
|          | 7/24/2006 | 5503.76                   | 12.27            | NPP                    | 6.19                 | 5497.57                         | NPP                                  |
| CW 6+70  | 7/12/2006 | 5503.84                   | 11.45            | NPP                    | 6.67                 | 5497.17                         | NPP                                  |
|          | 7/24/2006 | 5503.84                   | 11.45            | NPP                    | 6.67                 | 5497.17                         | NPP                                  |
| CW 8+10  | 7/12/2006 | 5504.02                   | 11.63            | NPP                    | 7.33                 | 5496.69                         | NPP                                  |
|          | 7/24/2006 | 5504.02                   | 11.63            | NPP                    | 7.27                 | 5496.75                         | NPP                                  |
| CW 8+45  | 7/12/2006 | 5503.80                   | 12.6             | NPP                    | 7.35                 | 5496.45                         | NPP                                  |
|          | 7/24/2006 | 5503.80                   | 12.6             | 7.31                   | 7.33                 | 5496.49                         | 0.02                                 |
| CW 11+15 | 7/12/2006 | 5503.95                   | 12.27            | NPP                    | 5.72                 | 5498.23                         | NPP                                  |
|          | 7/24/2006 | 5503.95                   | 12.27            | NPP                    | 5.68                 | 5498.27                         | NPP                                  |
| CW 14+10 | 7/12/2006 | 5504.39                   | 13.05            | NPP                    | 6.41                 | 5497.98                         | NPP                                  |
|          | 7/24/2006 | 5504.39                   | 13.05            | NPP                    | 6.36                 | 5498.03                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring July 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 16+ 60 | 7/12/2006 | 5504.32                   | 12.86            | NPP                    | 6.3                  | 5498.02                         | NPP                                  |
|           | 7/24/2006 | 5504.32                   | 12.86            | NPP                    | 6.31                 | 5498.01                         | NPP                                  |
| CW 19+ 50 | 7/12/2006 | 5504.52                   | 9.99             | NPP                    | 6.23                 | 5498.29                         | NPP                                  |
|           | 7/24/2006 | 5504.52                   | 9.99             | NPP                    | 6.50                 | 5498.02                         | NPP                                  |
| CW 22+ 00 | 7/12/2006 | 5508.04                   | 12.34            | NPP                    | 9.14                 | 5498.90                         | NPP                                  |
|           | 7/24/2006 | 5508.04                   | 12.34            | NPP                    | 9.13                 | 5498.91                         | NPP                                  |
| CW 23+ 10 | 7/12/2006 | 5510.04                   | 14.65            | 10.72                  | 10.77                | 5499.31                         | 0.05                                 |
|           | 7/24/2006 | 5510.04                   | 14.65            | NPP                    | 10.79                | 5499.25                         | NPP                                  |
| CW 23+ 90 | 7/12/2006 | 5507.32                   | 11.72            | NPP                    | 8.17                 | 5499.15                         | NPP                                  |
|           | 7/24/2006 | 5507.32                   | 11.72            | NPP                    | 8.23                 | 5499.09                         | NPP                                  |
| CW 25+ 95 | 7/12/2006 | 5505.90                   | 12.25            | NPP                    | 7.19                 | 5498.71                         | NPP                                  |
|           | 7/24/2006 | 5505.90                   | 12.25            | NPP                    | 7.22                 | 5498.68                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Monitoring Well Fluids Monitoring July 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 7/12/2006 | 5510.31                   | 22.94            | NPP                    | 10.29                | 5500.02                         | NPP                                  |
|         | 7/24/2006 | 5510.31                   | 22.94            | NPP                    | 10.32                | 5499.99                         | NPP                                  |
| MW #12  | 7/12/2006 | 5501.61                   | 14.98            | NPP                    | 9.85                 | 5491.76                         | NPP                                  |
|         | 7/24/2006 | 5501.61                   | 14.98            | NPP                    | 9.91                 | 5491.70                         | NPP                                  |
| MW #20  | 7/12/2006 | 5519.90                   | 27.13            | 20.71                  | 20.84                | 5499.16                         | 0.13                                 |
|         | 7/24/2006 | 5519.90                   | 27.13            | 20.73                  | 20.83                | 5499.15                         | 0.10                                 |
| MW #21  | 7/12/2006 | 5521.99                   | 30.38            | 21.82                  | 21.86                | 5500.16                         | 0.04                                 |
|         | 7/24/2006 | 5521.99                   | 30.38            | 21.80                  | 21.86                | 5500.18                         | 0.06                                 |
| MW #39  | 7/12/2006 | 5520.83                   | 38.34            | NPP                    | 26.98                | 5493.85                         | NPP                                  |
|         | 7/24/2006 | 5520.83                   | 38.34            | NPP                    | 27.05                | 5493.78                         | NPP                                  |
| MW #45  | 7/12/2006 | 5506.36                   | 16.92            | 11.11                  | 11.12                | 5495.25                         | 0.01                                 |
|         | 7/24/2006 | 5506.36                   | 16.92            | 11.05                  | 11.07                | 5495.31                         | 0.02                                 |
| MW #46  | 7/12/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 7/24/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 7/12/2006 | 5506.77                   | 14.28            | 12.80                  | 13.09                | 5493.91                         | 0.29                                 |
|         | 7/24/2006 | 5506.77                   | 14.28            | 11.84                  | 12.35                | 5494.83                         | 0.51                                 |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring August 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60  | 8/7/2006  | 5506.62                   | 12.26            | NPP                    | 11.13                | 5495.49                         | NPP                                  |
|          | 8/21/2006 | 5506.62                   | 12.26            | NPP                    | 11.23                | 5495.39                         | NPP                                  |
| OW 1+50  | 8/7/2006  | 5508.03                   | 14.36            | 13.13                  | 13.18                | 5494.89                         | 0.05                                 |
|          | 8/21/2006 | 5508.03                   | 14.36            | 13.26                  | 13.31                | 5494.76                         | 0.05                                 |
| OW 3+85  | 8/7/2006  | 5507.31                   | 15.06            | 12.45                  | 13.31                | 5494.69                         | 0.86                                 |
|          | 8/21/2006 | 5507.31                   | 15.06            | 12.61                  | 13.36                | 5494.55                         | 0.75                                 |
| OW 5+50  | 8/7/2006  | 5507.59                   | 13.67            | NPP                    | 13.47                | 5494.12                         | NPP                                  |
|          | 8/21/2006 | 5507.59                   | 13.67            | 13.36                  | 13.41                | 5494.22                         | 0.05                                 |
| OW 6+70  | 8/7/2006  | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 8/21/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 8+10  | 8/7/2006  | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 8/21/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 11+15 | 8/7/2006  | 5506.70                   | 16.59            | NPP                    | 11.83                | 5494.87                         | NPP                                  |
|          | 8/21/2006 | 5506.70                   | 16.59            | NPP                    | 11.84                | 5494.86                         | NPP                                  |
| OW 14+10 | 8/7/2006  | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 8/21/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 16+60 | 8/7/2006  | 5508.43                   | 15.21            | 12.69                  | 12.91                | 5495.70                         | 0.22                                 |
|          | 8/21/2006 | 5508.43                   | 15.21            | 12.74                  | 12.99                | 5495.64                         | 0.25                                 |

NPP = No Product Present      NWP = No Water Present



# Observation Well Fluids Monitoring August 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 19+50 | 8/7/2006  | 5508.03                   | 13.00            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 8/21/2006 | 5508.03                   | 13.00            | 12.78                  | 12.98                | 5495.21                         | 0.20                                 |
| OW 22+00 | 8/7/2006  | 5506.91                   | 14.16            | NPP                    | 12.08                | 5494.83                         | NPP                                  |
|          | 8/21/2006 | 5506.91                   | 14.16            | NPP                    | 12.21                | 5494.70                         | NPP                                  |
| OW 23+10 | 8/7/2006  | 5514.12                   | 18.34            | 16.29                  | 16.31                | 5497.83                         | 0.02                                 |
|          | 8/21/2006 | 5514.12                   | 18.34            | NPP                    | 16.32                | 5497.80                         | NPP                                  |
| OW 23+90 | 8/7/2006  | 5515.18                   | 18.01            | NPP                    | 17.19                | 5497.99                         | NPP                                  |
|          | 8/21/2006 | 5515.18                   | 18.01            | NPP                    | 17.15                | 5498.03                         | NPP                                  |
| OW 25+70 | 8/7/2006  | 5509.00                   | 13.98            | NPP                    | 10.76                | 5498.24                         | NPP                                  |
|          | 8/21/2006 | 5509.00                   | 13.98            | NPP                    | 10.78                | 5498.22                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring August 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60  | 8/7/2006  | 5506.68                   | 14.09            | NPP                    | 7.86                 | 5498.82                         | NPP                                  |
|          | 8/21/2006 | 5506.68                   | 14.09            | NPP                    | 7.91                 | 5498.77                         | NPP                                  |
| CW 1+50  | 8/7/2006  | 5505.13                   | 13.74            | NPP                    | 6.21                 | 5498.92                         | NPP                                  |
|          | 8/21/2006 | 5505.13                   | 13.74            | NPP                    | 6.25                 | 5498.88                         | NPP                                  |
| CW 3+85  | 8/7/2006  | 5503.87                   | 13.11            | NPP                    | 5.39                 | 5498.48                         | NPP                                  |
|          | 8/21/2006 | 5503.87                   | 13.11            | NPP                    | 5.37                 | 5498.50                         | NPP                                  |
| CW 5+50  | 8/7/2006  | 5503.76                   | 12.27            | NPP                    | 6.19                 | 5497.57                         | NPP                                  |
|          | 8/21/2006 | 5503.76                   | 12.27            | NPP                    | 6.23                 | 5497.53                         | NPP                                  |
| CW 6+70  | 8/7/2006  | 5503.84                   | 11.45            | NPP                    | 6.71                 | 5497.13                         | NPP                                  |
|          | 8/21/2006 | 5503.84                   | 11.45            | NPP                    | 6.67                 | 5497.17                         | NPP                                  |
| CW 8+10  | 8/7/2006  | 5504.02                   | 11.63            | NPP                    | 7.31                 | 5496.71                         | NPP                                  |
|          | 8/21/2006 | 5504.02                   | 11.63            | NPP                    | 7.29                 | 5496.73                         | NPP                                  |
| CW 8+45  | 8/7/2006  | 5503.80                   | 12.6             | 7.34                   | 7.44                 | 5496.44                         | 0.10                                 |
|          | 8/21/2006 | 5503.80                   | 12.6             | 7.36                   | 7.46                 | 5496.42                         | 0.10                                 |
| CW 11+15 | 8/7/2006  | 5503.95                   | 12.27            | NPP                    | 5.74                 | 5498.21                         | NPP                                  |
|          | 8/21/2006 | 5503.95                   | 12.27            | NPP                    | 5.76                 | 5498.19                         | NPP                                  |
| CW 14+10 | 8/7/2006  | 5504.39                   | 13.05            | NPP                    | 6.47                 | 5497.92                         | NPP                                  |
|          | 8/21/2006 | 5504.39                   | 13.05            | NPP                    | 6.43                 | 5497.96                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring August 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 16+ 60 | 8/7/2006  | 5504.32                   | 12.86            | NPP                    | 6.32                 | 5498.00                         | NPP                                  |
|           | 8/21/2006 | 5504.32                   | 12.86            | NPP                    | 6.33                 | 5497.99                         | NPP                                  |
| CW 19+ 50 | 8/7/2006  | 5504.52                   | 9.99             | NPP                    | 6.29                 | 5498.23                         | NPP                                  |
|           | 8/21/2006 | 5504.52                   | 9.99             | NPP                    | 6.29                 | 5498.23                         | NPP                                  |
| CW 22+ 00 | 8/7/2006  | 5508.04                   | 12.34            | NPP                    | 9.19                 | 5498.85                         | NPP                                  |
|           | 8/21/2006 | 5508.04                   | 12.34            | NPP                    | 9.14                 | 5498.90                         | NPP                                  |
| CW 23+ 10 | 8/7/2006  | 5510.04                   | 14.65            | NPP                    | 10.69                | 5499.35                         | NPP                                  |
|           | 8/21/2006 | 5510.04                   | 14.65            | NPP                    | 10.78                | 5499.26                         | NPP                                  |
| CW 23+ 90 | 8/7/2006  | 5507.32                   | 11.72            | NPP                    | 8.26                 | 5499.06                         | NPP                                  |
|           | 8/21/2006 | 5507.32                   | 11.72            | NPP                    | 8.24                 | 5499.08                         | NPP                                  |
| CW 25+ 95 | 8/7/2006  | 5505.90                   | 12.25            | NPP                    | 7.18                 | 5498.72                         | NPP                                  |
|           | 8/21/2006 | 5505.90                   | 12.25            | NPP                    | 7.15                 | 5498.75                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Monitoring Well Fluids Monitoring August 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 8/7/2006  | 5510.31                   | 22.94            | NPP                    | 10.48                | 5499.83                         | NPP                                  |
|         | 8/21/2006 | 5510.31                   | 22.94            | NPP                    | 10.63                | 5499.68                         | NPP                                  |
| MW #12  | 8/7/2006  | 5501.61                   | 14.98            | NPP                    | 9.91                 | 5491.70                         | NPP                                  |
|         | 8/21/2006 | 5501.61                   | 14.98            | NPP                    | 10.12                | 5491.49                         | NPP                                  |
| MW #20  | 8/7/2006  | 5519.90                   | 27.13            | 20.72                  | 20.88                | 5499.15                         | 0.16                                 |
|         | 8/21/2006 | 5519.90                   | 27.13            | 20.74                  | 20.86                | 5499.14                         | 0.12                                 |
| MW #21  | 8/7/2006  | 5521.99                   | 30.38            | 21.86                  | 21.91                | 5500.12                         | 0.05                                 |
|         | 8/21/2006 | 5521.99                   | 30.38            | 21.84                  | 21.9                 | 5500.14                         | 0.06                                 |
| MW #39  | 8/7/2006  | 5520.83                   | 38.34            | NPP                    | 26.33                | 5494.50                         | NPP                                  |
|         | 8/21/2006 | 5520.83                   | 38.34            | NPP                    | 26.24                | 5494.59                         | NPP                                  |
| MW #45  | 8/7/2006  | 5506.36                   | 16.92            | 11.28                  | 11.31                | 5495.07                         | 0.03                                 |
|         | 8/21/2006 | 5506.36                   | 16.92            | 11.23                  | 11.25                | 5495.13                         | 0.02                                 |
| MW #46  | 8/7/2006  | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 8/21/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 8/7/2006  | 5506.77                   | 14.28            | 11.75                  | 12.95                | 5494.78                         | 1.20                                 |
|         | 8/21/2006 | 5506.77                   | 14.28            | 12.01                  | 12.89                | 5494.58                         | 0.88                                 |

NPP = No Product Present      NWP = No Water Present



# Observation Well Fluids Monitoring September 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60  | 9/5/2006  | 5506.62                   | 12.26            | NPP                    | 11.32                | 5495.30                         | NPP                                  |
|          | 9/18/2006 | 5506.62                   | 12.26            | NPP                    | 11.41                | 5495.21                         | NPP                                  |
| OW 1+50  | 9/5/2006  | 5508.03                   | 14.36            | 13.24                  | 13.49                | 5494.74                         | 0.25                                 |
|          | 9/18/2006 | 5508.03                   | 14.36            | 13.25                  | 13.91                | 5494.65                         | 0.66                                 |
| OW 3+85  | 9/5/2006  | 5507.31                   | 15.06            | 12.71                  | 13.29                | 5494.48                         | 0.58                                 |
|          | 9/18/2006 | 5507.31                   | 15.06            | 12.71                  | 13.51                | 5494.44                         | 0.80                                 |
| OW 5+50  | 9/5/2006  | 5507.59                   | 13.67            | 13.24                  | 13.27                | 5494.34                         | 0.03                                 |
|          | 9/18/2006 | 5507.59                   | 13.67            | 13.25                  | 13.26                | 5494.34                         | 0.01                                 |
| OW 6+70  | 9/5/2006  | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 9/18/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 8+10  | 9/5/2006  | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 9/18/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 11+15 | 9/5/2006  | 5506.70                   | 16.59            | NPP                    | 11.74                | 5494.96                         | NPP                                  |
|          | 9/18/2006 | 5506.70                   | 16.59            | NPP                    | 11.74                | 5494.96                         | NPP                                  |
| OW 14+10 | 9/5/2006  | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 9/18/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 16+60 | 9/5/2006  | 5508.43                   | 15.21            | 12.69                  | 12.94                | 5495.69                         | 0.25                                 |
|          | 9/18/2006 | 5508.43                   | 15.21            | 12.69                  | 12.95                | 5495.69                         | 0.26                                 |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring September 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 19+ 50 | 9/5/2006  | 5508.03                   | 13.00            | NPP                    | NWP                  |                                 | NPP                                  |
|           | 9/18/2006 | 5508.03                   | 13.00            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 22+ 00 | 9/5/2006  | 5506.91                   | 14.16            | NPP                    | 11.99                | 5494.92                         | NPP                                  |
|           | 9/18/2006 | 5506.91                   | 14.16            | NPP                    | 11.99                | 5494.92                         | NPP                                  |
| OW 23+ 10 | 9/5/2006  | 5514.12                   | 18.34            | NPP                    | 16.31                | 5497.81                         | NPP                                  |
|           | 9/18/2006 | 5514.12                   | 18.34            | 16.28                  | 16.29                | 5497.84                         | 0.01                                 |
| OW 23+ 90 | 9/5/2006  | 5515.18                   | 18.01            | NPP                    | 17.12                | 5498.06                         | NPP                                  |
|           | 9/18/2006 | 5515.18                   | 18.01            | NPP                    | 17.16                | 5498.02                         | NPP                                  |
| OW 25+ 70 | 9/5/2006  | 5509.00                   | 13.98            | NPP                    | 10.73                | 5498.27                         | NPP                                  |
|           | 9/18/2006 | 5509.00                   | 13.98            | NPP                    | 10.79                | 5498.21                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring September 2006

| Well ID  | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60  | 9/5/2006  | 5506.68                   | 14.09            | NPP                    | 7.84                 | 5498.84                         | NPP                                  |
|          | 9/18/2006 | 5506.68                   | 14.09            | NPP                    | 7.78                 | 5498.90                         | NPP                                  |
| CW 1+50  | 9/5/2006  | 5505.13                   | 13.74            | NPP                    | 6.19                 | 5498.94                         | NPP                                  |
|          | 9/18/2006 | 5505.13                   | 13.74            | NPP                    | 6.18                 | 5498.95                         | NPP                                  |
| CW 3+85  | 9/5/2006  | 5503.87                   | 13.11            | NPP                    | 5.36                 | 5498.51                         | NPP                                  |
|          | 9/18/2006 | 5503.87                   | 13.11            | NPP                    | 5.35                 | 5498.52                         | NPP                                  |
| CW 5+50  | 9/5/2006  | 5503.76                   | 12.27            | NPP                    | 6.16                 | 5497.60                         | NPP                                  |
|          | 9/18/2006 | 5503.76                   | 12.27            | NPP                    | 6.19                 | 5497.57                         | NPP                                  |
| CW 6+70  | 9/5/2006  | 5503.84                   | 11.45            | NPP                    | 6.65                 | 5497.19                         | NPP                                  |
|          | 9/18/2006 | 5503.84                   | 11.45            | NPP                    | 6.69                 | 5497.15                         | NPP                                  |
| CW 8+10  | 9/5/2006  | 5504.02                   | 11.63            | NPP                    | 7.33                 | 5496.69                         | NPP                                  |
|          | 9/18/2006 | 5504.02                   | 11.63            | NPP                    | 7.32                 | 5496.70                         | NPP                                  |
| CW 8+45  | 9/5/2006  | 5503.80                   | 12.6             | 7.33                   | 7.74                 | 5496.39                         | 0.41                                 |
|          | 9/18/2006 | 5503.80                   | 12.6             | 7.39                   | 7.46                 | 5496.40                         | 0.07                                 |
| CW 11+15 | 9/5/2006  | 5503.95                   | 12.27            | NPP                    | 5.76                 | 5498.19                         | NPP                                  |
|          | 9/18/2006 | 5503.95                   | 12.27            | NPP                    | 5.71                 | 5498.24                         | NPP                                  |
| CW 14+10 | 9/5/2006  | 5504.39                   | 13.05            | NPP                    | 6.48                 | 5497.91                         | NPP                                  |
|          | 9/18/2006 | 5504.39                   | 13.05            | NPP                    | 6.45                 | 5497.94                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring September 2006

| Well ID   | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 16+ 60 | 9/5/2006  | 5504.32                   | 12.86            | NPP                    | 6.31                 | 5498.01                         | NPP                                  |
|           | 9/18/2006 | 5504.32                   | 12.86            | NPP                    | 6.33                 | 5497.99                         | NPP                                  |
| CW 19+ 50 | 9/5/2006  | 5504.52                   | 9.99             | NPP                    | 6.37                 | 5498.15                         | NPP                                  |
|           | 9/18/2006 | 5504.52                   | 9.99             | NPP                    | 6.32                 | 5498.20                         | NPP                                  |
| CW 22+ 00 | 9/5/2006  | 5508.04                   | 12.34            | NPP                    | 9.14                 | 5498.90                         | NPP                                  |
|           | 9/18/2006 | 5508.04                   | 12.34            | NPP                    | 9.23                 | 5498.81                         | NPP                                  |
| CW 23+ 10 | 9/5/2006  | 5510.04                   | 14.65            | NPP                    | 10.79                | 5499.25                         | NPP                                  |
|           | 9/18/2006 | 5510.04                   | 14.65            | NPP                    | 10.79                | 5499.25                         | NPP                                  |
| CW 23+ 90 | 9/5/2006  | 5507.32                   | 11.72            | NPP                    | 8.22                 | 5499.10                         | NPP                                  |
|           | 9/18/2006 | 5507.32                   | 11.72            | NPP                    | 8.21                 | 5499.11                         | NPP                                  |
| CW 25+ 95 | 9/5/2006  | 5505.90                   | 12.25            | NPP                    | 7.18                 | 5498.72                         | NPP                                  |
|           | 9/18/2006 | 5505.90                   | 12.25            | NPP                    | 7.21                 | 5498.69                         | NPP                                  |

NPP = No Product Present      NVWP = No Water Present



# Monitoring Well Fluids Monitoring September 2006

| Well ID | Date      | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|-----------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 9/5/2006  | 5510.31                   | 22.94            | NPP                    | 10.49                | 5499.82                         | NPP                                  |
|         | 9/18/2006 | 5510.31                   | 22.94            | NPP                    | 10.37                | 5499.94                         | NPP                                  |
| MW #12  | 9/5/2006  | 5501.61                   | 14.98            | NPP                    | 10.09                | 5491.52                         | NPP                                  |
|         | 9/18/2006 | 5501.61                   | 14.98            | NPP                    | 10.06                | 5491.55                         | NPP                                  |
| MW #20  | 9/5/2006  | 5519.90                   | 27.13            | 20.73                  | 20.87                | 5499.14                         | 0.14                                 |
|         | 9/18/2006 | 5519.90                   | 27.13            | 20.73                  | 20.88                | 5499.14                         | 0.15                                 |
| MW #21  | 9/5/2006  | 5521.99                   | 30.38            | 21.83                  | 21.86                | 5500.15                         | 0.03                                 |
|         | 9/18/2006 | 5521.99                   | 30.38            | 21.85                  | 21.9                 | 5500.13                         | 0.05                                 |
| MW #39  | 9/5/2006  | 5520.83                   | 38.34            | NPP                    | 29.89                | 5490.94                         | NPP                                  |
|         | 9/18/2006 | 5520.83                   | 38.34            | NPP                    | 27.98                | 5492.85                         | NPP                                  |
| MW #45  | 9/5/2006  | 5506.36                   | 16.92            | 11.14                  | 11.16                | 5495.22                         | 0.02                                 |
|         | 9/18/2006 | 5506.36                   | 16.92            | 11.14                  | 11.19                | 5495.21                         | 0.05                                 |
| MW #46  | 9/5/2006  | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 9/18/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 9/5/2006  | 5506.77                   | 14.28            | 12.03                  | 12.99                | 5494.55                         | 0.96                                 |
|         | 9/18/2006 | 5506.77                   | 14.28            | 12.09                  | 13.09                | 5494.48                         | 1.00                                 |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring    October 2006

| Well ID | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60 | 10/2/2006  | 5506.62                   | 12.26            | NPP                    | 11.47                | 5495.15                         | NPP                                  |
|         | 10/16/2006 | 5506.62                   | 12.26            | NPP                    | 10.41                | 5496.21                         | NPP                                  |
|         | 10/30/2006 | 5506.62                   | 12.26            | NPP                    | 10.24                | 5496.38                         | NPP                                  |
| OW 1+50 | 10/2/2006  | 5508.03                   | 14.36            | 13.25                  | 14.01                | 5494.63                         | 0.76                                 |
|         | 10/16/2006 | 5508.03                   | 14.36            | NPP                    | 12.03                | 5496.00                         | NPP                                  |
|         | 10/30/2006 | 5508.03                   | 14.36            | NPP                    | 12.11                | 5495.92                         | NPP                                  |
| OW 3+85 | 10/2/2006  | 5507.31                   | 15.06            | 12.69                  | 13.69                | 5494.42                         | 1.00                                 |
|         | 10/16/2006 | 5507.31                   | 15.06            | NPP                    | 11.63                | 5495.68                         | NPP                                  |
|         | 10/30/2006 | 5507.31                   | 15.06            | NPP                    | 11.88                | 5495.43                         | NPP                                  |
| OW 5+50 | 10/2/2006  | 5507.59                   | 13.67            | 13.27                  | 13.32                | 5494.31                         | 0.05                                 |
|         | 10/16/2006 | 5507.59                   | 13.67            | NPP                    | 11.63                | 5495.96                         | NPP                                  |
|         | 10/30/2006 | 5507.59                   | 13.67            | 12.90                  | 12.94                | 5494.68                         | 0.04                                 |
| OW 6+70 | 10/2/2006  | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 10/16/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 10/30/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 8+10 | 10/2/2006  | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 10/16/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 10/30/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring    October 2006

| Well ID      | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|--------------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 11+<br>15 | 10/2/2006  | 5506.70                   | 16.59            | NPP                    | 11.79                | 5494.91                         | NPP                                  |
|              | 10/16/2006 | 5506.70                   | 16.59            | NPP                    | 11.42                | 5495.28                         | NPP                                  |
|              | 10/30/2006 | 5506.70                   | 16.59            | NPP                    | 11.53                | 5495.17                         | NPP                                  |
| OW 14+<br>10 | 10/2/2006  | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|              | 10/16/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|              | 10/30/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 16+<br>60 | 10/2/2006  | 5508.43                   | 15.21            | 12.65                  | 12.89                | 5495.73                         | 0.24                                 |
|              | 10/16/2006 | 5508.43                   | 15.21            | 12.59                  | 12.61                | 5495.84                         | 0.02                                 |
|              | 10/30/2006 | 5508.43                   | 15.21            | NPP                    | 12.21                | 5496.22                         | NPP                                  |
| OW 19+<br>50 | 10/2/2006  | 5508.03                   | 13.00            | NPP                    | NWP                  |                                 | NPP                                  |
|              | 10/16/2006 | 5508.03                   | 13.00            | NPP                    | NWP                  |                                 | NPP                                  |
|              | 10/30/2006 | 5508.03                   | 13.00            | NPP                    | 12.92                | 5495.11                         | NPP                                  |
| OW 22+<br>00 | 10/2/2006  | 5506.91                   | 14.16            | NPP                    | 11.96                | 5494.95                         | NPP                                  |
|              | 10/16/2006 | 5506.91                   | 14.16            | NPP                    | 10.74                | 5496.17                         | NPP                                  |
|              | 10/30/2006 | 5506.91                   | 14.16            | NPP                    | 10.99                | 5495.92                         | NPP                                  |
| OW 23+<br>10 | 10/2/2006  | 5514.12                   | 18.34            | NPP                    | 16.29                | 5497.83                         | NPP                                  |
|              | 10/16/2006 | 5514.12                   | 18.34            | NPP                    | 16.05                | 5498.07                         | NPP                                  |
|              | 10/30/2006 | 5514.12                   | 18.34            | NPP                    | 16.19                | 5497.93                         | NPP                                  |

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# Observation Well Fluids Monitoring      October 2006

| Well ID   | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 23+ 90 | 10/2/2006  | 5515.18                   | 18.01            | NPP                    | 17.15                | 5498.03                         | NPP                                  |
|           | 10/16/2006 | 5515.18                   | 18.01            | NPP                    | 16.99                | 5498.19                         | NPP                                  |
|           | 10/30/2006 | 5515.18                   | 18.01            | NPP                    | 17.02                | 5498.16                         | NPP                                  |
| OW 25+ 70 | 10/2/2006  | 5509.00                   | 13.98            | NPP                    | 10.78                | 5498.22                         | NPP                                  |
|           | 10/16/2006 | 5509.00                   | 13.98            | NPP                    | 10.65                | 5498.35                         | NPP                                  |
|           | 10/30/2006 | 5509.00                   | 13.98            | NPP                    | 10.71                | 5498.29                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present



# Collection Well Fluids Monitoring October 2006

| Well ID | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60 | 10/2/2006  | 5506.68                   | 14.09            | NPP                    | 7.77                 | 5498.91                         | NPP                                  |
|         | 10/16/2006 | 5506.68                   | 14.09            | NPP                    | 7.37                 | 5499.31                         | NPP                                  |
|         | 10/30/2006 | 5506.68                   | 14.09            | NPP                    | 7.57                 | 5499.11                         | NPP                                  |
| CW 1+50 | 10/2/2006  | 5505.13                   | 13.74            | NPP                    | 6.16                 | 5498.97                         | NPP                                  |
|         | 10/16/2006 | 5505.13                   | 13.74            | NPP                    | 5.91                 | 5499.22                         | NPP                                  |
|         | 10/30/2006 | 5505.13                   | 13.74            | NPP                    | 5.85                 | 5499.28                         | NPP                                  |
| CW 3+85 | 10/2/2006  | 5503.87                   | 13.11            | NPP                    | 5.34                 | 5498.53                         | NPP                                  |
|         | 10/16/2006 | 5503.87                   | 13.11            | NPP                    | 5.23                 | 5498.64                         | NPP                                  |
|         | 10/30/2006 | 5503.87                   | 13.11            | NPP                    | 5.22                 | 5498.65                         | NPP                                  |
| CW 5+50 | 10/2/2006  | 5503.76                   | 12.27            | NPP                    | 6.14                 | 5497.62                         | NPP                                  |
|         | 10/16/2006 | 5503.76                   | 12.27            | NPP                    | 6.11                 | 5497.65                         | NPP                                  |
|         | 10/30/2006 | 5503.76                   | 12.27            | NPP                    | 6.11                 | 5497.65                         | NPP                                  |
| CW 6+70 | 10/2/2006  | 5503.84                   | 11.45            | NPP                    | 6.68                 | 5497.16                         | NPP                                  |
|         | 10/16/2006 | 5503.84                   | 11.45            | NPP                    | 6.62                 | 5497.22                         | NPP                                  |
|         | 10/30/2006 | 5503.84                   | 11.45            | NPP                    | 6.62                 | 5497.22                         | NPP                                  |
| CW 8+10 | 10/2/2006  | 5504.02                   | 11.63            | NPP                    | 7.31                 | 5496.71                         | NPP                                  |
|         | 10/16/2006 | 5504.02                   | 11.63            | NPP                    | 7.21                 | 5496.81                         | NPP                                  |
|         | 10/30/2006 | 5504.02                   | 11.63            | NPP                    | 7.24                 | 5496.78                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring      October 2006

| Well ID  | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 8+45  | 10/2/2006  | 5503.80                   | 12.6             | 7.35                   | 7.4                  | 5496.44                         | 0.05                                 |
|          | 10/16/2006 | 5503.80                   | 12.6             | 7.25                   | 7.3                  | 5496.54                         | 0.05                                 |
|          | 10/30/2006 | 5503.80                   | 12.6             | 7.26                   | 7.36                 | 5496.52                         | 0.10                                 |
| CW 11+15 | 10/2/2006  | 5503.95                   | 12.27            | NPP                    | 5.73                 | 5498.22                         | NPP                                  |
|          | 10/16/2006 | 5503.95                   | 12.27            | NPP                    | 5.64                 | 5498.31                         | NPP                                  |
|          | 10/30/2006 | 5503.95                   | 12.27            | NPP                    | 5.64                 | 5498.31                         | NPP                                  |
| CW 14+10 | 10/2/2006  | 5504.39                   | 13.05            | NPP                    | 6.45                 | 5497.94                         | NPP                                  |
|          | 10/16/2006 | 5504.39                   | 13.05            | NPP                    | 6.34                 | 5498.05                         | NPP                                  |
|          | 10/30/2006 | 5504.39                   | 13.05            | NPP                    | 6.38                 | 5498.01                         | NPP                                  |
| CW 16+60 | 10/2/2006  | 5504.32                   | 12.86            | NPP                    | 6.32                 | 5498.00                         | NPP                                  |
|          | 10/16/2006 | 5504.32                   | 12.86            | NPP                    | 6.29                 | 5498.03                         | NPP                                  |
|          | 10/30/2006 | 5504.32                   | 12.86            | NPP                    | 6.29                 | 5498.03                         | NPP                                  |
| CW 19+50 | 10/2/2006  | 5504.52                   | 9.99             | NPP                    | 6.28                 | 5498.24                         | NPP                                  |
|          | 10/16/2006 | 5504.52                   | 9.99             | NPP                    | 8.17                 | 5496.35                         | NPP                                  |
|          | 10/30/2006 | 5504.52                   | 9.99             | NPP                    | 6.21                 | 5498.31                         | NPP                                  |
| CW 22+00 | 10/2/2006  | 5508.04                   | 12.34            | NPP                    | 9.16                 | 5498.88                         | NPP                                  |
|          | 10/16/2006 | 5508.04                   | 12.34            | NPP                    | 9.14                 | 5498.90                         | NPP                                  |
|          | 10/30/2006 | 5508.04                   | 12.34            | NPP                    | 8.99                 | 5499.05                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring      October 2006

| Well ID   | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 23+ 10 | 10/2/2006  | 5510.04                   | 14.65            | NPP                    | 10.78                | 5499.26                         | NPP                                  |
|           | 10/16/2006 | 5510.04                   | 14.65            | NPP                    | 10.69                | 5499.35                         | NPP                                  |
|           | 10/30/2006 | 5510.04                   | 14.65            | NPP                    | 10.61                | 5499.43                         | NPP                                  |
| CW 23+ 90 | 10/2/2006  | 5507.32                   | 11.72            | NPP                    | 8.21                 | 5499.11                         | NPP                                  |
|           | 10/16/2006 | 5507.32                   | 11.72            | NPP                    | 8.22                 | 5499.10                         | NPP                                  |
|           | 10/30/2006 | 5507.32                   | 11.72            | NPP                    | 8.14                 | 5499.18                         | NPP                                  |
| CW 25+ 95 | 10/2/2006  | 5505.90                   | 12.25            | NPP                    | 7.21                 | 5498.69                         | NPP                                  |
|           | 10/16/2006 | 5505.90                   | 12.25            | NPP                    | 7.15                 | 5498.75                         | NPP                                  |
|           | 10/30/2006 | 5505.90                   | 12.25            | NPP                    | 7.17                 | 5498.73                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Monitoring Well Fluids Monitoring October 2006

| Well ID | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 10/2/2006  | 5510.31                   | 22.94            | NPP                    | 10.41                | 5499.90                         | NPP                                  |
|         | 10/16/2006 | 5510.31                   | 22.94            | NPP                    | 9.52                 | 5500.79                         | NPP                                  |
|         | 10/30/2006 | 5510.31                   | 22.94            | NPP                    | 10.06                | 5500.25                         | NPP                                  |
| MW #12  | 10/2/2006  | 5501.61                   | 14.98            | NPP                    | 10.01                | 5491.60                         | NPP                                  |
|         | 10/16/2006 | 5501.61                   | 14.98            | NPP                    | 9.41                 | 5492.20                         | NPP                                  |
|         | 10/30/2006 | 5501.61                   | 14.98            | NPP                    | 9.72                 | 5491.89                         | NPP                                  |
| MW #20  | 10/2/2006  | 5519.90                   | 27.13            | 20.71                  | 20.84                | 5499.16                         | 0.13                                 |
|         | 10/16/2006 | 5519.90                   | 27.13            | 20.66                  | 20.76                | 5499.22                         | 0.10                                 |
|         | 10/30/2006 | 5519.90                   | 27.13            | 20.59                  | 20.69                | 5499.29                         | 0.10                                 |
| MW #21  | 10/2/2006  | 5521.99                   | 30.38            | 21.84                  | 21.91                | 5500.14                         | 0.07                                 |
|         | 10/16/2006 | 5521.99                   | 30.38            | 21.61                  | 21.76                | 5500.35                         | 0.15                                 |
|         | 10/30/2006 | 5521.99                   | 30.38            | 21.43                  | 21.48                | 5500.55                         | 0.05                                 |
| MW #39  | 10/2/2006  | 5520.83                   | 38.34            | NPP                    | 27.98                | 5492.85                         | NPP                                  |
|         | 10/16/2006 | 5520.83                   | 38.34            | NPP                    | 26.95                | 5493.88                         | NPP                                  |
|         | 10/30/2006 | 5520.83                   | 38.34            | NPP                    | 27.47                | 5493.36                         | NPP                                  |
| MW #45  | 10/2/2006  | 5506.36                   | 16.92            | 11.21                  | 11.24                | 5495.14                         | 0.03                                 |
|         | 10/16/2006 | 5506.36                   | 16.92            | NPP                    | 10.79                | 5495.57                         | NPP                                  |
|         | 10/30/2006 | 5506.36                   | 16.92            | NPP                    | 10.85                | 5495.51                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present



# Monitoring Well Fluids Monitoring    October 2006

| Well ID | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #46  | 10/2/2006  | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 10/16/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 10/30/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 10/2/2006  | 5506.77                   | 14.28            | 12.15                  | 13.32                | 5494.39                         | 1.17                                 |
|         | 10/16/2006 | 5506.77                   | 14.28            | NPP                    | 11.04                | 5495.73                         | NPP                                  |
|         | 10/30/2006 | 5506.77                   | 14.28            | NPP                    | 11.31                | 5495.46                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring November 2006

| Well ID  | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60  | 11/13/2006 | 5506.62                   | 12.26            | NPP                    | 10.57                | 5496.05                         | NPP                                  |
|          | 11/29/2006 | 5506.62                   | 12.26            | NPP                    | 10.81                | 5495.81                         | NPP                                  |
| OW 1+50  | 11/13/2006 | 5508.03                   | 14.36            | NPP                    | 12.37                | 5495.66                         | NPP                                  |
|          | 11/29/2006 | 5508.03                   | 14.36            | 11.57                  | 11.61                | 5496.45                         | 0.04                                 |
| OW 3+85  | 11/13/2006 | 5507.31                   | 15.06            | NPP                    | 11.98                | 5495.33                         | NPP                                  |
|          | 11/29/2006 | 5507.31                   | 15.06            | NPP                    | 12.25                | 5495.06                         | NPP                                  |
| OW 5+50  | 11/13/2006 | 5507.59                   | 13.67            | 13.01                  | 13.05                | 5494.57                         | 0.04                                 |
|          | 11/29/2006 | 5507.59                   | 13.67            | 12.99                  | 13.01                | 5494.60                         | 0.02                                 |
| OW 6+70  | 11/13/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 11/29/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 8+10  | 11/13/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 11/29/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 11+15 | 11/13/2006 | 5506.70                   | 16.59            | NPP                    | 11.68                | 5495.02                         | NPP                                  |
|          | 11/29/2006 | 5506.70                   | 16.59            | NPP                    | 11.74                | 5494.96                         | NPP                                  |
| OW 14+10 | 11/13/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 11/29/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 16+60 | 11/13/2006 | 5508.43                   | 15.21            | NPP                    | 12.11                | 5496.32                         | NPP                                  |
|          | 11/29/2006 | 5508.43                   | 15.21            | NPP                    | 12.19                | 5496.24                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring November 2006

| Well ID  | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 19+50 | 11/13/2006 | 5508.03                   | 13.00            | NPP                    | 12.23                | 5495.80                         | NPP                                  |
|          | 11/29/2006 | 5508.03                   | 13.00            | NPP                    | 12.21                | 5495.82                         | NPP                                  |
| OW 22+00 | 11/13/2006 | 5506.91                   | 14.16            | NPP                    | 11.22                | 5495.69                         | NPP                                  |
|          | 11/29/2006 | 5506.91                   | 14.16            | NPP                    | 11.29                | 5495.62                         | NPP                                  |
| OW 23+10 | 11/13/2006 | 5514.12                   | 18.34            | NPP                    | 16.31                | 5497.81                         | NPP                                  |
|          | 11/29/2006 | 5514.12                   | 18.34            | NPP                    | 16.31                | 5497.81                         | NPP                                  |
| OW 23+90 | 11/13/2006 | 5515.18                   | 18.01            | NPP                    | 17.11                | 5498.07                         | NPP                                  |
|          | 11/29/2006 | 5515.18                   | 18.01            | NPP                    | 17.19                | 5497.99                         | NPP                                  |
| OW 25+70 | 11/13/2006 | 5509.00                   | 13.98            | NPP                    | 10.72                | 5498.28                         | NPP                                  |
|          | 11/29/2006 | 5509.00                   | 13.98            | NPP                    | 10.77                | 5498.23                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring November 2006

| Well ID  | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60  | 11/13/2006 | 5506.68                   | 14.09            | NPP                    | 7.67                 | 5499.01                         | NPP                                  |
|          | 11/29/2006 | 5506.68                   | 14.09            | NPP                    | 7.84                 | 5498.84                         | NPP                                  |
| CW 1+50  | 11/13/2006 | 5505.13                   | 13.74            | NPP                    | 5.99                 | 5499.14                         | NPP                                  |
|          | 11/29/2006 | 5505.13                   | 13.74            | NPP                    | 6.13                 | 5499.00                         | NPP                                  |
| CW 3+85  | 11/13/2006 | 5503.87                   | 13.11            | NPP                    | 5.16                 | 5498.71                         | NPP                                  |
|          | 11/29/2006 | 5503.87                   | 13.11            | NPP                    | 5.25                 | 5498.62                         | NPP                                  |
| CW 5+50  | 11/13/2006 | 5503.76                   | 12.27            | NPP                    | 6.11                 | 5497.65                         | NPP                                  |
|          | 11/29/2006 | 5503.76                   | 12.27            | NPP                    | 6.13                 | 5497.63                         | NPP                                  |
| CW 6+70  | 11/13/2006 | 5503.84                   | 11.45            | NPP                    | 6.65                 | 5497.19                         | NPP                                  |
|          | 11/29/2006 | 5503.84                   | 11.45            | NPP                    | 6.67                 | 5497.17                         | NPP                                  |
| CW 8+10  | 11/13/2006 | 5504.02                   | 11.63            | NPP                    | 7.29                 | 5496.73                         | NPP                                  |
|          | 11/29/2006 | 5504.02                   | 11.63            | NPP                    | 6.01                 | 5498.01                         | NPP                                  |
| CW 8+45  | 11/13/2006 | 5503.80                   | 12.6             | 7.35                   | 7.41                 | 5496.44                         | 0.06                                 |
|          | 11/29/2006 | 5503.80                   | 12.6             | NPP                    | 7.31                 | 5496.49                         | NPP                                  |
| CW 11+15 | 11/13/2006 | 5503.95                   | 12.27            | NPP                    | 5.99                 | 5497.96                         | NPP                                  |
|          | 11/29/2006 | 5503.95                   | 12.27            | NPP                    | 5.63                 | 5498.32                         | NPP                                  |
| CW 14+10 | 11/13/2006 | 5504.39                   | 13.05            | NPP                    | 6.42                 | 5497.97                         | NPP                                  |
|          | 11/29/2006 | 5504.39                   | 13.05            | NPP                    | 6.55                 | 5497.84                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present



# Collection Well Fluids Monitoring November 2006

| Well ID   | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 16+ 60 | 11/13/2006 | 5504.32                   | 12.86            | NPP                    | 6.28                 | 5498.04                         | NPP                                  |
|           | 11/29/2006 | 5504.32                   | 12.86            | NPP                    | 6.61                 | 5497.71                         | NPP                                  |
| CW 19+ 50 | 11/13/2006 | 5504.52                   | 9.99             | NPP                    | 6.21                 | 5498.31                         | NPP                                  |
|           | 11/29/2006 | 5504.52                   | 9.99             | NPP                    | 6.33                 | 5498.19                         | NPP                                  |
| CW 22+ 00 | 11/13/2006 | 5508.04                   | 12.34            | NPP                    | 9.00                 | 5499.04                         | NPP                                  |
|           | 11/29/2006 | 5508.04                   | 12.34            | NPP                    | 9.01                 | 5499.03                         | NPP                                  |
| CW 23+ 10 | 11/13/2006 | 5510.04                   | 14.65            | NPP                    | 10.64                | 5499.40                         | NPP                                  |
|           | 11/29/2006 | 5510.04                   | 14.65            | NPP                    | 10.82                | 5499.22                         | NPP                                  |
| CW 23+ 90 | 11/13/2006 | 5507.32                   | 11.72            | NPP                    | 8.15                 | 5499.17                         | NPP                                  |
|           | 11/29/2006 | 5507.32                   | 11.72            | NPP                    | 8.26                 | 5499.06                         | NPP                                  |
| CW 25+ 95 | 11/13/2006 | 5505.90                   | 12.25            | NPP                    | 7.15                 | 5498.75                         | NPP                                  |
|           | 11/29/2006 | 5505.90                   | 12.25            | NPP                    | 7.17                 | 5498.73                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Monitoring Well Fluids Monitoring November 2006

| Well ID | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 11/13/2006 | 5510.31                   | 22.94            | NPP                    | 10.41                | 5499.90                         | NPP                                  |
|         | 11/29/2006 | 5510.31                   | 22.94            | NPP                    |                      |                                 | NPP                                  |
| MW #12  | 11/13/2006 | 5501.61                   | 14.98            | NPP                    | 8.63                 | 5492.98                         | NPP                                  |
|         | 11/29/2006 | 5501.61                   | 14.98            | NPP                    |                      |                                 | NPP                                  |
| MW #20  | 11/13/2006 | 5519.90                   | 27.13            | 20.59                  | 20.70                | 5499.29                         | 0.11                                 |
|         | 11/29/2006 | 5519.90                   | 27.13            |                        |                      |                                 | 0.00                                 |
| MW #21  | 11/16/2006 | 5521.99                   | 30.38            | 21.56                  | 21.6                 | 5500.42                         | 0.04                                 |
|         | 11/29/2006 | 5521.99                   | 30.38            |                        |                      |                                 | 0.00                                 |
| MW #39  | 11/13/2006 | 5520.83                   | 38.34            | NPP                    | 26.80                | 5494.03                         | NPP                                  |
|         | 11/29/2006 | 5520.83                   | 38.34            | NPP                    |                      |                                 | NPP                                  |
| MW #45  | 11/13/2006 | 5506.36                   | 16.92            | NPP                    | 11.05                | 5495.31                         | 4398.46                              |
|         | 11/29/2006 | 5506.36                   | 16.92            | NPP                    | 11.14                | 5495.22                         | 4398.40                              |
| MW #46  | 11/13/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 11/29/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 11/13/2006 | 5506.77                   | 14.28            | NPP                    | 11.39                | 5495.38                         | NPP                                  |
|         | 11/29/2006 | 5506.77                   | 14.28            | NPP                    | 11.59                | 5495.18                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring December 2006

| Well ID  | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 0+60  | 12/11/2006 | 5506.62                   | 12.26            | NPP                    | 10.89                | 5495.73                         | NPP                                  |
|          | 12/18/2006 | 5506.62                   | 12.26            | NPP                    | 10.96                | 5495.66                         | NPP                                  |
| OW 1+50  | 12/11/2006 | 5508.03                   | 14.36            | 12.69                  | 12.71                | 5495.34                         | 0.02                                 |
|          | 12/18/2006 | 5508.03                   | 14.36            | 12.74                  | 12.91                | 5495.26                         | 0.17                                 |
| OW 3+85  | 12/11/2006 | 5507.31                   | 15.06            | NPP                    | 12.19                | 5495.12                         | NPP                                  |
|          | 12/18/2006 | 5507.31                   | 15.06            | NPP                    | 12.33                | 5494.98                         | NPP                                  |
| OW 5+50  | 12/11/2006 | 5507.59                   | 13.67            | NPP                    | 12.98                | 5494.61                         | NPP                                  |
|          | 12/18/2006 | 5507.59                   | 13.67            | 13.28                  | 13.29                | 5494.31                         | 0.01                                 |
| OW 6+70  | 12/11/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 12/18/2006 | 5504.78                   | 14.67            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 8+10  | 12/11/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 12/18/2006 | 5506.53                   | 15.99            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 11+15 | 12/11/2006 | 5506.70                   | 16.59            | NPP                    | 11.8                 | 5494.90                         | NPP                                  |
|          | 12/18/2006 | 5506.70                   | 16.59            | NPP                    | 11.85                | 5494.85                         | NPP                                  |
| OW 14+10 | 12/11/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
|          | 12/18/2006 | 5508.14                   | 12.96            | NPP                    | NWP                  |                                 | NPP                                  |
| OW 16+60 | 12/11/2006 | 5508.43                   | 15.21            | NPP                    | 12.30                | 5496.13                         | NPP                                  |
|          | 12/18/2006 | 5508.43                   | 15.21            | NPP                    | 12.26                | 5496.17                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Observation Well Fluids Monitoring      December 2006

| Well ID   | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| OW 19+ 50 | 12/11/2006 | 5508.03                   | 13.00            | NPP                    | 12.47                | 5495.56                         | NPP                                  |
|           | 12/18/2006 | 5508.03                   | 13.00            | NPP                    | 12.40                | 5495.63                         | NPP                                  |
| OW 22+ 00 | 12/11/2006 | 5506.91                   | 14.16            | NPP                    | 11.41                | 5495.50                         | NPP                                  |
|           | 12/18/2006 | 5506.91                   | 14.16            | NPP                    | 11.47                | 5495.44                         | NPP                                  |
| OW 23+ 10 | 12/11/2006 | 5514.12                   | 18.34            | NPP                    | 16.25                | 5497.87                         | NPP                                  |
|           | 12/18/2006 | 5514.12                   | 18.34            | NPP                    | 16.28                | 5497.84                         | NPP                                  |
| OW 23+ 90 | 12/11/2006 | 5515.18                   | 18.01            | NPP                    | 17.18                | 5498.00                         | NPP                                  |
|           | 12/18/2006 | 5515.18                   | 18.01            | NPP                    | 17.15                | 5498.03                         | NPP                                  |
| OW 25+ 70 | 12/11/2006 | 5509.00                   | 13.98            | NPP                    | 10.74                | 5498.26                         | NPP                                  |
|           | 12/18/2006 | 5509.00                   | 13.98            | NPP                    | 10.73                | 5498.27                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present



# Collection Well Fluids Monitoring December 2006

| Well ID  | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 0+60  | 12/11/2006 | 5506.68                   | 14.09            | NPP                    | 7.94                 | 5498.74                         | NPP                                  |
|          | 12/18/2006 | 5506.68                   | 14.09            | NPP                    | 7.93                 | 5498.75                         | NPP                                  |
| CW 1+50  | 12/11/2006 | 5505.13                   | 13.74            | NPP                    | 6.21                 | 5498.92                         | NPP                                  |
|          | 12/18/2006 | 5505.13                   | 13.74            | NPP                    | 6.18                 | 5498.95                         | NPP                                  |
| CW 3+85  | 12/11/2006 | 5503.87                   | 13.11            | NPP                    | 5.28                 | 5498.59                         | NPP                                  |
|          | 12/18/2006 | 5503.87                   | 13.11            | NPP                    | 5.26                 | 5498.61                         | NPP                                  |
| CW 5+50  | 12/11/2006 | 5503.76                   | 12.27            | NPP                    | 6.14                 | 5497.62                         | NPP                                  |
|          | 12/18/2006 | 5503.76                   | 12.27            | NPP                    | 6.15                 | 5497.61                         | NPP                                  |
| CW 6+70  | 12/11/2006 | 5503.84                   | 11.45            | NPP                    | 6.67                 | 5497.17                         | NPP                                  |
|          | 12/18/2006 | 5503.84                   | 11.45            | NPP                    | 7.66                 | 5496.18                         | NPP                                  |
| CW 8+10  | 12/11/2006 | 5504.02                   | 11.63            | NPP                    | 7.38                 | 5496.64                         | NPP                                  |
|          | 12/18/2006 | 5504.02                   | 11.63            | NPP                    | 7.37                 | 5496.65                         | NPP                                  |
| CW 8+45  | 12/11/2006 | 5503.80                   | 12.6             | 7.40                   | 7.43                 | 5496.39                         | 0.03                                 |
|          | 12/18/2006 | 5503.80                   | 12.6             | 7.47                   | 7.48                 | 5496.33                         | 0.01                                 |
| CW 11+15 | 12/11/2006 | 5503.95                   | 12.27            | NPP                    | 5.58                 | 5498.37                         | NPP                                  |
|          | 12/18/2006 | 5503.95                   | 12.27            | NPP                    | 5.62                 | 5498.33                         | NPP                                  |
| CW 14+10 | 12/11/2006 | 5504.39                   | 13.05            | NPP                    | 6.46                 | 5497.93                         | NPP                                  |
|          | 12/18/2006 | 5504.39                   | 13.05            | NPP                    | 6.69                 | 5497.70                         | NPP                                  |

NPP = No Product Present      NWP = No Water Present

# Collection Well Fluids Monitoring December 2006

| Well ID   | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|-----------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| CW 16+ 60 | 12/11/2006 | 5504.32                   | 12.86            | NPP                    | 6.3                  | 5498.02                         | NPP                                  |
|           | 12/18/2006 | 5504.32                   | 12.86            | NPP                    | 6.27                 | 5498.05                         | NPP                                  |
| CW 19+ 50 | 12/11/2006 | 5504.52                   | 9.99             | NPP                    | 6.24                 | 5498.28                         | NPP                                  |
|           | 12/18/2006 | 5504.52                   | 9.99             | NPP                    | 6.24                 | 5498.28                         | NPP                                  |
| CW 22+ 00 | 12/11/2006 | 5508.04                   | 12.34            | NPP                    | 9.02                 | 5499.02                         | NPP                                  |
|           | 12/18/2006 | 5508.04                   | 12.34            | NPP                    | 9.01                 | 5499.03                         | NPP                                  |
| CW 23+ 10 | 12/11/2006 | 5510.04                   | 14.65            | NPP                    | 10.65                | 5499.39                         | NPP                                  |
|           | 12/18/2006 | 5510.04                   | 14.65            | NPP                    | 10.65                | 5499.39                         | NPP                                  |
| CW 23+ 90 | 12/11/2006 | 5507.32                   | 11.72            | NPP                    | 8.18                 | 5499.14                         | NPP                                  |
|           | 12/18/2006 | 5507.32                   | 11.72            | NPP                    | 8.16                 | 5499.16                         | NPP                                  |
| CW 25+ 95 | 12/11/2006 | 5505.90                   | 12.25            | NPP                    | 7.17                 | 5498.73                         | NPP                                  |
|           | 12/18/2006 | 5505.90                   | 12.25            | NPP                    | 7.13                 | 5498.77                         | NPP                                  |

NPP = No Product Present    NWVP = No Water Present

# Monitoring Well Fluids Monitoring December 2006

| Well ID | Date       | Measuring Point Elevation | Total Well Depth | Depth To Product (DTP) | Depth To Water (DTW) | Corrected Groundwater Elevation | Separate Phase Hydrocarbon Thickness |
|---------|------------|---------------------------|------------------|------------------------|----------------------|---------------------------------|--------------------------------------|
| MW #11  | 12/11/2006 | 5510.31                   | 22.94            | NPP                    | 10.74                | 5499.57                         | NPP                                  |
|         | 12/18/2006 | 5510.31                   | 22.94            | NPP                    | 10.79                | 5499.52                         | NPP                                  |
| MW #12  | 12/11/2006 | 5501.61                   | 14.98            | NPP                    | 8.83                 | 5492.78                         | NPP                                  |
|         | 12/18/2006 | 5501.61                   | 14.98            | NPP                    | 8.91                 | 5492.70                         | NPP                                  |
| MW #20  | 12/11/2006 | 5519.90                   | 27.13            | 20.58                  | 20.62                | 5499.31                         | 0.04                                 |
|         | 12/18/2006 | 5519.90                   | 27.13            | 20.55                  | 20.61                | 5499.34                         | 0.06                                 |
| MW #21  | 12/11/2006 | 5521.99                   | 30.38            | 20.64                  | 20.74                | 5501.33                         | 0.10                                 |
|         | 12/18/2006 | 5521.99                   | 30.38            | 21.65                  | 21.71                | 5500.33                         | 0.06                                 |
| MW #39  | 12/11/2006 | 5520.83                   | 38.34            | NPP                    | 26.42                | 5494.41                         | NPP                                  |
|         | 12/18/2006 | 5520.83                   | 38.34            | NPP                    | 26.30                | 5494.53                         | NPP                                  |
| MW #45  | 12/11/2006 | 5506.36                   | 16.92            | 11.19                  | 11.21                | 5495.17                         | 0.02                                 |
|         | 12/18/2006 | 5506.36                   | 16.92            | 11.24                  | 11.26                | 5495.12                         | 0.02                                 |
| MW #46  | 12/11/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
|         | 12/18/2006 | 5504.65                   | 10.39            | NPP                    | NWP                  |                                 | NPP                                  |
| MW #47  | 12/11/2006 | 5506.77                   | 14.28            | NPP                    | 12.67                | 5494.10                         | NPP                                  |
|         | 12/18/2006 | 5506.77                   | 14.28            | 11.73                  | 11.74                | 5495.04                         | 0.01                                 |

NPP = No Product Present NWP = No Water Present

# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Collection Wells

| EPA Method 8021B         |                 |        |                 |        |                  |        |                |      |              |             |                  | EPA Method 8015B |                    |             | Field Data |  |  |
|--------------------------|-----------------|--------|-----------------|--------|------------------|--------|----------------|------|--------------|-------------|------------------|------------------|--------------------|-------------|------------|--|--|
| WQCC 20NMAC<br>6.2.3.103 | mg/L<br>Benzene | 0.01   | mg/L<br>Toluene | 0.75   | mg/L<br>Ethylben | 0.75   | mg/L<br>Xylene | 0.62 | mg/L<br>MTBE | mg/L<br>DRO | mmhos/cm<br>E.C. | pH               | Farenheit<br>Temp. | mg/L<br>TDS |            |  |  |
| CW 0+60                  | Date<br>Sampled |        |                 |        |                  |        |                |      |              |             |                  |                  |                    |             |            |  |  |
|                          | Aug-06          | NR     | NR              | NR     | NR               | NR     | NR             | NR   | NR           | NR          | NR               | NR               | NR                 | NR          |            |  |  |
|                          | Apr-06          | 0.360  | 0.015           | 0.048  | 0.160            | <0.025 | NR             | 1525 | 6.91         | 51.5        | 1148             |                  |                    |             |            |  |  |
|                          | Aug-05          | 0.400  | <0.005          | 0.800  | 0.350            | NR     | NR             | 1379 | 7.02         | 68          | 994              |                  |                    |             |            |  |  |
| May-05                   | 0.200           | 0.032  | 0.180           | 1.000  | NR               | NR     | 1378           | 6.82 | 55           | 1023        |                  |                  |                    |             |            |  |  |
| CW 1+50                  | Aug-06          | NR     | NR              | NR     | NR               | NR     | NR             | NR   | NR           | NR          | NR               | NR               | NR                 | NR          |            |  |  |
|                          | Apr-06          | 0.130  | 0.024           | 0.120  | 1.700            | <0.050 | NR             | 2242 | 6.96         | 52.2        | 1691             |                  |                    |             |            |  |  |
|                          | Aug-05          | 1.000  | <0.02           | 0.200  | 1.800            | NR     | NR             | 1504 | 7.05         | 68          | 1090             |                  |                    |             |            |  |  |
|                          | May-05          | 1.200  | 0.041           | 0.240  | 2.300            | NR     | NR             | 1463 | 6.86         | 56          | 1084             |                  |                    |             |            |  |  |
| CW 3+85                  | Aug-06          | NR     | NR              | NR     | NR               | NR     | NR             | NR   | NR           | NR          | NR               | NR               | NR                 | NR          |            |  |  |
|                          | Apr-06          | 0.120  | 0.0120          | 0.0200 | 0.2200           | <0.012 | NR             | 2242 | 6.96         | 52.2        | 1691             |                  |                    |             |            |  |  |
|                          | Aug-05          | 0.0045 | <0.002          | 0.0075 | 0.036            | NR     | NR             | 2514 | 6.96         | 65          | 1908             |                  |                    |             |            |  |  |
|                          | May-05          | 0.035  | 0.022           | 0.020  | 0.250            | NR     | NR             | 2880 | 6.87         | 56          | 2270             |                  |                    |             |            |  |  |
| CW 5+50                  | Aug-06          | NR     | NR              | NR     | NR               | NR     | NR             | NR   | NR           | NR          | NR               | NR               | NR                 | NR          |            |  |  |
|                          | Apr-06          | 0.044  | <0.010          | 0.012  | 0.15             | 0.087  | NR             | 4156 | 7.00         | 53.4        | 7439             |                  |                    |             |            |  |  |
|                          | Aug-05          | SPH    | SPH             | SPH    | SPH              | SPH    | SPH            | SPH  | SPH          | SPH         | SPH              | SPH              | SPH                | SPH         |            |  |  |
|                          | May-05          | 0.2    | 0.011           | 0.064  | 0.24             | NR     | NR             | 8765 | 6.81         | 56          | 7762             |                  |                    |             |            |  |  |
| CW 6+70                  | Aug-06          | NR     | NR              | NR     | NR               | NR     | NR             | NR   | NR           | NR          | NR               | NR               | NR                 | NR          |            |  |  |
|                          | Apr-06          | 0.019  | <0.002          | <0.002 | <0.006           | 0.11   | NR             | 7563 | 6.96         | 50.6        | 6449             |                  |                    |             |            |  |  |
|                          | Aug-05          | SPH    | SPH             | SPH    | SPH              | SPH    | SPH            | SPH  | SPH          | SPH         | SPH              | SPH              | SPH                | SPH         |            |  |  |
|                          | May-05          | 0.0027 | <0.005          | <0.005 | 0.0013           | NR     | NR             | 8175 | 6.86         | 55          | 7191             |                  |                    |             |            |  |  |

NS = Well is Dry - No Sample      NR = Not Required      SPH = Well Contains Separated Phase Hydrocarbons - No Sample



# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Collection Wells

| EPA Method 8021B        |                 |                 |                 |                  |                |              |             |                  |      |                    | EPA Method 8015B | Field Data |  |  |
|-------------------------|-----------------|-----------------|-----------------|------------------|----------------|--------------|-------------|------------------|------|--------------------|------------------|------------|--|--|
| WQCC 20NMAC<br>6.2.3103 | Date<br>Sampled | mg/L<br>Benzene | mg/L<br>Toluene | mg/L<br>Ethylben | mg/L<br>Xylene | mg/L<br>MTBE | mg/L<br>DRO | mmhos/cm<br>E.C. | pH   | Farenheit<br>Temp. | mg/L<br>TDS      |            |  |  |
| CW 8+10                 | Aug-06          | NR              | NR              | NR               | NR             | NR           | NR          | NR               | NR   | NR                 | NR               |            |  |  |
|                         | Apr-06          | 0.17            | <0.005          | 0.01             | 0.11           | 0.09         | NR          | 8610             | 7.00 | 53.40              | 7439             |            |  |  |
|                         | Aug-05          | 0.18            | <0.005          | 0.01             | 0.21           | NR           | NR          | 6487             | 7.06 | 69.00              | 5382             |            |  |  |
|                         | May-05          | 0.43            | <0.025          | 0.05             | 0.66           | NR           | NR          | 5199             | 6.83 | 55.00              | 4358             |            |  |  |
| CW 8+45                 | Aug-06          | NR              | NR              | NR               | NR             | NR           | NR          | NR               | NR   | NR                 | NR               |            |  |  |
|                         | Apr-06          | SPH             | SPH             | SPH              | SPH            | SPH          | SPH         | SPH              | SPH  | SPH                | SPH              |            |  |  |
|                         | Aug-05          | SPH             | SPH             | SPH              | SPH            | SPH          | SPH         | SPH              | SPH  | SPH                | SPH              |            |  |  |
|                         | May-05          | SPH             | SPH             | SPH              | SPH            | SPH          | SPH         | SPH              | SPH  | SPH                | SPH              |            |  |  |
| CW 11+15                | Aug-06          | NR              | NR              | NR               | NR             | NR           | NR          | NR               | NR   | NR                 | NR               |            |  |  |
|                         | Apr-06          | 1.70            | <0.020          | 0.024            | 0.380          | 1.200        | NR          | 2388             | 7.01 | 53.1               | 1807             |            |  |  |
|                         | Aug-05          | SPH             | SPH             | SPH              | SPH            | SPH          | SPH         | SPH              | SPH  | SPH                | SPH              |            |  |  |
|                         | May-05          | SPH             | SPH             | SPH              | SPH            | SPH          | SPH         | SPH              | SPH  | SPH                | SPH              |            |  |  |
| CW 14+10                | Aug-06          | NR              | NR              | NR               | NR             | NR           | NR          | NR               | NR   | NR                 | NR               |            |  |  |
|                         | Apr-06          | 8.80            | <0.100          | 1.10             | <0.300         | 1.20         | NR          | 1914             | 6.98 | 54.0               | 1428             |            |  |  |
|                         | Aug-05          | 6.00            | <0.100          | 1.20             | 0.24           | NR           | NR          | 3502             | 6.93 | 69.0               | 2739             |            |  |  |
|                         | May-05          | 9.80            | <0.025          | 2.10             | 1.30           | NR           | NR          | 4103             | 6.85 | 58.0               | 3353             |            |  |  |
| CW 16+60                | Aug-06          | NR              | NR              | NR               | NR             | NR           | NR          | NR               | NR   | NR                 | NR               |            |  |  |
|                         | Apr-06          | 6.30            | <0.100          | 3.10             | 6.30           | 7.60         | NR          | 2273             | 6.98 | 56.5               | 1718             |            |  |  |
|                         | Aug-05          | 6.80            | 0.065           | 3.10             | 7.10           | NR           | NR          | 2108             | 6.98 | 73.0               | 1569             |            |  |  |
|                         | May-05          | 5.30            | 0.075           | 3.80             | 7.30           | NR           | NR          | 2420             | 6.91 | 60.0               | 1875             |            |  |  |

NS = Well is Dry - No Sample      NR = Not Required      SPH = Well Contains Separate Phase Hydrocarbons - No Sample

# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Collection Wells

| EPA Method 8021B      |              |              |              |               |             |           |          |               |      |                 |          | EPA Method 8015B |  |  | Field Data |  |  |
|-----------------------|--------------|--------------|--------------|---------------|-------------|-----------|----------|---------------|------|-----------------|----------|------------------|--|--|------------|--|--|
| WQCG 20NMAC 6.2:3:103 | Date Sampled | mg/L Benzene | mg/L Toluene | mg/L Ethylben | mg/L Xylene | mg/L MTBE | mg/L DRO | mmhos/cm E.C. | pH   | Farenheit Temp. | mg/L TDS |                  |  |  |            |  |  |
| CW 19+50              | Aug-06       | NR           | NR           | NR            | NR          | NR        | NR       | NR            | NR   | NR              | NR       |                  |  |  |            |  |  |
|                       | Apr-06       | 4.90         | <0.001       | 1.30          | 2.60        | 80.00     | NR       | 2670          | 6.98 | 52.8            | 1428     |                  |  |  |            |  |  |
|                       | Aug-05       | 6.60         | <0.05        | 2.80          | 4.30        | NR        | NR       | 3001          | 6.88 | 67.0            | 2321     |                  |  |  |            |  |  |
|                       | May-05       | 4.80         | 0.021        | 1.70          | 5.10        | NR        | NR       | 2844          | 6.83 | 56.0            | 6724     |                  |  |  |            |  |  |
| CW 22+00              | Aug-06       | NR           | NR           | NR            | NR          | NR        | NR       | NR            | NR   | NR              | NR       |                  |  |  |            |  |  |
|                       | Apr-06       | 7.20         | <0.001       | <0.001        | <0.003      | 6.70      | NR       | 3310          | 7.00 | 53.3            | 2595     |                  |  |  |            |  |  |
|                       | Aug-05       | 6.50         | <0.10        | <0.10         | 0.15        | NR        | NR       | 3461          | 6.98 | 70.0            | 2699     |                  |  |  |            |  |  |
|                       | May-05       | 7.00         | 0.090        | 0.10          | 0.20        | NR        | NR       | 3202          | 6.83 | 57.0            | 2548     |                  |  |  |            |  |  |
| CW 23+10              | Aug-06       | NR           | NR           | NR            | NR          | NR        | NR       | NR            | NR   | NR              | NR       |                  |  |  |            |  |  |
|                       | Apr-06       | 4.20         | <0.010       | <0.010        | 1.1         | 2.9       | NR       | 3306          | 6.86 | 53.5            | 2601     |                  |  |  |            |  |  |
|                       | Aug-05       | 9.40         | 0.015        | 0.42          | 0.36        | NR        | NR       | 3284          | 6.96 | 68.0            | 2554     |                  |  |  |            |  |  |
|                       | May-05       | 6.30         | 0.076        | 0.19          | 0.35        | NR        | NR       | 3046          | 6.92 | 54.0            | 2425     |                  |  |  |            |  |  |
| CW 23+90              | Aug-06       | NR           | NR           | NR            | NR          | NR        | NR       | NR            | NR   | NR              | NR       |                  |  |  |            |  |  |
|                       | Apr-06       | 2.90         | <0.100       | 0.11          | <0.300      | 0.94      | NR       | 3306          | 6.87 | 53.7            | 2601     |                  |  |  |            |  |  |
|                       | Aug-05       | 3.30         | <0.05        | 0.17          | 0.33        | NR        | NR       | 3222          | 6.96 | 68.0            | 2501     |                  |  |  |            |  |  |
|                       | May-05       | 3.40         | 0.035        | 0.17          | 0.40        | NR        | NR       | 2702          | 6.86 | 55.0            | 2124     |                  |  |  |            |  |  |
| CW 25+95              | Aug-06       | NR           | NR           | NR            | NR          | NR        | NR       | NR            | NR   | NR              | NR       |                  |  |  |            |  |  |
|                       | Apr-06       | <0.001       | <0.001       | <0.001        | <0.003      | 0.0054    | NR       | 2205          | 6.93 | 52.3            | 1670     |                  |  |  |            |  |  |
|                       | Aug-05       | 0.00059      | <0.0005      | <0.0005       | <0.0005     | NR        | NR       | 1252          | 6.98 | 66.0            | 899      |                  |  |  |            |  |  |
|                       | May-05       | 0.001        | <0.0005      | <0.0005       | <0.0005     | NR        | NR       | 1287          | 6.92 | 56.0            | 949      |                  |  |  |            |  |  |

NS = Well is Dry - No Sample

NR = Not Required

SPH = Well Contains Separate Phase Hydrocarbons - No Sample

# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Observation Wells

| EPA Method<br>8021B   |                 |                 |      |                 |      |                  |      |                |      |              |             | EPA Method<br>8015B |      |                    |             | Field Data |  |  |  |
|-----------------------|-----------------|-----------------|------|-----------------|------|------------------|------|----------------|------|--------------|-------------|---------------------|------|--------------------|-------------|------------|--|--|--|
| WQCG 20NMAC<br>623103 | Date<br>Sampled | mg/L<br>Benzene | 0.01 | mg/L<br>Toluene | 0.75 | mg/L<br>Ethylben | 0.75 | mg/L<br>Xylene | 0.62 | mg/L<br>MTBE | mg/L<br>DRO | mmhos/cm<br>E.C.    | pH   | Farenheit<br>Temp. | mg/L<br>TDS |            |  |  |  |
| OW 0+60               | Aug-06          | 0.057           |      | 0.12            |      | 0.31             |      | 1.2            |      | <0.025       | 34          | 1854                | 7.05 | 69.3               | NR          |            |  |  |  |
|                       | Apr-06          | 0.065           |      | 0.033           |      | 0.34             |      | 1.6            |      | <0.025       | 110         | 1942                | 6.93 | 55.6               | 1453        |            |  |  |  |
|                       | Aug-05          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | May-05          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
| OW 1+50               | Aug-06          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | Apr-06          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | Aug-05          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | May-05          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
| OW 3+85               | Aug-06          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | Apr-06          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | Aug-05          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | May-05          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
| OW 5+50               | Aug-06          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | Apr-06          | 0.015           |      | 0.014           |      | 0.089            |      | 9.7            |      | <0.0025      | 130         | 3073                | 6.96 | 54.5               | 2393        |            |  |  |  |
|                       | Aug-05          | SPH             |      | SPH             |      | SPH              |      | SPH            |      | SPH          | SPH         | SPH                 | SPH  | SPH                | SPH         |            |  |  |  |
|                       | May-05          | NS              |      | NS              |      | NS               |      | NS             |      | NS           | NS          | NS                  | NS   | NS                 | NS          |            |  |  |  |
| OW 6+70               | Aug-06          | NS              |      | NS              |      | NS               |      | NS             |      | NS           | NS          | NS                  | NS   | NS                 | NS          |            |  |  |  |
|                       | Apr-06          | NS              |      | NS              |      | NS               |      | NS             |      | NS           | NS          | NS                  | NS   | NS                 | NS          |            |  |  |  |
|                       | Aug-05          | NS              |      | NS              |      | NS               |      | NS             |      | NS           | NS          | NS                  | NS   | NS                 | NS          |            |  |  |  |
|                       | May-05          | NS              |      | NS              |      | NS               |      | NS             |      | NS           | NS          | NS                  | NS   | NS                 | NS          |            |  |  |  |

NS = Well is Dry - No Sample      NR = Not Required      SPH = Well Contains Separate Phase Hydrocarbons - No Sample

# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Observation Wells

| EPA Method 8021B      |              |              |               |             |           |          |         |  |  | EPA Method 8015B |                  |  |  | Field Data    |          |  |  |
|-----------------------|--------------|--------------|---------------|-------------|-----------|----------|---------|--|--|------------------|------------------|--|--|---------------|----------|--|--|
| WQCC 20NMAC 6.2.3.103 |              |              |               |             |           |          |         |  |  | mg/L             |                  |  |  | mmhos/cm E.C. |          |  |  |
| Date Sampled          | mg/L Benzene | mg/L Toluene | mg/L Ethylben | mg/L Xylene | mg/L MTBE | mg/L DRO | 6.0-9.0 |  |  |                  | Fahrenheit Temp. |  |  |               | mg/L TDS |  |  |
| Aug-06                | NS           | NS           | NS            | NS          | NS        | NS       | NS      |  |  |                  | NS               |  |  |               | NS       |  |  |
| Apr-06                | NS           | NS           | NS            | NS          | NS        | NS       | NS      |  |  |                  | NS               |  |  |               | NS       |  |  |
| Aug-05                | NS           | NS           | NS            | NS          | NS        | NS       | NS      |  |  |                  | NS               |  |  |               | NS       |  |  |
| May-05                | NS           | NS           | NS            | NS          | NS        | NS       | NS      |  |  |                  | NS               |  |  |               | NS       |  |  |
| Aug-06                | 0.86         | <0.020       | 0.026         | 0.096       | 1.8       | 16       | 2391    |  |  |                  | 69.5             |  |  |               | NR       |  |  |
| Apr-06                | 0.23         | <0.020       | <0.020        | <0.060      | 1.6       | 15       | 1840    |  |  |                  | 55.1             |  |  |               | 2014     |  |  |
| Aug-05                | 0.75         | <0.01        | 0.12          | 0.27        | NR        | NR       | 2467    |  |  |                  | 66.0             |  |  |               | 1866     |  |  |
| May-05                | 0.42         | <0.025       | 0.14          | 0.52        | NR        | NR       | 2507    |  |  |                  | 57.0             |  |  |               | 1951     |  |  |
| Aug-06                | NS           | NS           | NS            | NS          | NS        | NS       | NS      |  |  |                  | NS               |  |  |               | NS       |  |  |
| Apr-06                | NS           | NS           | NS            | NS          | NS        | NS       | NS      |  |  |                  | NS               |  |  |               | NS       |  |  |
| Aug-05                | SPH          | SPH          | SPH           | SPH         | SPH       | SPH      | SPH     |  |  |                  | SPH              |  |  |               | SPH      |  |  |
| May-05                | 10.00        | <0.0005      | 3.90          | 3.20        | NR        | NR       | 2311    |  |  |                  | 60.0             |  |  |               | 1784     |  |  |
| Aug-06                | SPH          | SPH          | SPH           | SPH         | SPH       | SPH      | SPH     |  |  |                  | SPH              |  |  |               | SPH      |  |  |
| Apr-06                | SPH          | SPH          | SPH           | SPH         | SPH       | SPH      | SPH     |  |  |                  | SPH              |  |  |               | SPH      |  |  |
| Aug-05                | SPH          | SPH          | SPH           | SPH         | SPH       | SPH      | SPH     |  |  |                  | SPH              |  |  |               | SPH      |  |  |
| May-05                | SPH          | SPH          | SPH           | SPH         | SPH       | SPH      | SPH     |  |  |                  | SPH              |  |  |               | SPH      |  |  |
| Aug-06                | SPH          | SPH          | SPH           | SPH         | SPH       | SPH      | SPH     |  |  |                  | SPH              |  |  |               | SPH      |  |  |
| Apr-06                | 0.0035       | <0.001       | 0.012         | 0.077       | 0.18      | 3.4      | 4043    |  |  |                  | 54.9             |  |  |               | 3242     |  |  |
| Aug-05                | 0.0057       | <0.0005      | 0.0011        | 0.0019      | NR        | NR       | 3251    |  |  |                  | 74.0             |  |  |               | 2527     |  |  |
| May-05                | 1.90         | 0.013        | 0.86          | 3.20        | NR        | NR       | 2896    |  |  |                  | 58.0             |  |  |               | 2288     |  |  |

NS = Well is Dry - No Sample

NR = Not Required

SPH = Well Contains Separate Phase Hydrocarbons - No Sample



# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Observation Wells

| EPA Method 8021B         |                 |                 |         |                 |         |                  |      |                |              |             |                  | EPA Method 8015B |                    | Field Data  |  |  |  |
|--------------------------|-----------------|-----------------|---------|-----------------|---------|------------------|------|----------------|--------------|-------------|------------------|------------------|--------------------|-------------|--|--|--|
| WQCG-20NMAC<br>6.2.3.103 | 0.01            | mg/L<br>Benzene | 0.75    | mg/L<br>Toluene | 0.75    | mg/L<br>Ethylben | 0.62 | mg/L<br>Xylene | mg/L<br>MTBE | mg/L<br>DRO | mmhos/cm<br>E.C. | pH               | Farenheit<br>Temp. | mg/L<br>TDS |  |  |  |
| OW 22+00                 | Date<br>Sampled |                 |         |                 |         |                  |      |                |              |             |                  |                  |                    |             |  |  |  |
|                          | Aug-06          | <0.010          | 0.012   | <0.010          | <0.030  | 3.6              | 87   | 3037           | 7.02         | 69.5        | NR               |                  |                    | 1000        |  |  |  |
|                          | Apr-06          | <0.001          | <0.001  | <0.001          | <0.003  | 3.9              | 13   | 2878           | 6.99         | 54.6        | 2227             |                  |                    |             |  |  |  |
|                          | Aug-05          | SPH             | SPH     | SPH             | SPH     | SPH              | SPH  | SPH            | SPH          | SPH         | SPH              | SPH              | SPH                | SPH         |  |  |  |
|                          | May-05          | 3.10            | 0.045   | 0.15            | 0.34    | NR               | NR   | 2928           | 6.84         | 57.0        | 2311             |                  |                    |             |  |  |  |
| OW 23+10                 | Aug-06          | 0.015           | 0.012   | 0.013           | 0.27    | 0.17             | 290  | 2010           | 7.02         | 69.6        | NR               |                  |                    |             |  |  |  |
|                          | Apr-06          | 0.026           | 0.012   | 0.018           | 0.18    | 0.31             | 20   | 1772           | 6.99         | 59          | 1309             |                  |                    |             |  |  |  |
|                          | Aug-05          | 0.53            | <0.01   | <0.01           | 0.047   | NR               | NR   | 2502           | 6.98         | 69.0        | 1894             |                  |                    |             |  |  |  |
|                          | May-05          | 0.34            | 0.0092  | 0.011           | 0.08    | NR               | NR   | 2678           | 6.96         | 59.0        | 2095             |                  |                    |             |  |  |  |
|                          | Aug-06          | 0.0017          | 0.0024  | 0.0039          | <0.030  | 0.0034           | 4.5  | 1794           | 7.06         | 68.7        | NR               |                  |                    |             |  |  |  |
| OW 23+90                 | Apr-06          | 0.012           | 0.0032  | 0.014           | 0.029   | 0.034            | 24   | 1499           | 7.02         | 61.3        | 1092             |                  |                    |             |  |  |  |
|                          | Aug-05          | 0.39            | <0.02   | 0.03            | 0.072   | NR               | NR   | 2201           | 6.97         | 67.0        | 1747             |                  |                    |             |  |  |  |
|                          | May-05          | 0.98            | 0.016   | 0.031           | 0.13    | NR               | NR   | 2268           | 6.97         | 60.0        | 1747             |                  |                    |             |  |  |  |
|                          | Aug-06          | <0.001          | <0.001  | <0.001          | <0.003  | <0.0025          | <1.0 | 1187           | 7.06         | 70.8        | NR               |                  |                    |             |  |  |  |
| OW 25+70                 | Apr-06          | <0.0025         | <0.001  | <0.001          | <0.003  | <0.0025          | <1.0 | 1552           | 6.99         | 54.7        | 1137             |                  |                    |             |  |  |  |
|                          | Aug-06          | <0.0005         | <0.0005 | <0.0005         | <0.0005 | NR               | NR   | 1161           | 7.04         | 69.0        | 833              |                  |                    |             |  |  |  |
|                          | May-05          | <0.0005         | <0.0005 | <0.0005         | <0.0005 | NR               | NR   | 1303           | 6.94         | 56.0        | 963              |                  |                    |             |  |  |  |

NS = Well is Dry - No Sample      NR = Not Required      SPH = Well Contains Separate Phase Hydrocarbons - No Sample

# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Monitoring Wells

|                          |              | EPA Method 8021B & 8260B |              |               |             | EPA Method 8015B |          | Field Data    |      |         |          |
|--------------------------|--------------|--------------------------|--------------|---------------|-------------|------------------|----------|---------------|------|---------|----------|
| WQCC-20NMAC<br>6.2:3:103 | Date Sampled | mg/L Benzene             | mg/L Toluene | mg/L Ethylben | mg/L Xylene | mg/L MTBE        | mg/L DRO | mmhos/cm E.C. | pH   | F Temp. | mg/L TDS |
| MW - #11                 | Aug-06       | 0.24                     | <0.01        | 0.012         | 0.045       | 0.033            | 20       | 2066          | 6.91 | 65      | 1400     |
|                          | Apr-06       | 3.2                      | <0.005       | <0.005        | 0.23        | <0.120           | 35       | 2052          | 6.78 | 56      | 1535     |
|                          | Aug-05       | 4.2                      | <0.05        | 0.11          | 0.5         | <0.05            | NR       | 2084          | 7.03 | 68      | NR       |
|                          | Apr-05       | 0.4                      | <0.02        | <0.02         | 0.28        | <0.1             | NR       | 2093          | 6.81 | 68      | NR       |
| MW - #12                 | Aug-06       | <0.001                   | <0.001       | <0.001        | <0.003      | <0.0015          | <1.0     | 875           | 7.01 | 65      | NR       |
|                          | Apr-06       | 0.001                    | <0.001       | <0.001        | <0.003      | <0.025           | <1.0     | 1048          | 6.86 | 48.9    | 757      |
|                          | Aug-05       | <0.001                   | <0.001       | <0.001        | 0.0085      | <0.001           | NR       | 4291          | 6.90 | 65      | NR       |
|                          | Apr-05       | <0.0005                  | <0.0005      | <0.0005       | 0.00072     | 0.0025           | NR       | 2052          | 6.97 | 51      | NR       |
| MW - #20                 | Aug-06       | SPH                      | SPH          | SPH           | SPH         | SPH              | SPH      | SPH           | SPH  | SPH     | SPH      |
|                          | Apr-06       | SPH                      | SPH          | SPH           | SPH         | SPH              | SPH      | SPH           | SPH  | SPH     | SPH      |
|                          | Aug-05       | SPH                      | SPH          | SPH           | SPH         | SPH              | SPH      | SPH           | SPH  | SPH     | SPH      |
|                          | Apr-05       | SPH                      | SPH          | SPH           | SPH         | SPH              | SPH      | SPH           | SPH  | SPH     | SPH      |
| MW - #21                 | Aug-06       | SPH                      | SPH          | SPH           | SPH         | SPH              | SPH      | SPH           | SPH  | SPH     | SPH      |
|                          | Apr-06       | SPH                      | SPH          | SPH           | SPH         | SPH              | SPH      | SPH           | SPH  | SPH     | SPH      |
|                          | Aug-05       | SPH                      | SPH          | SPH           | SPH         | SPH              | SPH      | SPH           | SPH  | SPH     | SPH      |
|                          | Apr-05       | 0.13                     | <0.0025      | 0.025         | 0.028       | 0.041            | NR       | 4352          | 7.01 | 62      | NR       |
| MW - #38                 | Aug-06       | <0.001                   | <0.001       | <0.001        | <0.003      | 0.0038           | 3.5      | 2199          | 6.90 | 60      | 1600     |
|                          | Apr-06       | <0.001                   | 0.0029       | <0.001        | <0.003      | 0.0045           | 2.8      | 2298          | 6.43 | 55.8    | 1740     |
|                          | Aug-05       | <0.001                   | <0.001       | <0.001        | <0.001      | 0.0062           | NR       | 2073          | 7.1  | 65.0    | NR       |
|                          | Apr-05       | <0.0005                  | <0.0005      | <0.005        | 0.0015      | 0.0071           | NR       | 2269          | 6.95 | 55      | NR       |

NS = Well is Dry - No Sample

SPH = Well Contains Separate Phase Hydrocarbons - No Sample

NR = Not Required

# PHASE II MONITORING - 2005/2006

## Water Analysis BTEX & Field Data - Monitoring Wells

| EPA Method<br>8021B & 8260B |                         |      |                         |                          |                        |              |             |                  |               |             |                     | EPA Method<br>8015B | Field Data |  |  |
|-----------------------------|-------------------------|------|-------------------------|--------------------------|------------------------|--------------|-------------|------------------|---------------|-------------|---------------------|---------------------|------------|--|--|
| WQGC 20NMAC<br>6.2.3103     | 0.01<br>mg/L<br>Benzene |      | 0.75<br>mg/L<br>Toluene | 0.75<br>mg/L<br>Ethylben | 0.62<br>mg/L<br>Xylene | mg/L<br>MTBE | mg/L<br>DRO | mmhos/cm<br>E.C. | 6.0-9.0<br>pH | °F<br>Temp. | 1000<br>mg/L<br>TDS |                     |            |  |  |
|                             | Date<br>Sampled         |      |                         |                          |                        |              |             |                  |               |             |                     |                     |            |  |  |
| MW #39                      | Aug-06                  | 0.33 | <0.005                  | 0.89                     | 0.88                   | <0.012       | 3.30        | 5625             | 7.04          | 65          | NS                  |                     |            |  |  |
|                             | Apr-06                  | 0.28 | 0.05                    | 0.9                      | 0.89                   | <0.050       | 2.6         | 5698             | 6.96          | 61.8        | 4782                |                     |            |  |  |
|                             | Aug-05                  | NR   | NR                      | NR                       | NR                     | NR           | NR          | NR               | NR            | NR          | NR                  |                     |            |  |  |
|                             | Apr-05                  | 0.52 | 0.057                   | 1.3                      | 1.5                    | <0.05        | NR          | 5666             | 6.93          | 59          | NR                  |                     |            |  |  |
| MW #45                      | Aug-06                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |
|                             | Apr-06                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |
|                             | Aug-05                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |
|                             | Apr-05                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |
| MW #46                      | Aug-06                  | NS   | NS                      | NS                       | NS                     | NS           | NS          | NS               | NS            | NS          | NS                  |                     |            |  |  |
|                             | Apr-06                  | NS   | NS                      | NS                       | NS                     | NS           | NS          | NS               | NS            | NS          | NS                  |                     |            |  |  |
|                             | Aug-05                  | NS   | NS                      | NS                       | NS                     | NS           | NS          | NS               | NS            | NS          | NS                  |                     |            |  |  |
|                             | Apr-05                  | NS   | NS                      | NS                       | NS                     | NS           | NS          | NS               | NS            | NS          | NS                  |                     |            |  |  |
| MW #47                      | Aug-06                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |
|                             | Apr-06                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |
|                             | Aug-05                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |
|                             | Apr-05                  | SPH  | SPH                     | SPH                      | SPH                    | SPH          | SPH         | SPH              | SPH           | SPH         | SPH                 |                     |            |  |  |

NS = Well is Dry - No Sample

SPH = Well Contains Separate Phase Hydrocarbons - No Sample

NR = Not Required

## Section 16.0 Chemical Analytical Program



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## QUALITY ASSURANCE PLAN

October 2004

Revision 6

Control Number: 0000038

Approved By:

Nancy McDuffie      Date  
Laboratory Manager

Approved By:

Scott Hallenbeck      Date  
Laboratory Director



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# Table of Contents

| <u>Section</u> | <u>Title</u>                                                                                                                                                                                                                                                                                                                                                       | <u>Page</u> |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1.0            | Title Page                                                                                                                                                                                                                                                                                                                                                         | 1           |
| 2.0            | Table of Contents                                                                                                                                                                                                                                                                                                                                                  | 2           |
| 3.0            | Introduction<br>Purpose of Document<br>Objectives                                                                                                                                                                                                                                                                                                                  | 4           |
| 4.0            | Organization and Responsibility<br>Company<br>Personnel and Responsibilities<br>Laboratory Manager<br>Business/Project Manager<br>Quality Assurance Officer<br>Section Supervisors<br>GC/MS Analyst<br>Analyst<br>Lab Technician<br>Sample Control Manager<br>Delegation of absence employees<br>Personnel Qualifications and Training<br>Organizational Structure | 6           |
| 5.0            | Receipt and Handling of Samples<br>Sampling<br>Procedures<br>Containers<br>Preservation<br>Holding Times<br>Sample Custody<br>Chain-of-Custody Form<br>Receiving Samples<br>Logging in Samples and Storage<br>Disposal of Samples                                                                                                                                  | 11          |
| 6.0            | Analytical Procedures<br>List of Procedures Used                                                                                                                                                                                                                                                                                                                   | 19          |
| 7.0            | Calibration<br>Instrument Calibration<br>Standards<br>Procedures<br>Reagents<br>Analytical Balance<br>pH Meter<br>Thermometers                                                                                                                                                                                                                                     | 21          |

Refrigerators  
Ovens  
Analytical Instrumentation  
Other Analytical Instrumentation and Equipment

**Maintenance 24**

**Quality Control 25**

Internal Quality Control Checks  
Precision, Accuracy, Detection Limit  
Quality Control Parameter Calculations  
    Mean  
    Standard Deviation  
    Percent Recovery (%R)  
    Confidence Intervals  
    Relative Percent Difference (RPD)

**Data Reduction, Validation, and Reporting 30**

Data Reduction  
Validation  
Reports and Records

**Corrective Action 32**

**Quality Assurance Audits and Reports 33**

Internal/External Systems' Audits and  
Internal and External Reports

**Analytical Protocols 35**

#### Purpose of Document

The purpose of this Quality Assurance Manual is to formally document the quality assurance policies and procedures of Hall Environmental Analysis Laboratory, Inc. (HEAL), for the benefit of its employees, clients, and accrediting organizations. This laboratory continually implements the aspects of this plan as an essential and integral part of laboratory operations in order to assure that the results and work produced are accurate, precise, and reliable.

#### Objectives

The objective of HEAL is to achieve and maintain excellence in environmental testing. This is accomplished by developing, incorporating and documenting the procedures and policies specified in this manual. A laboratory staff that is analytically competent, well qualified, and highly trained carries out these activities. An experienced management team, knowledgeable in their area of expertise, monitors them. Finally, a comprehensive Quality Assurance program governs laboratory practices and assures that the analytical results are valid and defensible.

HEAL establishes and thoroughly documents its practices so that there is no uncertainty in determining appropriate procedures. Routine laboratory activities are detailed in method specific Standard Operating Procedures (SOP's) and Quality Assurance practices are outlined in this QA/QC manual.

The management assures that this documentation is correct in terms of required accuracy, data reproducibility, and that the procedures contain proper Quality Control measures. The management additionally assures that all equipment is reliable, well maintained and calibrated. The procedures and practices of the laboratory are able to conform to client specifications and regulatory requirements. Meticulous records are maintained for all samples and their respective analyses so that results are well documented and defensible in a court of law.

The HEAL management is responsible for supervising and administering this quality assurance program, insuring each individual is responsible for its proper implementation. Accordingly, the HEAL management remains committed to the encouragement of excellence in analytical testing and will continue to provide the necessary resources and environment conducive to its achievement.

Understanding that quality cannot be mandated, it is the policy of this laboratory to provide an environment that encourages all staff members to take pride in the quality of their work. In addition to furnishing proper equipment and supplies, HEAL stresses the importance of continued training and professional development. Further, HEAL recognizes the time required for data interpretation. Therefore, no analyst feels pressure to sacrifice data quality for data quantity. Each staff member must perform with the highest level of integrity and professional competence, always being alert to problems that could compromise the quality of technical work. Management and senior personnel supervise analysts closely in all operations. The laboratory staff is encouraged to speak



with lab managers or senior management if they feel that there are any commercial, financial, or other undue pressures, which might adversely affect the quality of their work.

When properly conceived and executed, our quality assurance program will result in a measurement system that operates in analytical control and where error is at a minimum level. The goal of HEAL is to produce quality results that are accurate, reliable and reflect the analytical needs of our clients.

This is a controlled document. Each copy is assigned a unique tracking number and when released to a client or accrediting agency the QA Officer keeps the tracking number on file.

## 4.0 Organization and Responsibility

### Company

HEAL is accredited in accordance with NELAC standards (see NELAC accredited analysis list). Additionally, HEAL is qualified as defined under the Petroleum Storage Tank Regulations of the State of New Mexico Environmental Improvement Board (USTR §1201) and the State of New Mexico Water Quality Control Commission regulations. It is a locally owned small business that was established in 1991. HEAL is a full service Environmental Analysis Laboratory with analytical capabilities that include both organic and inorganic methodologies and has performed analyses of soil, water and air samples for many sites statewide. HEAL's client base includes local, state and federal governmental agencies, private consultants as well as individual homeowners. It has performed as a subcontractor to the state of New Mexico and to the State Highway and Transportation Department. HEAL has been acclaimed by its customers as producing quality results and as being adaptive to client-specific needs.

The laboratory is divided into a volatile organic section, a semi-volatile organic section, and an inorganic section. Each section has a designated supervisor. The section supervisors report directly to the laboratory manager, who oversees all of the operations.

### Certifications

National Environmental Laboratory Accreditation Program (NELAP) -- Oregon Primary accrediting authority. Accredited for EPA methods 8260, 8310, 8015, 8021.

### Personnel

#### Laboratory Manager

The Laboratory Manager is responsible for the daily operations of the laboratory. Additionally, the laboratory manager reviews and approves new analytical procedures and methods, and performs a technical review of most analytical results. The Lab Manager also observes the performance of supervisors to ensure good laboratory practices and proper techniques are being taught and utilized. Also, the Lab Manager is responsible for meeting with clients, assisting in overall quality control implementation, and strategic planning for the future of the company. Other duties include assisting in establishing laboratory policies which lead to the fulfillment of requirements for various certification programs, assuring that all Quality Assurance and Quality Control documents are reviewed and approved, and assisting in conducting Quality Assurance Audits. The lab manager addresses questions or complaints that cannot be answered by the section managers. Someone with a minimum of 7 years of directly related experience and a scientific degree should fill this position.

### **Business/ Project Manager**

The role of the business/project manager is to act as a liaison between the client and the laboratory. The business project manager reviews reports, updates clients on the status of projects in-house, prepares quotations for new work, and is responsible for the marketing effort. All new work is assessed by the project manager and reviewed with the other managers so as to not exceed the laboratory's capacity. It is also the duty of the project manager to work with government agencies and accrediting authorities to make certain that the laboratory is compliant on new regulations or policies. Someone with a minimum of 5 years of directly related experience and a scientific degree should fill this position.

### **Quality Assurance Officer**

The Quality Assurance Officer (QAO) is responsible for developing and carrying out the approved Quality Assurance Program, and advising and assisting management in meeting these requirements. The QAO monitors quality control activities of the laboratory in order to determine conformance with the Quality Assurance Program, performing Quality Assurance Audits, writing reports, providing follow-up action, and issuing Observation and Corrective Action Reports as needed. Additional responsibilities include cataloged documentation of the following: Staff Training and Demonstration Of Capability (DOC) records, Instrument Detection Limits (IDL), Method Detection Limits (MDL), and Instrument/Equipment Certification and/or Maintenance records. Complaints from clients are logged on a complaint form, which is reviewed by the QAO to ensure that it is handled according to the Quality Systems Section 5.5.3.1 and kept on file. When procedures are not in compliance with the requirements of this plan, "stop work orders" can be issued. Finally, the QAO provides clients with Quality Control data and Quality Assurance reports as requested. This position should be filled by someone with a minimum of 3 years of directly related experience and can also be filled by a senior manager.

### **Section Supervisors**

The Section Supervisors are responsible for training and supervising departmental staff. The Section Supervisors schedule incoming work and monitor laboratory personnel to ensure that proper procedures and techniques are being used. The section supervisors implement new Quality Control procedures as directed by the QAO, update and maintain quality control records and evaluate laboratory personnel in their Quality Control activities. They are the technical director of the associated section and review analytical data to acknowledge that data meets all criteria set forth for good Quality Assurance practices. Someone with a minimum of 3 years of directly related experience should fill this position.

### **Senior Analyst**

A senior analyst performs soil and water analysis in a section of the laboratory. A senior analyst shall have a minimum of one year of analytical instrument experience. A scientific degree is strongly recommended.

### **Analyst**

An analyst performs soil and water analysis in the laboratory. The analyst also performs instrument maintenance. All analysts shall have a minimum 6 months of relevant prior experience or training. A scientific degree is encouraged. An analyst may also perform the duties of a lab technician.

### **Lab Technician**

A lab technician performs multiple duties in the laboratory. These duties may include, but not be limited to sample preparation, glassware washing, sample kit preparation.

### **Sample Control Manager**

The sample control manager is responsible for receiving samples and reviewing the sample login information after it has been entered into the computer. The sample control manager also checks the samples against the chain-of-custody for any sample and/or labeling discrepancies prior to distribution.

The sample control manager is also responsible for sending out samples to the sub-contractors along with the review and shipping of field sampling bottle kits. The sample control manager acts as a liaison between the laboratory and field sampling crew to assure the appropriate analytical tests is assigned.

### **Delegations in the Absence of Key Personnel**

Planned absences shall be preceded by notification to the laboratory manager. The appropriate staff members shall be informed of the absence. In the case of unplanned absences, the organizational superior shall either assume the responsibilities and duties or delegate the responsibilities and duties to an appropriately qualified member.

### **Laboratory Personnel Qualification and Training**

All personnel joining HEAL shall undergo orientation and training. During this period the new personnel shall be introduced to the organization and their responsibilities, as well as the policies and procedures of the company. They shall also undergo on the job training and shall work with trained staff. They will be shown required tasks and be observed while performing them. Initial demonstration of capability must be completed and documented prior to performing assignments unsupervised. New employees that do not have prior analysis experience will not be allowed to perform analysis until they have demonstrated attention to detail with minimal errors in the assigned tasks. To ensure a



sustained level of quality performance among staff members, continuing demonstration of capability shall be performed at least once a year. Laboratory staff must successfully pass an external Proficiency Evaluation (PE) sample or initial PE sample. Each new employee shall sign an ethics and data integrity agreement to ensure that they know that data quality is our main objective. Every HEAL employee recognizes that although turn around time is important, quality is put above any pressure to complete the task expediently. Analysts are not compensated for passing QC parameters nor are incentives given for the quantity of work produced.

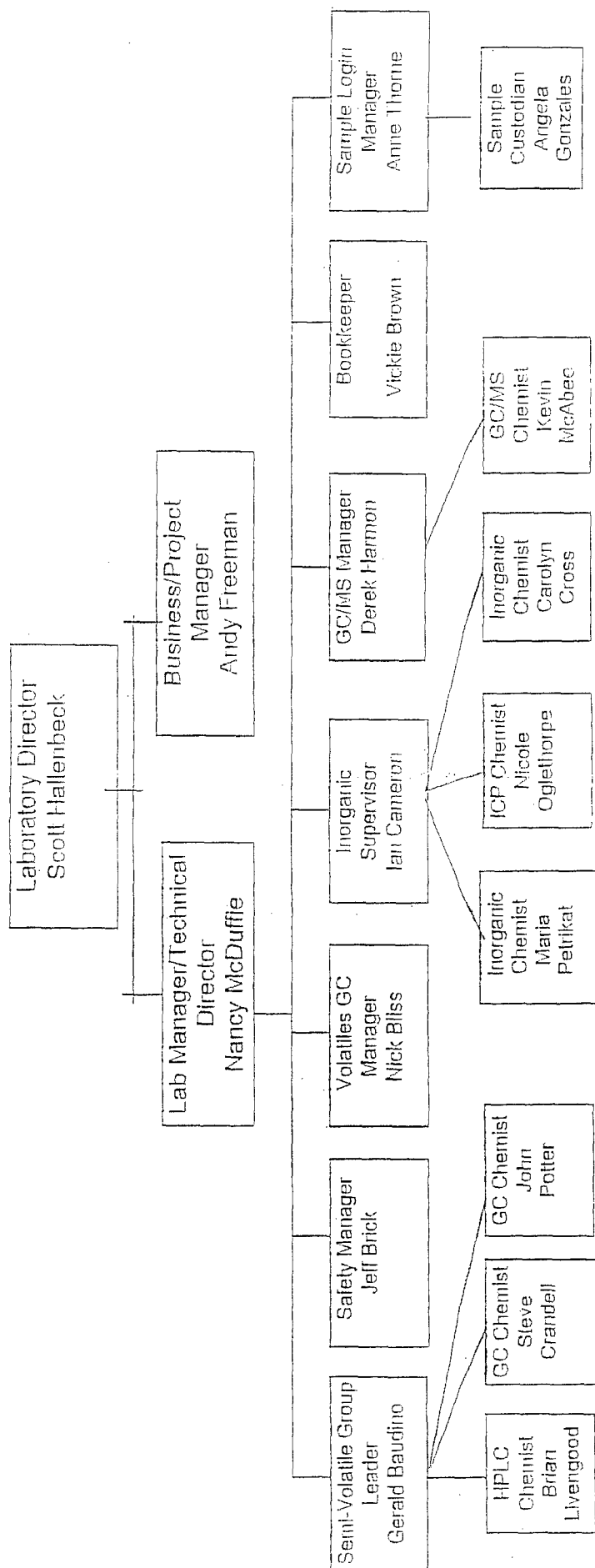


Diagram of organizational Structure

## 5.0 Receipt and Handling of Samples

### Sampling

#### Procedures

HEAL does not provide field sampling for any projects. Sample kits are prepared and provided for clients upon request. The sample kits contain the appropriate sampling containers (with a preservative when necessary), labels, blue ice, a cooler, chain-of-custody forms, plastic bags, bubble wrap, and any special sampling instructions. The sample control manager reviews the kits prior to shipment.

#### Containers

Containers which are sent out for sampling are purchased by HEAL from a commercial source. Glass containers are certified "EPA Cleaned" QA level 1. Those containers are received with a Certificate of Analysis verifying that the containers have been cleaned according to the EPA wash procedure.

#### Preservation

If sampling for an analyte(s) requires preservation, the sample custodians fortify the containers prior to shipment to the field. The required preservative is introduced into the vials in uniform amounts and done so rapidly to minimize the risk of contamination. Vials that contain a preservative are labeled appropriately.

The following pages contain tables specifying additional preservation requirements for samples.

## Tables of Standard Holding Times, Preservation, and Containers

## Organic Compounds

| Compound Class                       | Matrix     | Container                             | Preservative                            | Holding Time                                            |
|--------------------------------------|------------|---------------------------------------|-----------------------------------------|---------------------------------------------------------|
| Purgeable halo carbons and aromatics | aqueous    | 40 mL glass voas, teflon-lined septum | HgCl <sub>2</sub> , or HCl, pH <2; cool | 14 days to analysis                                     |
| Purgeable halo carbons and aromatics | Soil/MeOH* | 4 oz. Jar/2-20 ml VOAs w/ methanol    | cool, 4° C                              | 14 days to analysis                                     |
| Semi-volatiles                       | aqueous    | 1 L amber                             | cool, 4° C                              | 7 days to extract, 40 days after extraction to analyze  |
| Semi-volatiles                       | soil       | 8 oz. Jar                             | cool, 4° C                              | 14 days to extract, 40 days after extraction to analyze |
| PCBs, pesticides, herbicides         | aqueous    | 1 L amber                             | cool, 4° C                              | 7 days to extract, 40 days after extraction to analyze  |
| PCBs, pesticides, herbicides         | soil       | 8 oz. Jar                             | cool, 4° C                              | 14 days to extract, 40 days after extraction to analyze |

\*Use of field methanol kits are available and recommended for the PSTB.



## Inorganic Compounds

| Parameter                     | Medium  | Container  | Preservative                                               | Stability           |
|-------------------------------|---------|------------|------------------------------------------------------------|---------------------|
| Acidity                       | aqueous | 250-mL HDP | cool, 4° C                                                 | 14 days             |
| Alkalinity                    | aqueous | 250-mL HDP | cool, 4° C                                                 | 14 days             |
| Ammonia                       | aqueous | 1-L HDP    | cool, 4° C,<br>H <sub>2</sub> SO <sub>4</sub> pH<2         | 28 days             |
| Biochemical Oxygen Demand     | aqueous | 2-L HDP    | cool, 4° C                                                 | 48 hours            |
| Bromide                       | aqueous | 250-mL HDP | none required                                              | 28 days             |
| Chemical Oxygen Demand        | aqueous | 125-mL HDP | cool, 4° C,<br>H <sub>2</sub> SO <sub>4</sub> pH<2         | 28 days             |
| Chloride                      | aqueous | 125-mL HDP | none required                                              | 28 days             |
| Chloride                      | solid   | 4-oz jar   | none required                                              | 28 days             |
| Chlorine, total residual      | aqueous | 500-mL HDP | none required                                              | analyze immediately |
| Chromium VI                   | aqueous | 250-mL HDP | cool, 4° C                                                 | 24 hours            |
| Chromium VI                   | solid   | 8-oz jar   | cool, 4° C                                                 | as soon as possible |
| Color                         | aqueous | 125-mL HDP | cool, 4° C                                                 | 48 hours            |
| Cyanide                       | aqueous | 1-L HDP    | cool, 4° C<br>NaOH pH>12                                   | 14 days             |
| Cyanide                       | solid   | 4-oz jar   | cool, 4° C                                                 | 14 days             |
| Fluoride                      | aqueous | 500-mL HDP | none required                                              | 28 days             |
| Hardness                      | aqueous | 250-mL HDP | HNO <sub>3</sub> or<br>H <sub>2</sub> SO <sub>4</sub> pH<2 | 6 months            |
| Hydrogen ion (pH)             | aqueous | 60-mL HDP  | none required                                              | analyze immediately |
| Hydrogen ion (pH)             | solid   | 4-oz jar   | none required                                              | analyze immediately |
| Kjeldahl and organic nitrogen | aqueous | 1-L HDP    | cool, 4° C,<br>H <sub>2</sub> SO <sub>4</sub> pH<2         | 28 days             |

| Sample Description            | Matrix  | Container                | Preservative                                                 | Storage Time        |
|-------------------------------|---------|--------------------------|--------------------------------------------------------------|---------------------|
| Mercury                       | aqueous | 250-mL HDP               | HNO <sub>3</sub> pH < 2                                      | 28 days             |
| Mercury                       | solid   | 8-oz jar                 | none required                                                | 28 days             |
| Metals (except Cr VI and Hg)  | aqueous | 500-mL HDP               | HNO <sub>3</sub><br>pH < 2                                   | 6 months            |
| Metals (except Cr VI and Hg)  | solid   | 8-oz jar                 |                                                              | 6 months            |
| Nitrate                       | aqueous | 250-mL HDP               | cool, 4° C                                                   | 48 hours            |
| Nitrate                       | solid   | 8-oz jar                 | cool, 4° C                                                   | analyze immediately |
| Nitrate-Nitrite               | aqueous | 250-mL HDP               | cool, 4° C,<br>H <sub>2</sub> SO <sub>4</sub> pH<2           | 28 days             |
| Nitrate-Nitrite               | solid   | 8-oz jar                 | cool, 4° C                                                   | 28 days             |
| Nitrite                       | aqueous | 125-mL HDP               | cool, 4° C                                                   | 48 hours            |
| Oil and Grease                | aqueous | 2-L wide-mouth glass     | cool, 4° C,<br>H <sub>2</sub> SO <sub>4</sub> pH<2           | 28 days             |
| Oil and Grease                | solid   | 2-L wide-mouth glass     | cool, 4° C                                                   | 28 days             |
| Organic Carbon                | aqueous | 125-mL HDP               | cool, 4° C,<br>HCl or H <sub>2</sub> SO <sub>4</sub><br>pH<2 | 28 days             |
| Organic Carbon                | solid   | 4-oz jar                 | cool, 4° C                                                   | 28 days             |
| Orthophosphate                | aqueous | 125-mL HDP               | Cool, 4° C                                                   | 48 hours            |
| Phenolics                     | aqueous | 1-L Boston Round         | cool, 4° C,<br>H <sub>2</sub> SO <sub>4</sub> pH<2           | 28 days             |
| Phenolics                     | solid   | 8-oz jar<br>(glass only) | cool, 4° C                                                   | 28 days             |
| Phosphorous (elemental)       | aqueous | 1-L Boston Round         | cool, 4° C                                                   | 48 hours            |
| Phosphorous (total)           | aqueous | 125-mL HDP               | cool, 4° C,<br>H <sub>2</sub> SO <sub>4</sub> pH<2           | 28 days             |
| Residue, total                | aqueous | 250-mL HDP               | cool, 4° C                                                   | 7 days              |
| Residue, filterable (TDS)     | aqueous | 250-mL HDP               | cool, 4° C                                                   | 7 days              |
| Residue, non-filterable (TSS) | aqueous | 250-mL HDP               | cool, 4° C                                                   | 7 days              |
| Residue, settleable           | aqueous | Imhoff Cone              | cool, 4° C                                                   | 48 hours            |
| Residue, volatile             | aqueous | 250-mL HDP               | cool, 4° C                                                   | 7 days              |

| Parameter            | Phase   | Container  | Temperature                        | Hold Time |
|----------------------|---------|------------|------------------------------------|-----------|
| Silica               | aqueous | 125-mL HDP | cool, 4° C                         | 28 days   |
| Specific conductance | aqueous | 250-mL HDP | cool, 4° C                         | 28 days   |
| Specific conductance | solid   | 8-oz jar   | cool, 4° C                         | 28 days   |
| Sulfate              | aqueous | 125-mL HDP | cool, 4° C                         | 28 days   |
| Sulfate              | solid   | 4-oz jar   | cool, 4° C                         | 28 days   |
| Sulfide              | aqueous | 1-L HDP    | cool, 4° C,<br>ZnAc +<br>NaOH pH>9 | 7 days    |
| Sulfide              | solid   | 8-oz jar   | cool, 4° C                         | 7 days    |
| Surfactants          | aqueous | 500-mL HDP | cool, 4° C                         | 48 hours  |
| Turbidity            | aqueous | 250-mL HDP | cool, 4° C                         | 48 hours  |

## Sample Custody

### Chain-of-Custody Form

A Chain-of-Custody (CoC) form is used to provide a record of sample chronology starting with the field sampling through laboratory analysis. HEALs CoC contains the client's name, address, phone and fax numbers, the project name and number, the project manager's name, and the field sampler's name. It also identifies the date and time of sample collection, sample matrix, field sample ID number, number/volume of sample containers, sample temperature upon receipt, and any sample preservative information.

There is also a space to record the HEAL ID number assigned to samples after they are received. Next to the sample information is a space for the client to indicate the desired analyses to be performed. Finally, there is a section to track the actual custody of the samples. The custody section contains lines for signatures, dates and times when samples are relinquished and received. The CoC form also includes a space to record special sample related instructions, sampling anomalies, time constraints, and any sample disposal considerations.

A sample chain-of-custody form can be found at the end of this section.

### Receiving Samples

Samples are received by authorized HEAL personnel. Upon arrival, the CoC is compared to the respective samples. After the samples and CoC have been determined to be complete and accurate, the sampler signs over the CoC. The HEAL staff member in turn signs the chain-of-custody, also noting the current date and time. This relinquishes custody of the samples from the sampler and delegates sample custody to HEAL. The third (pink) copy of the CoC form is given to the person who has relinquished custody of the samples.

### Logging in Samples and Storage

Each sample set is given a unique HEAL tracking ID number. Individual sample locations within a defined sample set are given a unique sample ID suffix-number. Labels with the HEAL numbers, and analytes requested, are generated and placed on their respective containers. The samples are reviewed by the sample control manager prior to being distributed to the storage refrigerators or appropriate laboratory personnel.

Samples are stored in the volatile section refrigerator, the semi-volatile section refrigerator, or the inorganic section refrigerator. If a soil sample must be extracted for both volatile and semi-volatile analysis, it is first placed into the volatile soil sample refrigerator. After the volatile extraction, the sample is moved to the semi-volatile refrigerator to minimize any risk of contamination.



Each project (sample set) is entered into the Laboratory Information Management System (LIMS) with a unique ID given to every container. The ID tag includes the Lab ID, Client ID, date and time of collection, and the analysis/analyses to be performed. The LIMS continually updates throughout the lab. Therefore, at any time, an analyst or manager may inquire about a project and/or samples status. For more information about the login procedures, reference the Sample Login SOP.

### **Disposal of Samples**

Analytical results are used to characterize their respective sample contamination level(s) so that the proper disposal can be performed. These wastes will be disposed of according to their hazard as well as their type and level of contamination. Refer to the Hall Environmental Analysis Laboratory Chemical Hygiene Plan for details regarding waste disposal.

Waste drums are provided by an outside agency. These drums are removed by the outside agency and disposed of in a proper manner.

The wastes that are determined to be non-hazardous are disposed of as non-hazardous waste.

Accreditation Applied: ☐ NEAAC ☐ USACE ☐

Other: \_\_\_\_\_

Project Name:

Project #2

Project Manager:

## Supplier:

Sample Temperature:

[illegible]

|          |  |                                                                                        |  |
|----------|--|----------------------------------------------------------------------------------------|--|
| Remarks: |  | BTEX + MTBE + TMB's (8021)                                                             |  |
|          |  | BTEX + MTBE + TPH (Gasoline Only)                                                      |  |
|          |  | TPH Method 8015B MOD (Gas/Diesel)                                                      |  |
|          |  | TPH (Method 418.1)                                                                     |  |
|          |  | EDB (Method 504.1)                                                                     |  |
|          |  | EDC (Method 8021)                                                                      |  |
|          |  | 8310 (PNA or PAH)                                                                      |  |
|          |  | RCRA 8 Metals                                                                          |  |
|          |  | Cations (Na, K, Ca, Mg)                                                                |  |
|          |  | Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) |  |
|          |  | 8081 Pesticides / PCB's (8082)                                                         |  |
|          |  | 8260 (VDA)                                                                             |  |
|          |  | 8270 (Semi-VDA)                                                                        |  |
|          |  |                                                                                        |  |
|          |  | Air Bubbles or Headspace (Y or N)                                                      |  |



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## 6.0 Analytical Procedures

All analytical methods used at HEAL incorporate necessary and sufficient Quality Assurance and Quality Control practices. A Standard Operating Procedure is used for each method to provide the necessary criteria to yield acceptable results. These procedures are updated each year or more often if necessary and are attached as a pdf file in the Laboratory Information Management System (LIMS) for easy access by each analyst. The sample is almost always consumed or altered during the analytical process. Therefore, it is important that each step in the analytical process be correctly followed in order to yield valid data.

When unforeseen problems arise, the analyst, section supervisor, and lab manager meet to discuss the factors involved. The analytical requirements are evaluated and a suitable corrective action, or resolution is established.

### List of Procedures Used

Typically, the procedures used by HEAL are EPA approved methodologies. However, proprietary methods for client specific samples, are sometimes used. The following tables list EPA Method numbers with their corresponding analytes and/or instrument classification.

#### Organic Analysis

| Methodology | Title of Method                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------|
| 8021B       | "Halogenated and Aromatic Volatile Organics by Gas Chromatography"                                     |
| 8015B       | "Nonhalogenated Volatile Organics by Gas Chromatography"<br>(Gasoline Range and Diesel Range Organics) |
| 8081A       | "Organochlorine Pesticides by Gas Chromatography"                                                      |
| 8082        | "PCBs as Aroclors by Gas Chromatography"                                                               |
| 8151A       | "Chlorinated Herbicides by GC using Methylation or Pentafluorobenzoylation Derivatization"             |
| 8310        | "Polynuclear Aromatic Hydrocarbons"                                                                    |
| 8330        | "Nitroaromatics and Nitramines"                                                                        |
| 8315        | "Formaldehyde"                                                                                         |
| 1005        | "TNRCC - Total Petroleum Hydrocarbons"                                                                 |
| 504.1       | "EDB" & "DBCP"                                                                                         |
| 418.1       | "Total Petroleum Hydrocarbons"                                                                         |
| 413.2       | "Oil and Grease"                                                                                       |

## Gas Chromatographic/Mass Spectrometric Methods

| Methodology | Title of Method                                                       |
|-------------|-----------------------------------------------------------------------|
| 8260B       | "Volatile Organic Compounds by GC/MS: Capillary Column Technique"     |
| 8270D       | "Semivolatile Organic Compounds by GC/MS: Capillary Column Technique" |
| 624         | "Purgeables"                                                          |
| 625         | "Base/Neutrals and Acids"                                             |

## Inorganic Analysis

| Methodology | Title of Method               |
|-------------|-------------------------------|
| 310.1       | Alkalinity                    |
| 350.3       | Ammonia                       |
| 300.0/300.1 | Anions (aqueous)              |
| 9065        | Anion (soil)                  |
| 120.1       | Electrical Conductivity       |
| 3500        | Ferrous Iron                  |
| 351.2       | Total Kjeldhal Nitrogen (TKN) |
| 9095        | Paint Filter                  |
| 150.1       | pH                            |
| 420.3       | Phenols                       |
| 160.1       | Total Dissolved Solids (TDS)  |
| 160.2       | Total Suspended Solids (TSS)  |
| 180.1       | Turbidity                     |

**Metals**

|             |                   |
|-------------|-------------------|
| 200.7/6010C | ICP Metals        |
| 7470        | Mercury (aqueous) |
| 7471        | Mercury (soil)    |

## Preparative Methodologies

| Methodology | Title of Method                                                                             |
|-------------|---------------------------------------------------------------------------------------------|
| 1311        | Toxicity Characteristic Leaching Procedure                                                  |
| 1312        | Synthetic Precipitation Leaching Procedure                                                  |
| 3005        | Acid Digestion of Waters for Total Recoverable or Dissolved Metals                          |
| 3010        | Acid Digestion of Aqueous Samples and Extracts for Total Metals                             |
| 3050        | Acid Digestion of Sediment, Sludge, and Soil samples                                        |
| 3510C       | Separatory Funnel Liquid-Liquid Extraction                                                  |
| 3540        | Soxhlet Extraction                                                                          |
| 3665        | Sulfuric Acid/Permanganate Cleanup (PCB)                                                    |
| 5030        | Purge-and-Trap for Aqueous Samples                                                          |
| 5035        | Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples |



## 7.0 Calibration

### Instrument Calibration

An instrument calibration is the relationship between the known concentrations of a set of calibration standards introduced into an analytical instrument and the measured response they produce. Calibration curve standards are a prepared series of aliquots at various known concentrations levels from a primary source reference standard. Specific mathematical types of calibration techniques are outlined in SW-846 8000B. Analysts choose the proper calibration type following guidelines set fourth in their method specific protocol. Field samples are then analyzed on the instrument. The unknown concentration in the sample can be extrapolated from the calibration curve as a function of the instrument response. Any sample with an analyte response which exceeds the highest calibration standard response must be diluted to fall within the calibration range (ideally at or near the mid-level calibration standard response) of that analyte.

### Standards

All of the source reference standards used are ordered from a reliable commercial vendor. A Certificate of Analysis (CoA), which verifies the quality of the standard, accompanies the standards from the vendor. The Certificates of Analysis are dated and stored on file by the QAO. These standards are traceable to the National Institute of Standards (NIST).

All standard solutions, calibration curve preparations, and all other quality control solutions are labeled in a manner that can be traced back to the original source reference standard. All source reference standards are entered into the LIMS with an appropriate description of the standard. Dilutions of the source reference standard (or any mixes of the source standards) are fully tracked in the LIMS as well. Standards are labeled with the date received, date opened for use, and an expiration date. New source standards received into the laboratory are checked with current standard solutions. Source standard vials will never be altered. Rather, small aliquots are removed and stored in working standard solution vials from which measured amounts can be withdrawn.

As part of the quality assurance procedures at HEAL, analysts strictly adhere to method protocols for storage times and policies of analytical standards and quality control solutions.

## Procedures

### Reagents

HEAL assures that the reagents used are of acceptable quality for their intended purpose. This is accomplished by ordering high quality reagents and adhering to good laboratory practices so as to minimize contamination or chemical degradation. All reagents must meet any specifications noted in the analytical method.

Upon receipt, all reagents are assigned a separate ID number, and logged into the LIMS. All reagents shall be labeled with the date received into the laboratory and again with the date opened for use. Recommended shelf life shall be documented and controlled. Dilutions or solutions prepared shall be clearly labeled, dated, and signed. These solutions are traceable back to their primary reagents.

All gases used with an instrument shall meet specifications of the manufacturer. Recommended shelf life shall be documented and controlled. All safety requirements that relate to maximum and/or minimum allowed pressure, fitting types, and leak test frequency, shall be followed. When a new tank of gas is delivered, it shall be checked for leaks and marked with the date put in use. The date and initial pressure of a new tank will be noted on the new tank.

HEAL has a Quality Assurance Procedure designed to assure that the quality of laboratory reagent water meets established criteria for all analytical methods. HEAL continuously monitors the quality of the reagent water and provides the necessary indicators for maintenance of the purification systems.

### Analytical balance

All of the analytical balances are capable of weighing to a minimum precision of 0.1 grams. Records are kept of daily calibration checks for the balances in use. Class S weights are used in these checks. The balances are annually certified by an outside source and the certifications are on file with the QAO.

### pH Meter

The pH meter measures to a precision of 0.01 pH units. Records showing its calibration before each use, or each day, if used more than once per day. It is calibrated using a certified buffer. Also available with the pH meter is a magnetic stirrer with a temperature sensor.

### Thermometers

The thermometers in the laboratory are used to measure the temperatures of the refrigerators/freezers, ovens, water baths, TCLP Extractions and sample log-in.

### Refrigerators/Freezers

Each laboratory refrigerator or freezer contains a thermometer capable of measuring to a minimum precision of 1°C. The thermometers are kept with the bulb immersed in liquid. Each workday, the temperatures of the refrigerators are recorded in a designated logbook to insure that the refrigerators are between  $\pm 2^\circ \text{C}$ . Samples are stored separately from the standards to reduce the risk of contamination.

### Ovens

The oven contains a thermometer graduated by 1° C. the temperature is measured before and after a cycle when the operating procedure demands this level of precision.

### Analytical Instrumentation (GC, IC, HPLC, ICP, Hg analyzer, IR, GCMS)

A calibration curve is analyzed on each instrument according to specific method protocols. The calibration curve typically consists of the analysis a blank and a minimum of five dilutions of the analyte list (or lists) outlined in the analytical method. The quality assurance program requires a second source verification of a calibration curve. Ideally, a second source verification is provided from a separate vendor. However, a different Lot Number from the same vendor is acceptable for second source verification. In the absence of standards from a separate vendor or the same vendor with two different Lot Numbers, two separate preparations from the same source standard can be used for second source verification.

Each day that an analysis is performed on the instrument, the calibration must be verified. This is accomplished by analyzing a calibration standard usually (but not exclusively), a mid-point standard. Another calibration verification is analyzed according to method specific protocols. If during the analysis the specified QC criteria are no longer satisfied, then the analysis should be stopped and the problem examined. When the calibration curve is determined to be no longer acceptable, a new curve is prepared and the instrument re-calibrated. Any samples not bracketed with acceptable daily calibration verifications should be re-analyzed or the results may be subject data qualification or rejection.

Reagent blank samples are also analyzed to ensure that no contamination is present at detectable levels. The frequency of reagent blank analysis is the same as calibration verification samples. The reagent blank and calibration verification should be analyzed successively.

Analytical methods vary in QC acceptance criteria. HEAL follows the method specific guidelines for QC acceptance. The specific acceptance criteria are outlined in the analytical methods and its corresponding SOP.

### Other Analytical Instrumentation and Equipment

The conductivity probe constant shall be determined prior to use.

Eppendorf (or equivalent brands) pipettes are calibrated gravimetrically prior to use.

### 8.0 Maintenance

Maintenance logs are kept for each major instrument. In the front of the log, the following information is included:

- Unique name of the item or equipment
- Manufacturer
- Type of Instrument
- Model Number
- Serial Number
- Date received and date placed into service
- Location of Instrument
- Condition of instrument upon receipt

For routine maintenance, the following information shall be included in the log:

- Maintenance Date
- Maintenance Description
- Maintenance Performed by initials

A manufacturer service agreement (or equivalent) covers most major instrumentation to assure prompt and reliable response to maintenance needs beyond HEAL instrument operator capabilities.

## 9.0 Quality Control

### Internal Quality Control Checks

Hall Environmental Analysis Laboratory, Inc. utilizes various internal quality control checks, including replicates, spiked samples, blanks, quality control samples, calibration standards, quality control charts, and surrogate samples.

Replicates, or duplicates, are identical tests repeated for the same sample in order to determine the precision of such a method. A Relative Percent Difference (RPD) is calculated as a measure of this precision.

Spiked Samples are samples evaluated with a known added quantity of a target compound. This is to help determine the accuracy of the analyses. A percent recovery is calculated to assess the quality of the accuracy.

Duplicate samples and spiked samples are performed according to the following schedule for each area:

**Organics:** LCS and MS/MSD samples are analyzed for every batch of 20 samples (sufficient sample volume permitting for the MS/MSD).

**Metals and wet chemistry:** LCS, MS, and sample duplicate analysis are performed, at a minimum, for every batch of 20 samples (sufficient sample volume permitting for the MS and sample duplicate).

**Anions:** LCS, MS, and sample duplicate analysis are performed, at a minimum, for every batch of 10 samples (sufficient sample volume permitting for the MS and sample duplicate).

Blanks consist of all the reagents measured and treated as they are with samples, except without the samples. This enables the laboratory to assure clean reagents and procedures.

Blind Quality Control Samples are samples provided by an unbiased third party. They contain a pre-determined concentration of the target compound, which is unknown to the analyst. They are analyzed quarterly, and enable the laboratory to assess the quality of its results.

Calibration standards are standards run to calibrate and confirm the consistency of the instrumentation. Calibration standards are utilized at the beginning and end of each batch, and more frequently for larger batches.

Quality Control Charts are charts with acceptable ranges of the values of quality control checks. If a value falls outside the appropriate range, immediate evaluation and assessment of the procedures is required.



A surrogate compound, a substance that has similar properties to the target compounds (but not expected to be present), is added in all applicable tests. It is a measure of the level of recovery achieved in testing.

The specific types and frequency of QC sample analysis differ from method to method and section to section. Individual method specific QC sample criteria are outlined in the each Methods SOP.

SOPs will be update annually or more often if changes are deemed necessary. SOPs are stored as a linked pdf file in the test portion of the LIMS. This is done by right clicking on the SOP tab of the test screen and adding the appropriate path where the current SOPs are located on the server. The QAO will update these links as necessary.

An initial demonstration of capability is performed everytime there is a change in instrument type, personnel, or test method. A minimum of 4 replicate samples are prepared and analyzed according to the test method. Sample results are compared against current acceptable LCS recovery limits. On-going DOCs are performed annually through the use of proficiency testing, LCS recoveries, and/or MDL analysis.

## **Precision, Accuracy, Detection Levels**

### **Precision**

The laboratory uses sample duplicates to assess precision. A duplicate sample is analyzed for each batch of 20 samples (5% frequency) when possible. HEAL requires the RPD to fall within the 99% confidence interval of established control charts or a RPD of less than 20 if control charts are not available. RPDs greater than these limits are considered out-of-control and require an appropriate response. Allowances can be made for high RPD values when the sample results are above the detection limit but less than less than 5X the detection limit. Criteria (based on sample matrix and methodology) for these situations require analyst/supervisor review to determine appropriate corrective action required.

### **Accuracy**

The accuracy of an analysis refers to the difference between the calculated value and the actual value of a measurement. The accuracy of a laboratory result is evaluated by comparing the measured amount of QC reference material recovered from a sample and the known amount added. Control limits are established for each analytical method and sample matrix. Recoveries are assessed to determine the method efficiency and/or the matrix effect.

Analytical accuracy is expressed as the percent recovery (%R) of an analyte or parameter. A known amount of analyte is added to an environmental sample before the sample is prepared and subsequently analyzed. The equation used to calculate percent recovery is:

$$\% \text{Recovery} = \{(\text{concentration} * \text{recovered}) / (\text{concentration} * \text{added})\} \times 100$$

\* or amount

HEAL requires that the Percent Recovery to fall within the 99 % confidence interval of established control limits. A value that falls outside of the confidence interval requires a warning and process evaluation. The confidence intervals are calculated by determining the mean and sample standard deviation. If control limits are not available, the range of 85 to 115% is used unless the specific method dictates otherwise. Percent Recoveries outside of this range mandate additional action such as analyses by Method of Standard Additions, additional sample preparation(s) where applicable, method changes, out-of-control action or data qualification.

### Detection Limit

Current practices at HEAL define the Detection Limit (DL) as the smallest amount that can be detected above the baseline noise in a procedure within a stated confidence level.

HEAL presently utilize an Instrument Detection Limit (IDL), a Method Detection Limit (MDL), and a Practical Quantitation Limit (PQL). The relationship between these levels is approximately

IDL: MDL: PQL = 1:5:5.

The IDL is a measure of the sensitivity of an analytical instrument. The IDL is the amount which, when injected, produces a detectable signal in 99% of the analyses at that concentration. An IDL can be considered the minimum level of analyte concentration that is detectable above random baseline noise.

The MDL is a laboratories measure of the sensitivity of an analytical method. An MDL determination (also outlined in SVV-846 Chapter 1) consists of replicate spiked samples carried through all necessary preparation steps. The spike concentration is three to five times the lowest calibration standard level. The replicates are then analyzed successively and their Standard Deviation (s) calculated. The method detection limit (MDL) can be calculated using the standard deviation according to the formula:

$$\text{MDL} = s * t(99\%)$$

Where  $t$  (99%) is the student's  $t$  value for the 99% confidence interval. It depends on the number of trials used in calculating the sample standard deviation, so choose the appropriate value according to the number of trials.

| Number of Trials | $t(99\%)$ |
|------------------|-----------|
| 3                | 6.96      |
| 4                | 4.54      |
| 5                | 3.75      |
| 6                | 3.36      |
| 7                | 3.14      |
| 8                | 3.00      |
| 9                | 2.90      |

The PQL is significant because different laboratories can produce different MDLs although they may employ the same analytical procedures, instruments and sample matrices. The PQL is about two to five times the MDL and represents a practical, and routinely achievable, reporting level with a good certainty that the reported value is reliable. The reported PQL for a sample is dependent on the dilution factor utilized during sample analysis.

### Quality Control Parameter Calculations

#### Mean

The sample mean is also known as the arithmetic average. It can be calculated by adding all of the appropriate values together, and dividing this sum by the number of values.

$$\text{Average} = (\sum x_i) / n$$

$x_i$  = the value  $x$  in the  $i^{\text{th}}$  trial  
 $n$  = the number of trials

#### Standard Deviation

The sample standard deviation, represented by  $s$ , is a measure of dispersion. The dispersion is considered to be the difference between the average and each of the values  $x_i$ . The variance,  $s^2$ , can be calculated by summing the squares of the differences and dividing by the number of differences. The sample standard deviation,  $s$ , can be found by taking the square root of the variance.

$$\text{Standard deviation} = s = \sqrt{[\sum (x_i - \text{average})^2 / (n - 1)]}$$

### Percent Recovery (MS, MSD, LCS and LCSD)

$$\text{Percent Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result}) \times 100}{(\text{Spike Added})}$$

### Confidence intervals

Confidence intervals are calculated using the average ( $\bar{x}$ ), the sample standard deviation ( $s$ ), and the Student's  $t$  distribution ( $s$ -dist), which depends on the number of values used to calculate the average and sample standard deviation.

The formula is:

$$\text{confidence interval} = \bar{x} \pm s \cdot s\text{-dist}$$

### Student's $t$ Distribution

| n values | 10    | 15    | 20    | 25    | 30    | 40    | 50    | 60    | >100  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 95 %     | 2.262 | 2.145 | 2.093 | 2.064 | 2.042 | 2.021 | 2.000 | 1.980 | 1.960 |
| 99%      | 3.250 | 2.977 | 2.861 | 2.797 | 2.750 | 2.704 | 2.660 | 2.617 | 2.576 |

Unless there is insufficient data, at least 20 values will always be used in calculating the confidence intervals.

### RPD (Relative Percent Difference)

Analytical precision is expressed as a percentage of the difference between the results of duplicate samples for a given analyst. Relative percent difference (RPD) is calculated as follows:

$$\text{RPD} = 2 \times \frac{(\text{Sample Result} - \text{Duplicate Result}) \times 100}{(\text{Sample Result} + \text{Duplicate Result})}$$

## 10.0 Data Reduction, Validation, Reporting, and Record Keeping

All data reported must be of the highest possible accuracy and quality. During the processes of data reduction, validation, and report generation, the work is thoroughly checked to insure that error is minimized.

### Data Reduction

The analyst who generated the data usually performs the data reduction. The calculations include evaluation of surrogate recoveries (where applicable), response factor calculations for manual calculations, and other miscellaneous calculations related to the sample quantitation.

If the results are computer generated, then the formulas must be confirmed by hand calculations.

### Validation

A senior analyst, most often the section supervisor, validates the data. The data is checked at a minimum of 20% after an analyst has shown analytical proficiency. If an error is detected, all of the current data generated by that analyst is reviewed. Previous and/or common mistake areas are stringently monitored throughout the validation process. Data is reported using appropriate significant figure criteria. In most cases, two significant digits are utilized, but three significant digits can be used in QC calculations. Significant digits are not rounded until after the last step of a sample calculation.

If data is to be manually transferred from one medium to another, the transcribed data is checked at a minimum of 20%. This includes data typing, computer data entry, chromatographic data transfer, data table inclusion to a cover letter, or when data results are combined with other data fields.

All hand written data from run logs, analytical standard logbooks, hand entered data logbooks, or on instrument generated chromatograms, are systematically archived should the need for future retrieval arise.

Data that is being reported is treated with the utmost respect and care to help eliminate errors. Unethical practices will be detected through peer review and be dealt with the utmost severity.

### Reports and Records

The reports are compiled by the Laboratory Information Management System (LIMS). Most data is transferred directly from the instruments to the LIMS. After being processed by the analyst and reviewed by the section supervisor, reports are approved and signed by the senior laboratory management. A comparative analysis of the data is performed at this point. For example, if TKN and NH<sub>3</sub> are analyzed on the same sample the NH<sub>3</sub> result should never be greater than the TKN result. Lab



results and reports are released only to appropriately designated individuals. Release of the data can be by fax, email, diskette deliverables, or mailed hard copy.

When a project is completed, the project file folder is stored with a hard copy of the report, relevant supporting data, and the quality assurance/control worksheets. These folders are kept on file and are arranged by project number. Additionally, all electronic data is backed up daily on the HEAL main server. The backup includes raw data, chromatograms and report documents. Hard copies of chromatograms are stored separately according to the instrument and the analysis date. All records and analytical data reports are retained in a secure location as permanent records for a minimum period of five years (unless specified otherwise in a client contract). Access to archived information shall be documented with an access log. Access to archived electronic reports and data will be protected by a project manager password. In the event that HEAL transfers ownership or terminates business practices, complete records will be maintained or transferred according to the client's instructions.

After issuance, the original report shall remain unchanged. If a correction to the report is necessary, then an additional document shall be issued. This document shall have a title of "Addendum to Test Report or Correction to Original Report", or equivalent. Demonstration of original report integrity comes in two forms. First, the report date is included on each page of the final report. Second, each page is numbered in sequential order, making the addition or omission of any data page(s) readily detectable.

## 11.0 Corrective Action

The limits that have been defined for data acceptability also form the basis for corrective action initiation. Initiation of corrective action occurs when the data generated from continuing calibration standard, sample surrogate recovery, laboratory control spike, matrix spike or sample duplicates exceed acceptance criteria. If corrective action is necessary, the analyst or the section supervisor will coordinate to take the following steps to determine and correct the measurement system deficiency:

Check all calculations and data measurements systems (Calibrations, reagents, instrument performance checks etc.).

Assure that proper procedures were followed.

Unforeseen problems that arise during sample preparation and/or sample analysis that lead to treating a sample differently from documented procedures shall be documented with a corrective action report. The section supervisor and lab manager shall be made aware of the problem at the time of the occurrence. See the SOP regarding departures from documented procedures.

Continuing calibration standards below acceptance criteria can not be used for reporting analytical data unless method specific criteria states otherwise.

An analyte above control limits in a Continuing Calibration may be acceptable if the previous continuing calibration standard was acceptable for that analyte. Further, the target analyte in the samples analyzed after the acceptable calibration standard and before calibration standard with the high bias, are reported as non-detected. Finally, the samples following an analyte that is above control limits for a continuing calibration standard can not be reported for that analyte.

Samples with non-compliant surrogate recoveries should be reanalyzed unless deemed un-necessary by the supervisor for matrix, historical data, or other analysis related anomalies.

Laboratory and Matrix Spike acceptance criteria vary significantly depending on method and matrix. Analysts and supervisors meet and discuss appropriate corrective action measures as spike failures occur.

Sample duplicates with RPD values outside control limits require supervisor evaluation and possible reanalysis.

A second mechanism for initiation of corrective action is that resulting from Quality Assurance performance audits, system audits, inter and intra-laboratory comparison studies. Corrective Actions initiated through this mechanism will be monitored and coordinated by the laboratory QA officer.

All corrective action forms are reviewed by and filed with the QA Officer.

## 12.0 Quality Assurance Audits, Reports and Complaints

### Internal/External Systems' Audits, Performance Evaluations, and Complaints

Several procedures are used to assess the effectiveness of the quality control system. One of the methods includes internal performance evaluations, which are conducted by the use of control samples, replicate measurements and use control charts. Another method is external performance audits, which are conducted by the use of inter-laboratory checks, such as participation in laboratory evaluation programs and performance evaluation samples available from ERA (Environmental Resource Associates).

Proficiency samples will be obtained twice per year from ERA. We also participate in soil and water Underground Storage Tank PE studies. Copies of our results are available upon request.

Quality Assurance Audits are performed annually by the Quality Assurance Officer. They are performed using the guidelines outlined below:

The system audit consists of a qualitative inspection of the QA system in the laboratory and an assessment of the adequacy of the physical facilities for sampling, calibration, and measurement. This audit includes a careful evaluation and review of laboratory quality control procedures. Including but not limited to:

1. Review of staff qualifications, demonstration of capability, and personnel training programs
2. Storage and handling of reagents, standards and samples
3. Standard preparation logbook and LIMS procedures
4. Extraction logbooks
5. Raw data logbooks
6. Analytical logbooks or batch printouts and instrument maintenance logbooks
7. Data review procedures
8. Corrective action procedures

Review of data packages is performed regularly by the lab manager/QA Officer.

The Quality Assurance Officer will conduct these audits on an annual basis. Performance evaluation will, in part, be based upon the results obtained on the ERA proficiency results.

## Complaints

Complaints from clients are documented and given to the laboratory manager. The lab manager shall review the information and contact the client. If doubt is raised concerning the laboratories policies or procedures, then an audit of the section or sections may be performed. All records of complaints and subsequent actions shall be maintained for 3 years unless otherwise stated.

## Internal and External Reports

The Quality Assurance Officer is responsible for preparation and submission of quality assurance reports to the appropriate management personnel as problems and issues arise. These reports include the assessment of measurement systems, data precision and accuracy, and the results of performance and system audits. Additionally, they also include significant QA problems, corrective actions, and recommended resolution measures. Reports of these Quality Assurance Audits describe the particular activities audited, procedures utilized in the examination and evaluation of laboratory records, and data validation procedures. Finally, there are procedures for evaluating the performance of Quality Control and Quality Assurance activities, and laboratory deficiencies and the implementation of corrective actions with the review requirements.

### 13.0 Analytical Protocols Utilized at Hall Environmental Analysis Laboratory, Inc.

1. Standard Methods for the Examination of Water and Wastewater: AOWA, AWWA, and WPCG; 20th Edition, 1999.
2. Methods for Chemical Analysis of Water and Wastes, USEPA, EPA-600/4-79-020, March 1979 and as amended December, 1982 (EPA-600/4-82-055)
3. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, USEPA SW-846, 3rd Edition, Updates I, II, IIA, IIB, III, December, 1996.
4. Methods of Soil Analysis: Parts 1 & 2, 2nd Edition, Agronomy Society of America. Monograph 9
5. Diagnosis & Improvement of Saline & Alkali Soils. Agriculture Handbook No. 60, USDA, 1954
6. Handbook on Reference Methods for Soil Testing. The Council on Soil Testing & Plant Analysis, 1980 and 1992
7. Field and Laboratory Methods Applicable to Overburdens and Mine Soils. USEPA, EPA-600/2-78-054, March 1978
8. Laboratory Procedures for Analyses of Oilfield Waste. Department of Natural Resources, Office of Conservation, Injection and Mining Division, Louisiana, August 1988
9. Soil Testing Methods Used at Colorado State University for the Evaluation of Fertility, Salinity and Trace Element Toxicity. Technical Bulletin LT B88-2 January, 1988
10. Manual of Operating Procedures for the Analysis of Selected Soil, Water, Plant Tissue and Wastes Chemical and physical Parameter. Soil, Water, and Plant Analysis Laboratory, Dept. of Soil and Water Science, The University of Arizona, August 1989
11. Sampling Procedures and Chemical Methods in Use at the U.S. Salinity Laboratory for Characterizing Salt-Affected Soils and Water. USDA Salinity Laboratory.
12. Procedures for Collecting Soil Samples and Methods of Analysis for Soil Survey. USDA Soil Conservation Service, SSIR No. 1.
13. Soil Survey Laboratory Methods Manual. Soil Survey Laboratory Staff. Soil Survey Investigations Report No. 42, version 2.0, August 1992.
14. Methods for the Determination of Metals in Environmental Samples, USEPA, EPA-600/4-91-010, June 1991
15. The Merck Index. Eleventh Edition, Merck & Co., Inc. 1989.
16. Handbook of Chemistry and Physics. 62nd Edition, CRC Press, Inc. 1981-1982.



17. Analytical Chemistry of PCB's. Erickson, Mitchell D., CRC Press, Inc. 1992.
18. Environmental Perspective on the Emerging Oil Shale Industry, EPA Oil & Shale Research Group.
19. Polycyclic Aromatic Hydrocarbons in Water Systems, CRC Press, Inc.

## Section 17.0 Chemical Analytical Reports

| <u>Title</u>                                   | <u>Tab Number</u> |
|------------------------------------------------|-------------------|
| 2006 Semi-Annual Monitoring Wells.....         | 1                 |
| 2006 Annual Monitoring Wells .....             | 2                 |
| San Juan River Quarterly Analysis.....         | 3                 |
| Tank #33 Quarterly Analysis.....               | 4                 |
| North Boundary Barrier 2006 Semi - Annual..... | 5                 |
| North Boundary Barrier 2006 Annual.....        | 6                 |

## COVER LETTER

Tuesday, April 18, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Semi Annual 2006

Order No.: 0604056

Dear Cindy Hurtado:

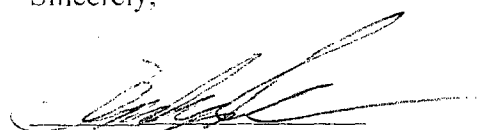
Hall Environmental Analysis Laboratory received 7 sample(s) on 4/7/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



## Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining  
Project: Semi Annual 2006  
Lab Order: 0604056

## CASE NARRATIVE

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Analytical Comments for METHOD 8015DRO\_S, SAMPLE 0604065-11A: DNOP not recovered due to dilution

# Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604056  
Project: Semi Annual 2006  
Lab ID: 0604056-01

Client Sample ID: MW#12  
Collection Date: 4/5/2006 10:25:00 AM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | ND     | 1.0      |      | mg/L  | 1  | 4/11/2006 6:11:53 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 6:11:53 PM |
| Surr: DNOP                            | 111    | 58-140   |      | %REC  | 1  | 4/11/2006 6:11:53 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | ND     | 2.5      |      | µg/L  | 1  | 4/17/2006 2:27:03 PM |
| Benzene                               | 1.0    | 1.0      |      | µg/L  | 1  | 4/17/2006 2:27:03 PM |
| Toluene                               | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 2:27:03 PM |
| Ethylbenzene                          | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 2:27:03 PM |
| Xylenes, Total                        | ND     | 3.0      |      | µg/L  | 1  | 4/17/2006 2:27:03 PM |
| Surr: 4-Bromofluorobenzene            | 93.3   | 82.2-119 |      | %REC  | 1  | 4/17/2006 2:27:03 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604056  
Project: Semi Annual 2006  
Lab ID: 0604056-02

Client Sample ID: MW#34  
Collection Date: 4/5/2006 12:55:00 PM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|--------------------------------|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: BDH          |
| Methyl tert-butyl ether (MTBE) | ND     | 2.5      |      | µg/L  | 1  | 4/17/2006 2:54:56 PM  |
| Benzene                        | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 2:54:56 PM  |
| Toluene                        | 30     | 10       |      | µg/L  | 10 | 4/15/2006 12:15:57 AM |
| Ethylbenzene                   | 5.5    | 1.0      |      | µg/L  | 1  | 4/17/2006 2:54:56 PM  |
| Xylenes, Total                 | 21     | 3.0      |      | µg/L  | 1  | 4/17/2006 2:54:56 PM  |
| Surr: 4-Bromofluorobenzene     | 99.5   | 82.2-119 |      | %REC  | 10 | 4/15/2006 12:15:57 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604056  
Project: Semi Annual 2006  
Lab ID: 0604056-03

Client Sample ID: MW#35  
Collection Date: 4/5/2006 1:20:00 PM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)     | ND     | 2.5      |      | µg/L  | 1  | 4/17/2006 3:23:00 PM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 3:23:00 PM |
| Toluene                            | 38     | 1.0      |      | µg/L  | 1  | 4/17/2006 3:23:00 PM |
| Ethylbenzene                       | 11     | 1.0      |      | µg/L  | 1  | 4/17/2006 3:23:00 PM |
| Xylenes, Total                     | 39     | 3.0      |      | µg/L  | 1  | 4/17/2006 3:23:00 PM |
| Surr: 4-Bromofluorobenzene         | 96.3   | 82.2-119 |      | %REC  | 1  | 4/17/2006 3:23:00 PM |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604056  
Project: Semi Annual 2006  
Lab ID: 0604056-04

Client Sample ID: MW#37  
Collection Date: 4/5/2006 1:50:00 PM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)     | ND     | 2.5      |      | µg/L  | 1  | 4/17/2006 3:51:07 PM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 3:51:07 PM |
| Toluene                            | 5.3    | 1.0      |      | µg/L  | 1  | 4/17/2006 3:51:07 PM |
| Ethylbenzene                       | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 3:51:07 PM |
| Xylenes, Total                     | 3.0    | 3.0      |      | µg/L  | 1  | 4/17/2006 3:51:07 PM |
| Surr: 4-Bromofluorobenzene         | 97.7   | 82.2-119 |      | %REC  | 1  | 4/17/2006 3:51:07 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604056  
Project: Semi Annual 2006  
Lab ID: 0604056-05

Client Sample ID: MW#38  
Collection Date: 4/6/2006 8:15:00 AM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 2.8    | 1.0      |      | mg/L  | 1  | 4/11/2006 7:19:16 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 7:19:16 PM |
| Surr: DNOP                            | 119    | 58-140   |      | %REC  | 1  | 4/11/2006 7:19:16 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | 4.5    | 2.5      |      | µg/L  | 1  | 4/17/2006 4:19:16 PM |
| Benzene                               | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 4:19:16 PM |
| Toluene                               | 2.9    | 1.0      |      | µg/L  | 1  | 4/17/2006 4:19:16 PM |
| Ethylbenzene                          | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 4:19:16 PM |
| Xylenes, Total                        | ND     | 3.0      |      | µg/L  | 1  | 4/17/2006 4:19:16 PM |
| Surr: 4-Bromofluorobenzene            | 94.0   | 82.2-119 |      | %REC  | 1  | 4/17/2006 4:19:16 PM |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604056  
Project: Semi Annual 2006  
Lab ID: 0604056-06

Client Sample ID: MW#36  
Collection Date: 4/6/2006 8:35:00 AM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)     | ND     | 2.5      |      | µg/L  | 1  | 4/17/2006 4:47:32 PM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 4:47:32 PM |
| Toluene                            | 16     | 1.0      |      | µg/L  | 1  | 4/17/2006 4:47:32 PM |
| Ethylbenzene                       | 4.6    | 1.0      |      | µg/L  | 1  | 4/17/2006 4:47:32 PM |
| Xylenes, Total                     | 14     | 3.0      |      | µg/L  | 1  | 4/17/2006 4:47:32 PM |
| Surr: 4-Bromofluorobenzene         | 96.8   | 82.2-119 |      | %REC  | 1  | 4/17/2006 4:47:32 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 18-Apr-06

CLIENT: San Juan Refining

Client Sample ID: MW#32

Lab Order: 0604056

Collection Date: 4/6/2006 9:30:00 AM

Project: Semi Annual 2006

Date Received: 4/7/2006

Lab ID: 0604056-07

Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)     | ND     | 2.5      |      | µg/L  | 1  | 4/17/2006 5:53:05 PM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 5:53:05 PM |
| Toluene                            | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 5:53:05 PM |
| Ethylbenzene                       | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 5:53:05 PM |
| Xylenes, Total                     | ND     | 3.0      |      | µg/L  | 1  | 4/17/2006 5:53:05 PM |
| Surr: 4-Bromofluorobenzene         | 92.6   | 82.2-119 |      | %REC  | 1  | 4/17/2006 5:53:05 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

CLIENT: San Juan Refining  
 Work Order: 0604056  
 Project: Semi Annual 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO\_W

|                     |                 |                     |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10154 | SampType: MBLK  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18888  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/11/2006 | SeqNo: 468734 |          |           |             |      |          |      |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                             |                 |                     |             |                          |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10154        | SampType: LCS   | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18888  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/11/2006 | SeqNo: 468947 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 4.983           | 1.0                 | 5           | 0                        | 99.7          | 81.2     | 149       |             |      |          |      |

|                             |                 |                     |             |                          |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-10154       | SampType: LCSD  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18922  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/14/2006 | SeqNo: 470075 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 7.200           | 1.0                 | 5           | 0                        | 144           | 81.2     | 149       | 4.983       | 36.4 | 23       | R    |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
Work Order: 0604056  
Project: Semi Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                   |                  |                      |             |                          |                                                        |
|-------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940                                           |
| Client ID: ZZZZZ  | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/14/2006 | SeqNo: 470575                                          |
| Analyte           | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 2.5  
Toluene 1.0  
Ethylbenzene 1.0  
Xylenes, Total 3.0

|                          |                  |                      |             |                          |                                                        |
|--------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB 041706 | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945                                           |
| Client ID: ZZZZZ         | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470688                                          |
| Analyte                  | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 2.5  
Toluene 1.0  
Ethylbenzene 1.0  
Xylenes, Total 3.0

|                      |                  |                      |             |                          |                                                        |
|----------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940                                           |
| Client ID: ZZZZZ     | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/15/2006 | SeqNo: 470576                                          |
| Analyte              | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 15.36 2.5 0 76.8 64.5 133  
Toluene 20.61 1.0 0 103 88.5 114  
Ethylbenzene 20.97 1.0 0 105 87.2 114  
Xylenes, Total 20.34 1.0 0 102 88.6 113  
41.18 3.0 0 103 83.3 114

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945                                           |
| Client ID: ZZZZZ          | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470689                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
Work Order: 0604056  
Project: Semi Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                                |                  |                      |             |                          |               |          |           |             |      |          |      |
|--------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS      | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945  |          |           |             |      |          |      |
| Client ID: ZZZZZ               | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470689 |          |           |             |      |          |      |
| Analyte                        | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 21.65            | 2.5                  | 20          | 0                        | 108           | 64.5     | 133       |             |      |          |      |
| Benzene                        | 21.40            | 1.0                  | 20          | 0                        | 107           | 88.5     | 114       |             |      |          |      |
| Toluene                        | 22.33            | 1.0                  | 20          | 0                        | 112           | 87.2     | 114       |             |      |          |      |
| Ethylbenzene                   | 22.57            | 1.0                  | 20          | 0                        | 113           | 88.6     | 113       |             |      |          |      |
| Xylenes, Total                 | 46.82            | 3.0                  | 40          | 0                        | 117           | 83.3     | 114       |             |      |          | S    |

|                                |                  |                      |             |                          |               |          |           |             |      |          |      |
|--------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS      | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945  |          |           |             |      |          |      |
| Client ID: ZZZZZ               | Batch ID: R18945 | TestNo.: SW8021      |             | Analysis Date: 4/18/2006 | SeqNo: 471167 |          |           |             |      |          |      |
| Analyte                        | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 15.99            | 2.5                  | 20          | 0                        | 79.9          | 64.5     | 133       |             |      |          |      |
| Benzene                        | 21.75            | 1.0                  | 20          | 0                        | 109           | 88.5     | 114       |             |      |          |      |
| Toluene                        | 22.33            | 1.0                  | 20          | 0                        | 112           | 87.2     | 114       |             |      |          |      |
| Ethylbenzene                   | 22.35            | 1.0                  | 20          | 0                        | 112           | 88.6     | 113       |             |      |          |      |
| Xylenes, Total                 | 45.41            | 3.0                  | 40          | 0                        | 114           | 83.3     | 114       |             |      |          |      |

|                                |                  |                      |             |                          |               |          |           |             |       |          |      |
|--------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|-------|----------|------|
| Sample ID: 100NG LCSD          | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940  |          |           |             |       |          |      |
| Client ID: ZZZZZ               | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/15/2006 | SeqNo: 470577 |          |           |             |       |          |      |
| Analyte                        | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 15.62            | 2.5                  | 20          | 0                        | 78.1          | 64.5     | 133       | 15.36       | 1.67  | 28       |      |
| Benzene                        | 20.70            | 1.0                  | 20          | 0                        | 103           | 88.5     | 114       | 20.61       | 0.416 | 27       |      |
| Toluene                        | 21.80            | 1.0                  | 20          | 0                        | 109           | 87.2     | 114       | 20.97       | 3.87  | 19       |      |
| Ethylbenzene                   | 20.98            | 1.0                  | 20          | 0                        | 105           | 88.6     | 113       | 20.34       | 3.10  | 10       |      |
| Xylenes, Total                 | 42.75            | 3.0                  | 40          | 0                        | 107           | 83.3     | 114       | 41.18       | 3.74  | 13       |      |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit  
H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/7/2006

Work Order Number 0604056

Received by GLS

Checklist completed by

Signature

*[Signature]*

Date

4-7-06

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Sample 0604056-6 "MW #36" one VOA was broken upon arrival GS 4-7-06

Corrective Action





## COVER LETTER

Thursday, April 20, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: Semi - Annual 2006

Order No.: 0604097

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/12/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory

Date: 20-Apr-06

CLIENT: San Juan Refining  
Project: Semi - Annual 2006

Lab Order: 0604097

| Lab ID:                        | 0604097-02 | Collection Date: | 4/10/2006 2:00:00 PM   |
|--------------------------------|------------|------------------|------------------------|
| Client Sample ID:              | MW #27     | Matrix:          | AQUEOUS                |
| Analyses                       | Result     | PQL Qual Units   | DF Date Analyzed       |
| EPA METHOD 8021B: VOLATILES    |            |                  | Analyst: BDH           |
| Methyl tert-butyl ether (MTBE) | ND         | 2.5 µg/L         | 1 4/18/2006 4:53:52 AM |
| Benzene                        | 5.8        | 1.0 µg/L         | 1 4/18/2006 4:53:52 AM |
| Toluene                        | ND         | 1.0 µg/L         | 1 4/18/2006 4:53:52 AM |
| Ethylbenzene                   | ND         | 1.0 µg/L         | 1 4/18/2006 4:53:52 AM |
| Xylenes, Total                 | 4.2        | 3.0 µg/L         | 1 4/18/2006 4:53:52 AM |
| Surr: 4-Bromofluorobenzene     | 114        | 82.2-119 %REC    | 1 4/18/2006 4:53:52 AM |

| Lab ID:                        | 0604097-03 | Collection Date: | 4/10/2006 2:45:00 PM   |
|--------------------------------|------------|------------------|------------------------|
| Client Sample ID:              | MW #33     | Matrix:          | AQUEOUS                |
| Analyses                       | Result     | PQL Qual Units   | DF Date Analyzed       |
| EPA METHOD 8021B: VOLATILES    |            |                  | Analyst: BDH           |
| Methyl tert-butyl ether (MTBE) | ND         | 2.5 µg/L         | 1 4/18/2006 5:28:46 AM |
| Benzene                        | ND         | 1.0 µg/L         | 1 4/18/2006 5:28:46 AM |
| Toluene                        | 1.6        | 1.0 µg/L         | 1 4/18/2006 5:28:46 AM |
| Ethylbenzene                   | ND         | 1.0 µg/L         | 1 4/18/2006 5:28:46 AM |
| Xylenes, Total                 | ND         | 3.0 µg/L         | 1 4/18/2006 5:28:46 AM |
| Surr: 4-Bromofluorobenzene     | 92.6       | 82.2-119 %REC    | 1 4/18/2006 5:28:46 AM |

| Lab ID:                        | 0604097-05 | Collection Date: | 4/11/2006 8:10:00 AM   |
|--------------------------------|------------|------------------|------------------------|
| Client Sample ID:              | Outfall #2 | Matrix:          | AQUEOUS                |
| Analyses                       | Result     | PQL Qual Units   | DF Date Analyzed       |
| EPA METHOD 8021B: VOLATILES    |            |                  | Analyst: BDH           |
| Methyl tert-butyl ether (MTBE) | ND         | 2.5 µg/L         | 1 4/18/2006 6:03:32 AM |
| Benzene                        | ND         | 1.0 µg/L         | 1 4/18/2006 6:03:32 AM |
| Toluene                        | ND         | 1.0 µg/L         | 1 4/18/2006 6:03:32 AM |
| Ethylbenzene                   | ND         | 1.0 µg/L         | 1 4/18/2006 6:03:32 AM |
| Xylenes, Total                 | ND         | 3.0 µg/L         | 1 4/18/2006 6:03:32 AM |
| Surr: 4-Bromofluorobenzene     | 86.8       | 82.2-119 %REC    | 1 4/18/2006 6:03:32 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level B Analyte detected in the associated Method Blank  
E Value above quantitation range H Holding times for preparation or analysis exceeded  
J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit  
S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory

Date: 20-Apr-06

CLIENT: San Juan Refining  
Project: Semi - Annual 2006

Lab Order: 0604097

Lab ID: 0604097-06

Collection Date: 4/11/2006 8:25:00 AM

Client Sample ID: Outfall #3

Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8021B: VOLATILES

Analyst: BDH

|                                |      |          |  |      |   |                      |
|--------------------------------|------|----------|--|------|---|----------------------|
| Methyl tert-butyl ether (MTBE) | ND   | 2.5      |  | µg/L | 1 | 4/18/2006 6:38:17 AM |
| Benzene                        | ND   | 1.0      |  | µg/L | 1 | 4/18/2006 6:38:17 AM |
| Toluene                        | ND   | 1.0      |  | µg/L | 1 | 4/18/2006 6:38:17 AM |
| Ethylbenzene                   | ND   | 1.0      |  | µg/L | 1 | 4/18/2006 6:38:17 AM |
| Xylenes, Total                 | ND   | 3.0      |  | µg/L | 1 | 4/18/2006 6:38:17 AM |
| Surr: 4-Bromofluorobenzene     | 89.0 | 82.2-119 |  | %REC | 1 | 4/18/2006 6:38:17 AM |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

CLIENT: San Juan Refining  
 Work Order: 0604097  
 Project: Semi - Annual 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                     |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 5ml rb 1 | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18956  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: R18956 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 471095 |          |           |             |      |          |      |
| Analyte             | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18956  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R18956 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 471096 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18956  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18956 | TestNo: SW8021       |             | Analysis Date: 4/18/2006 | SeqNo: 471097 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits



# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/12/2006

Work Order Number 0604097

Received by LMM

Checklist completed by Lisa Halek 4/12/06  
Signature Date

Matrix

Carrier name UPS

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐  
Custody seals intact on shipping container/cooler? Yes ☒ No ☐ Not Present ☐ Not Shipped ☐  
Custody seals intact on sample bottles? Yes ☐ No ☒ N/A ☐  
Chain of custody present? Yes ☒ No ☐  
Chain of custody signed when relinquished and received? Yes ☒ No ☐  
Chain of custody agrees with sample labels? Yes ☒ No ☐  
Samples in proper container/bottle? Yes ☒ No ☐  
Sample containers intact? Yes ☒ No ☐  
Sufficient sample volume for indicated test? Yes ☒ No ☐  
All samples received within holding time? Yes ☒ No ☐  
Water - VOA vials have zero headspace? No VOA vials submitted ☐ Yes ☒ No ☐  
Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒  
Container/Temp Blank temperature? 2° 4° C ± 2 Acceptable  
If given sufficient time to cool.

COMMENTS:

\_\_\_\_\_

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: MW#11 all vials broken/frozen upon receipt AT  
MW#31 " " " " " " AT  
Outfall #3 1 VOA broken/frozen " " AT

Corrective Action

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



COVER LETTER

Tuesday, April 25, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: Semi Annual 2006

Order No.: 0604108

Dear Cindy Hurtado:

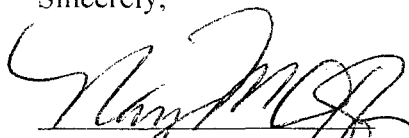
Hall Environmental Analysis Laboratory received 7 sample(s) on 4/13/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory

Date: 25-Apr-06

CLIENT: San Juan Refining

Client Sample ID: MW #26

Lab Order: 0604108

Collection Date: 4/11/2006 10:15:00 AM

Project: Semi Annual 2006

Date Received: 4/13/2006

Lab ID: 0604108-01

Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | ND     | 50       |      | µg/L  | 20 | 4/21/2006 1:18:26 PM |
| Benzene                        | 290    | 20       |      | µg/L  | 20 | 4/21/2006 1:18:26 PM |
| Toluene                        | 73     | 20       |      | µg/L  | 20 | 4/21/2006 1:18:26 PM |
| Ethylbenzene                   | 300    | 20       |      | µg/L  | 20 | 4/21/2006 1:18:26 PM |
| Xylenes, Total                 | ND     | 60       |      | µg/L  | 20 | 4/21/2006 1:18:26 PM |
| Surr: 4-Bromofluorobenzene     | 109    | 82.2-119 |      | %REC  | 20 | 4/21/2006 1:18:26 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 25-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604108  
Project: Semi Annual 2006  
Lab ID: 0604108-02

Client Sample ID: MW #39  
Collection Date: 4/11/2006 11:00:00 AM  
Date Received: 4/13/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL    | Qual | Units | DF | Date Analyzed         |
|---------------------------------------|--------|--------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |        |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)           | 2.6    | 1.0    |      | mg/L  | 1  | 4/18/2006 3:23:08 PM  |
| Motor Oil Range Organics (MRO)        | ND     | 5.0    |      | mg/L  | 1  | 4/18/2006 3:23:08 PM  |
| Surr: DNOP                            | 109    | 58-140 |      | %REC  | 1  | 4/18/2006 3:23:08 PM  |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |        |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)        | ND     | 50     |      | µg/L  | 20 | 4/24/2006 12:10:39 PM |
| Benzene                               | 280    | 20     |      | µg/L  | 20 | 4/24/2006 12:10:39 PM |
| Toluene                               | 50     | 20     |      | µg/L  | 20 | 4/24/2006 12:10:39 PM |
| Ethylbenzene                          | 900    | 20     |      | µg/L  | 20 | 4/24/2006 12:10:39 PM |
| Xylenes, Total                        | 890    | 60     |      | µg/L  | 20 | 4/24/2006 12:10:39 PM |
| Surr: 4-Bromofluorobenzene            | 116    | 85-115 | S    | %REC  | 20 | 4/24/2006 12:10:39 PM |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | .B Analyte detected in the associated Method Blank   |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory

Date: 25-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604108  
Project: Semi Annual 2006  
Lab ID: 0604108-03

Client Sample ID: MW #8  
Collection Date: 4/12/2006 9:45:00 AM  
Date Received: 4/13/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)     | ND     | 2.5      |      | µg/L  | 1  | 4/21/2006 2:48:16 PM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 2:48:16 PM |
| Toluene                            | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 2:48:16 PM |
| Ethylbenzene                       | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 2:48:16 PM |
| Xylenes, Total                     | ND     | 3.0      |      | µg/L  | 1  | 4/21/2006 2:48:16 PM |
| Surr: 4-Bromofluorobenzene         | 106    | 82.2-119 |      | %REC  | 1  | 4/21/2006 2:48:16 PM |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 25-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604108  
Project: Semi Annual 2006  
Lab ID: 0604108-04

Client Sample ID: MW #13  
Collection Date: 4/12/2006 1:00:00 PM  
Date Received: 4/13/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | 10     | 2.5      |      | µg/L  | 1  | 4/21/2006 3:17:27 PM |
| Benzene                        | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 3:17:27 PM |
| Toluene                        | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 3:17:27 PM |
| Ethylbenzene                   | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 3:17:27 PM |
| Xylenes, Total                 | ND     | 3.0      |      | µg/L  | 1  | 4/21/2006 3:17:27 PM |
| Surr: 4-Bromofluorobenzene     | 107    | 82.2-119 |      | %REC  | 1  | 4/21/2006 3:17:27 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 25-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604108  
Project: Semi Annual 2006  
Lab ID: 0604108-05

Client Sample ID: MW #31  
Collection Date: 4/12/2006 1:20:00 PM  
Date Received: 4/13/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF  | Date Analyzed         |
|------------------------------------|--------|----------|------|-------|-----|-----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |     | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)     | ND     | 120      |      | µg/L  | 50  | 4/21/2006 3:49:12 PM  |
| Benzene                            | 6100   | 100      |      | µg/L  | 100 | 4/24/2006 12:42:25 PM |
| Toluene                            | 1500   | 50       |      | µg/L  | 50  | 4/21/2006 3:49:12 PM  |
| Ethylbenzene                       | 940    | 50       |      | µg/L  | 50  | 4/21/2006 3:49:12 PM  |
| Xylenes, Total                     | 4500   | 150      |      | µg/L  | 50  | 4/21/2006 3:49:12 PM  |
| Surr: 4-Bromofluorobenzene         | 106    | 82.2-119 |      | %REC  | 50  | 4/21/2006 3:49:12 PM  |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 25-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604108  
Project: Semi Annual 2006  
Lab ID: 0604108-06

Client Sample ID: MW #3  
Collection Date: 4/12/2006 1:50:00 PM  
Date Received: 4/13/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | ND     | 2.5      |      | µg/L  | 1  | 4/21/2006 4:18:13 PM |
| Benzene                        | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 4:18:13 PM |
| Toluene                        | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 4:18:13 PM |
| Ethylbenzene                   | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 4:18:13 PM |
| Xylenes, Total                 | ND     | 3.0      |      | µg/L  | 1  | 4/21/2006 4:18:13 PM |
| Surr: 4-Bromofluorobenzene     | 101    | 82.2-119 |      | %REC  | 1  | 4/21/2006 4:18:13 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 25-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604108  
Project: Semi Annual 2006  
Lab ID: 0604108-07

Client Sample ID: MW #7  
Collection Date: 4/12/2006 2:15:00 PM  
Date Received: 4/13/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)     | ND     | 2.5      |      | µg/L  | 1  | 4/21/2006 5:45:19 PM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 5:45:19 PM |
| Toluene                            | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 5:45:19 PM |
| Ethylbenzene                       | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 5:45:19 PM |
| Xylenes, Total                     | ND     | 3.0      |      | µg/L  | 1  | 4/21/2006 5:45:19 PM |
| Surr: 4-Bromofluorobenzene         | 103    | 82.2-119 |      | %REC  | 1  | 4/21/2006 5:45:19 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



CLIENT: San Juan Refining  
 Work Order: 0604108  
 Project: Semi Annual 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO\_W

|                     |                 |                     |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10192 | SampType: MBLK  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18955  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10192 | TestNo: SW8015      |             | Analysis Date: 4/18/2006 | SeqNo: 471338 |          |           |             |      |          |      |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                             |                 |                     |             |                          |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10192        | SampType: LCS   | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18955  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10192 | TestNo: SW8015      |             | Analysis Date: 4/18/2006 | SeqNo: 471339 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 5.600           | 1.0                 | 5           | 0                        | 112           | 81.2     | 149       |             |      |          |      |

|                             |                 |                     |             |                          |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-10192       | SampType: LCSD  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18955  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10192 | TestNo: SW8015      |             | Analysis Date: 4/18/2006 | SeqNo: 471340 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 6.282           | 1.0                 | 5           | 0                        | 126           | 81.2     | 149       | 5.6         | 11.5 | 23       |      |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0604108  
 Project: Semi Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ           | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472742                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene ND 2.5  
 Toluene ND 1.0  
 Ethylbenzene ND 1.0  
 Xylenes, Total ND 3.0

|                      |                  |                      |             |                          |                                                        |
|----------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB-II | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ     | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472803                                          |
| Analyte              | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene ND 2.5  
 Toluene ND 1.0  
 Ethylbenzene ND 1.0  
 Xylenes, Total ND 3.0

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19029                                           |
| Client ID: ZZZZZ           | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/24/2006 | SeqNo: 473100                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene ND 2.5  
 Toluene ND 1.0  
 Ethylbenzene ND 1.0  
 Xylenes, Total ND 3.0

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ          | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472743                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
Work Order: 0604108  
Project: Semi Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472743 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|------|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 18.90 | 2.5 | 20 | 0 | 94.5 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 20.49 | 1.0 | 20 | 0 | 102  | 88.5 | 114 |  |  |  |  |
| Toluene                        | 20.65 | 1.0 | 20 | 0 | 103  | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 20.53 | 1.0 | 20 | 0 | 103  | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 42.11 | 3.0 | 40 | 0 | 105  | 83.3 | 114 |  |  |  |  |

|                              |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS-II | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ             | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472804 |          |           |             |      |          |      |
| Analyte                      | Result           | PQL                  | SPK value:  | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|-----|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 20.50 | 2.5 | 20 | 0 | 102 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 21.40 | 1.0 | 20 | 0 | 107 | 88.5 | 114 |  |  |  |  |
| Toluene                        | 22.09 | 1.0 | 20 | 0 | 110 | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 21.67 | 1.0 | 20 | 0 | 108 | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 44.41 | 3.0 | 40 | 0 | 111 | 83.3 | 114 |  |  |  |  |

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19029  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473101 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|-----|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 21.33 | 2.5 | 20 | 0 | 107 | 51.2 | 138 |  |  |  |  |
| Benzene                        | 22.07 | 1.0 | 20 | 0 | 110 | 85   | 115 |  |  |  |  |
| Toluene                        | 22.68 | 1.0 | 20 | 0 | 113 | 85   | 118 |  |  |  |  |
| Ethylbenzene                   | 22.07 | 1.0 | 20 | 0 | 110 | 85   | 116 |  |  |  |  |
| Xylenes, Total                 | 46.39 | 3.0 | 40 | 0 | 116 | 85   | 119 |  |  |  |  |

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19029  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473102 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit  
H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
Work Order: 0604108  
Project: Semi Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19029  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473102 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |       |      |    |  |
|--------------------------------|-------|-----|----|---|-----|------|-----|-------|------|----|--|
| Methyl tert-butyl ether (MTBE) | 21.02 | 2.5 | 20 | 0 | 105 | 51.2 | 138 | 21.33 | 1.45 | 28 |  |
| Benzene                        | 21.13 | 1.0 | 20 | 0 | 106 | 85   | 115 | 22.07 | 4.37 | 27 |  |
| Toluene                        | 21.83 | 1.0 | 20 | 0 | 109 | 85   | 118 | 22.68 | 3.81 | 19 |  |
| Ethylbenzene                   | 20.68 | 1.0 | 20 | 0 | 103 | 85   | 116 | 22.07 | 6.50 | 10 |  |
| Xylenes, Total                 | 43.04 | 3.0 | 40 | 0 | 108 | 85   | 119 | 46.39 | 7.50 | 13 |  |

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0604108-06A MS | SampType: MS     | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: MW #3          | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472765 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |       |      |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|-------|------|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 21.19 | 2.5 | 20 | 0     | 106  | 64.5 | 133 |  |  |  |  |
| Benzene                        | 20.22 | 1.0 | 20 | 0.782 | 97.2 | 88.5 | 114 |  |  |  |  |
| Toluene                        | 20.72 | 1.0 | 20 | 0.604 | 101  | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 20.45 | 1.0 | 20 | 0     | 102  | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 42.20 | 3.0 | 40 | 0.98  | 103  | 83.3 | 114 |  |  |  |  |

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0604108-06A MSD | SampType: MSD    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: MW #3           | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472766 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |       |     |      |     |       |      |    |  |
|--------------------------------|-------|-----|----|-------|-----|------|-----|-------|------|----|--|
| Methyl tert-butyl ether (MTBE) | 22.06 | 2.5 | 20 | 0     | 110 | 64.5 | 133 | 21.19 | 3.99 | 28 |  |
| Benzene                        | 21.81 | 1.0 | 20 | 0.782 | 105 | 88.5 | 114 | 20.22 | 7.56 | 27 |  |
| Toluene                        | 22.32 | 1.0 | 20 | 0.604 | 109 | 87.2 | 114 | 20.72 | 7.47 | 19 |  |
| Ethylbenzene                   | 22.18 | 1.0 | 20 | 0     | 111 | 88.6 | 113 | 20.45 | 8.10 | 10 |  |
| Xylenes, Total                 | 45.50 | 3.0 | 40 | 0.98  | 111 | 83.3 | 114 | 42.2  | 7.52 | 13 |  |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

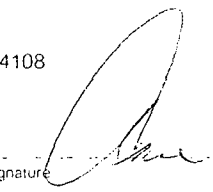
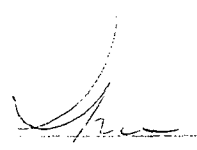
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR  
Work Order Number 0604108

Date and Time Received: 4/13/2006  
Received by AT

Checklist completed by   Date 4/13/06

Matrix \_\_\_\_\_ Carrier name UPS

|                                                         |                                                 |                                                          |                                         |                                      |
|---------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|-----------------------------------------|--------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/>    |                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/>    | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>                   | N/A <input type="checkbox"/>            |                                      |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                         |                                      |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                         |                                      |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                         |                                      |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                         |                                      |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                         |                                      |
| Sufficient sample volume for indicated test?            | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>                   |                                         |                                      |
| All samples received within holding time?               | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>                   |                                         |                                      |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/>                  | No <input type="checkbox"/>             |                                      |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>                              | N/A <input checked="" type="checkbox"/> |                                      |
| Container/Temp Blank temperature?                       | 2°                                              | 4° C ± 2 Acceptable<br>If given sufficient time to cool. |                                         |                                      |

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_



Std. Level 4

Client: SAN Juan Refining

Project Name:

Semi-Annual 2006

Project #:

Address: #50 Rd/4990

Bloomfield NM

87413

Project Manager:

Linda Hurtado

Sampler: Chris Dutto Kelly Owen

Sample Temperature:

Phone #: 505-632-4161

Fax #: 505-632-3911

| Date     | Time  | Matrix           | Sample I.D. No. | Number/Volume | Preservative      |                  | HEAL No. |
|----------|-------|------------------|-----------------|---------------|-------------------|------------------|----------|
|          |       |                  |                 |               | HgCl <sub>2</sub> | HNO <sub>3</sub> |          |
| 4/11/06  | 10:5A | H <sub>2</sub> O | MW # 26         | 3-VOL         |                   | X                | 260408-1 |
|          | 11A   | /                | MW # 39         | 4-VOL         |                   | X                | -2       |
| 11/20/06 | 9:5A  | H <sub>2</sub> O | MW # 8          | 3-VOL         |                   | X                | -3       |
|          | 1PM   | /                | MW # 13         | 3-VOL         |                   | X                | -4       |
|          | 120pm | /                | MW # 31         | 3-VOL         |                   | X                | -5       |
|          | 150pm | /                | MW # 3          | 3-VOL         |                   | X                | -6       |
|          | 2:5pm | /                | MW # 7          | 3-VOL         |                   | X                | -7       |

Relinquished By: (Signature)

Time: \_\_\_\_\_

Date: \_\_\_\_\_

Relinquished By: (Signature) A

(w) [Signature]

02

Received By: (Signature)

7/13/06

Relinquished By: (Signature)

Time:

Date:

Received By: (Signature)

1

# ANALYSIS REQUEST

[illegible]

Remarks:

## COVER LETTER

Monday, April 24, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: Semi Annual 2006

Order No.: 0604133

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/14/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory

Date: 24-Apr-06

CLIENT: San Juan Refining  
Project: Semi Annual 2006

Lab Order: 0604133

Lab ID: 0604133-01

Collection Date: 4/13/2006 1:20:00 PM

Client Sample ID: MW#29

Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)     | 4.5    | 2.5      |      | µg/L  | 1  | 4/21/2006 11:47:12 PM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 11:47:12 PM |
| Toluene                            | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 11:47:12 PM |
| Ethylbenzene                       | ND     | 1.0      |      | µg/L  | 1  | 4/21/2006 11:47:12 PM |
| Xylenes, Total                     | ND     | 3.0      |      | µg/L  | 1  | 4/21/2006 11:47:12 PM |
| Surr: 4-Bromofluorobenzene         | 105    | 82.2-119 |      | %REC  | 1  | 4/21/2006 11:47:12 PM |

Lab ID: 0604133-02

Collection Date: 4/13/2006 1:50:00 PM

Client Sample ID: MW#1

Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)     | ND     | 2.5      |      | µg/L  | 1  | 4/22/2006 12:16:15 AM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 12:16:15 AM |
| Toluene                            | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 12:16:15 AM |
| Ethylbenzene                       | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 12:16:15 AM |
| Xylenes, Total                     | ND     | 3.0      |      | µg/L  | 1  | 4/22/2006 12:16:15 AM |
| Surr: 4-Bromofluorobenzene         | 108    | 82.2-119 |      | %REC  | 1  | 4/22/2006 12:16:15 AM |

Lab ID: 0604133-03

Collection Date: 4/13/2006 2:45:00 PM

Client Sample ID: MW#44

Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)     | 2.8    | 2.5      |      | µg/L  | 1  | 4/22/2006 12:45:26 AM |
| Benzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 12:45:26 AM |
| Toluene                            | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 12:45:26 AM |
| Ethylbenzene                       | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 12:45:26 AM |
| Xylenes, Total                     | ND     | 3.0      |      | µg/L  | 1  | 4/22/2006 12:45:26 AM |
| Surr: 4-Bromofluorobenzene         | 106    | 82.2-119 |      | %REC  | 1  | 4/22/2006 12:45:26 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

CLIENT: San Juan Refining  
 Work Order: 0604133  
 Project: Semi Annual 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472742 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                      |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 5ML RB-II | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472803 |          |           |             |      |          |      |
| Analyte              | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472743 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

|                                |        |                  |                      |             |             |                          |           |               |      |          |      |
|--------------------------------|--------|------------------|----------------------|-------------|-------------|--------------------------|-----------|---------------|------|----------|------|
| Sample ID: 100NG BTEX LCS-II   |        | SampType: LCS    | TestCode: 8021BTEX_W |             | Units: µg/L | Prep Date:               |           | RunNo: 19011  |      |          |      |
| Client ID: ZZZZZ               |        | Batch ID: R19011 | TestNo: SW8021       |             |             | Analysis Date: 4/22/2006 |           | SeqNo: 472804 |      |          |      |
| Analyte                        | Result | PQL              | SPK value            | SPK Ref Val | %REC        | LowLimit                 | HighLimit | RPD Ref Val   | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 20.50  | 2.5              | 20                   | 0           | 102         | 64.5                     | 133       |               |      |          |      |
| Benzene                        | 21.40  | 1.0              | 20                   | 0           | 107         | 88.5                     | 114       |               |      |          |      |
| Toluene                        | 22.09  | 1.0              | 20                   | 0           | 110         | 87.2                     | 114       |               |      |          |      |
| Ethylbenzene                   | 21.67  | 1.0              | 20                   | 0           | 108         | 88.6                     | 113       |               |      |          |      |
| Xylenes, Total                 | 44.41  | 3.0              | 40                   | 0           | 111         | 83.3                     | 114       |               |      |          |      |

Qualifiers:

E

Value above quantitation range

ND

Not Detected at the Reporting Limit

H

Holding times for preparation or analysis exceeded

R

RPD outside accepted recovery limits

J

Analyte detected below quantitation limits

S

Spike Recovery outside accepted recovery limits



# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/14/2006

Work Order Number 0604133

Received by GLS

Checklist completed by

Signature

Date

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☒

No ☐

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

# CHAIN-OF-CUSTODY RECORD

Client: San Juan Refining

Address: #50 Rd 4990  
Bloomfield, NM  
87413

Phone #: 505-632-4161  
 Fax #: 505-632-3911

| Date    | Time | Matrix | Sample I.D. No. |
|---------|------|--------|-----------------|
| 4/13/06 | 1200 | H2O    | MW #29          |
|         | 150  | /      | MW #1           |
|         | 245  | /      | MW #44          |

Number/Volume  
 3-VOL  
 3-VOL  
 3-VOL

Preservative  
 HgCl<sub>2</sub> HNO<sub>3</sub>

HEAL No.  
 1004133

1  
 2  
 3

QA/QC Package:

Std ☐ Level 4 ☐

Other:

Project Name:

Semi-Annual 2006

Project #:

Project Manager:

Cindy Hurtado

Sampler:

Cindy Hurtado / Shelby Carlan

Sample Temperature:

12

**HALL ENVIRONMENTAL  
 ANALYSIS LABORATORY**  
 4901 Hawkins NE, Suite D  
 Albuquerque, New Mexico 87109  
 Tel. 505.345.3975 Fax 505.345.4107  
 www.hallenvironmental.com

## ANALYSIS REQUEST

| BTEX + MTBE + THB's (8021) | BTEX + MTBE + TPH (Gasoline Only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | EDC (Method 8021) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F <sup>-</sup> , Cl <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> , PO <sub>4</sub> <sup>3-</sup> , SO <sub>4</sub> <sup>2-</sup> ) | 8081 Pesticides / PCB's (8082) | 8260B (VOA) | 8270 (Semi-VOA) | Air Bubbles or Headspace (Y or N) |
|----------------------------|-----------------------------------|-------------------------------|--------------------|--------------------|-------------------|-------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------|-----------------|-----------------------------------|
| X                          |                                   |                               |                    |                    |                   |                   |               |                                                                                                                                                                          |                                |             |                 |                                   |
| X                          |                                   |                               |                    |                    |                   |                   |               |                                                                                                                                                                          |                                |             |                 |                                   |
| X                          |                                   |                               |                    |                    |                   |                   |               |                                                                                                                                                                          |                                |             |                 |                                   |

Remarks:

Received By: (Signature) Cindy Hurtado  
 Received By: (Signature) Shelby Carlan

Date: 4/13/06 Time: 305pm  
 Date: 4/13/06 Time: 305pm

Relinquished By: (Signature) Cindy Hurtado  
 Relinquished By: (Signature) Cindy Hurtado

COVER LETTER

Thursday, May 04, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Semi-Annual - 2006

Order No.: 0604154

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/18/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

  
Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



## Hall Environmental Analysis Laboratory

Date: 04-May-06

CLIENT: San Juan Refining  
Project: Semi-Annual - 2006  
Lab Order: 0604154

### CASE NARRATIVE

---

EPA Method 8015 Diesel:

MW#11 was analyzed for diesel twice within holding time however the surrogate recoveries were poor and the sample formed a heavy emulsion. The sample was extracted a third time, at a x10 dilution, 2 days past the EPA 7 day holding time. The surrogates were acceptable on the third extraction.

# Hall Environmental Analysis Laboratory

Date: 04-May-06

CLIENT: San Juan Refining  
Lab Order: 0604154  
Project: Semi-Annual - 2006  
Lab ID: 0604154-01

Client Sample ID: MW #11  
Collection Date: 4/17/2006 9:40:00 AM  
Date Received: 4/18/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 35     | 10       | H    | mg/L  | 1  | 5/4/2006 11:11:11 AM |
| Motor Oil Range Organics (MRO)        | ND     | 50       | H    | mg/L  | 1  | 5/4/2006 11:11:11 AM |
| Surr: DNOP                            | 130    | 58-140   | H    | %REC  | 1  | 5/4/2006 11:11:11 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)        | ND     | 120      |      | µg/L  | 50 | 4/21/2006 6:16:51 PM |
| Benzene                               | 3200   | 50       |      | µg/L  | 50 | 4/21/2006 6:16:51 PM |
| Toluene                               | ND     | 50       |      | µg/L  | 50 | 4/21/2006 6:16:51 PM |
| Ethylbenzene                          | ND     | 50       |      | µg/L  | 50 | 4/21/2006 6:16:51 PM |
| Xylenes, Total                        | 230    | 150      |      | µg/L  | 50 | 4/21/2006 6:16:51 PM |
| Surr: 4-Bromofluorobenzene            | 102    | 82.2-119 |      | %REC  | 50 | 4/21/2006 6:16:51 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 04-May-06

CLIENT: San Juan Refining  
Lab Order: 0604154  
Project: Semi-Annual - 2006  
Lab ID: 0604154-02

Client Sample ID: MW #30  
Collection Date: 4/17/2006 1:15:00 PM  
Date Received: 4/18/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|-----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |     | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)     | ND     | 620      |      | µg/L  | 250 | 4/21/2006 8:15:57 PM |
| Benzene                            | 3500   | 250      |      | µg/L  | 250 | 4/21/2006 8:15:57 PM |
| Toluene                            | 1400   | 250      |      | µg/L  | 250 | 4/21/2006 8:15:57 PM |
| Ethylbenzene                       | 2600   | 250      |      | µg/L  | 250 | 4/21/2006 8:15:57 PM |
| Xylenes, Total                     | 6800   | 750      |      | µg/L  | 250 | 4/21/2006 8:15:57 PM |
| Surr: 4-Bromofluorobenzene         | 96.2   | 82.2-119 |      | %REC  | 250 | 4/21/2006 8:15:57 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 04-May-06

CLIENT: San Juan Refining  
Lab Order: 0604154  
Project: Semi-Annual - 2006  
Lab ID: 0604154-03

Client Sample ID: RW #14  
Collection Date: 4/17/2006 1:45:00 PM  
Date Received: 4/18/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|-----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |     | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)     | ND     | 620      |      | µg/L  | 250 | 4/21/2006 8:47:35 PM |
| Benzene                            | 1200   | 250      |      | µg/L  | 250 | 4/21/2006 8:47:35 PM |
| Toluene                            | 10000  | 250      |      | µg/L  | 250 | 4/21/2006 8:47:35 PM |
| Ethylbenzene                       | 2500   | 250      |      | µg/L  | 250 | 4/21/2006 8:47:35 PM |
| Xylenes, Total                     | 15000  | 750      |      | µg/L  | 250 | 4/21/2006 8:47:35 PM |
| Surr: 4-Bromofluorobenzene         | 97.5   | 82.2-119 |      | %REC  | 250 | 4/21/2006 8:47:35 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 04-May-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0604154  
**Project:** Semi-Annual - 2006  
**Lab ID:** 0604154-04

**Client Sample ID:** RW #3  
**Collection Date:** 4/17/2006 3:00:00 PM  
**Date Received:** 4/18/2006  
**Matrix:** AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF  | Date Analyzed         |
|------------------------------------|--------|----------|------|-------|-----|-----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |     | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)     | 750    | 250      |      | µg/L  | 100 | 4/21/2006 9:19:17 PM  |
| Benzene                            | 24000  | 500      |      | µg/L  | 500 | 4/24/2006 11:09:51 AM |
| Toluene                            | 28000  | 500      |      | µg/L  | 500 | 4/24/2006 11:09:51 AM |
| Ethylbenzene                       | 2700   | 100      |      | µg/L  | 100 | 4/21/2006 9:19:17 PM  |
| Xylenes, Total                     | 15000  | 300      |      | µg/L  | 100 | 4/21/2006 9:19:17 PM  |
| Surr: 4-Bromofluorobenzene         | 109    | 82.2-119 |      | %REC  | 100 | 4/21/2006 9:19:17 PM  |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

COVER LETTER

Thursday, November 09, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: River Sampling 4th Qtr 2006

Order No.: 0610259

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 10/24/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425  
AZ license # AZ0682  
ORELAP Lab # NM100001



## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #45

Lab Order: 0610259

Collection Date: 10/23/2006 9:45:00 AM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-01

Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 10/26/2006 3:05:03 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 10/26/2006 3:05:03 PM |
| Surr: DNOP                                | 113    | 58-140   |      | %REC  | 1  | 10/26/2006 3:05:03 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 1:27:42 PM |
| Surr: BFB                                 | 92.5   | 84.5-129 |      | %REC  | 1  | 10/24/2006 1:27:42 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.18   | 0.10     |      | mg/L  | 1  | 10/24/2006 3:39:34 PM |
| Chloride                                  | 2.8    | 0.10     |      | mg/L  | 1  | 10/24/2006 3:39:34 PM |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 3:39:34 PM |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 3:39:34 PM |
| Nitrogen, Nitrate (As N)                  | 0.19   | 0.10     |      | mg/L  | 1  | 10/24/2006 3:39:34 PM |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 3:39:34 PM |
| Sulfate                                   | 66     | 0.50     |      | mg/L  | 1  | 10/24/2006 3:39:34 PM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC          |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 11/1/2006             |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Barium                                    | 0.061  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Calcium                                   | 33     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Iron                                      | 0.14   | 0.020    |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Magnesium                                 | 5.4    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Manganese                                 | 0.016  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Potassium                                 | 1.7    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Selenium                                  | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Silver                                    | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Sodium                                    | 21     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Uranium                                   | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |
| Zinc                                      | 0.031  | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:25:04 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit



## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #45

Lab Order: 0610259

Collection Date: 10/23/2006 9:45:00 AM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-01

Matrix: AQUEOUS

| Analyses                                   | Result | PQL    | Qual | Units | DF | Date Analyzed          |
|--------------------------------------------|--------|--------|------|-------|----|------------------------|
| <b>EPA 6010B: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: NMO           |
| Arsenic                                    | ND     | 0.020  |      | mg/L  | 1  | 10/26/2006 10:08:22 AM |
| Barium                                     | 0.12   | 0.020  |      | mg/L  | 1  | 10/26/2006 10:08:22 AM |
| Cadmium                                    | ND     | 0.0020 |      | mg/L  | 1  | 10/26/2006 10:08:22 AM |
| Chromium                                   | ND     | 0.0060 |      | mg/L  | 1  | 10/26/2006 10:08:22 AM |
| Lead                                       | ND     | 0.0050 |      | mg/L  | 1  | 11/7/2006 2:34:57 PM   |
| Selenium                                   | ND     | 0.050  |      | mg/L  | 1  | 10/26/2006 10:08:22 AM |
| Silver                                     | ND     | 0.0050 |      | mg/L  | 1  | 10/26/2006 10:08:22 AM |

**EPA METHOD 8270C: SEMIVOLATILES**

Analyst: BL

|                             |    |    |  |      |   |            |
|-----------------------------|----|----|--|------|---|------------|
| Acenaphthene                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Acenaphthylene              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Aniline                     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Anthracene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Azobenzene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benz(a)anthracene           | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(a)pyrene              | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(b)fluoranthene        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(g,h,i)perylene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzo(k)fluoranthene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzoic acid                | ND | 50 |  | µg/L | 1 | 10/27/2006 |
| Benzyl alcohol              | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethoxy)methane  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethyl)ether     | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroisopropyl)ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-ethylhexyl)phthalate  | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| 4-Bromophenyl phenyl ether  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Butyl benzyl phthalate      | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Carbazole                   | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloro-3-methylphenol     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloroaniline             | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 2-Chloronaphthalene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 2-Chlorophenol              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chlorophenyl phenyl ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Chrysene                    | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Di-n-butyl phthalate        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Di-n-octyl phthalate        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Dibenz(a,h)anthracene       | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Dibenzofuran                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,2-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,3-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #45

Lab Order: 0610259

Collection Date: 10/23/2006 9:45:00 AM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-01

Matrix: AQUEOUS

| Analyses                               | Result | PQL      | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|----------|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |          |      |       |    | Analyst: BL   |
| 1,4-Dichlorobenzene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 3,3'-Dichlorobenzidine                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Diethyl phthalate                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Dimethyl phthalate                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dichlorophenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dimethylphenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 4,6-Dinitro-2-methylphenol             | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,6-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluoranthene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluorene                               | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobenzene                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobutadiene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorocyclopentadiene              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachloroethane                       | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Isophorone                             | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylnaphthalene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylphenol                         | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 3+4-Methylphenol                       | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodi-n-propylamine              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodimethylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodiphenylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Naphthalene                            | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 3-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitroaniline                         | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| Nitrobenzene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitrophenol                          | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitrophenol                          | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Pentachlorophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Phenanthrene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Phenol                                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Pyrene                                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Pyridine                               | ND     | 30       |      | µg/L  | 1  | 10/27/2006    |
| 1,2,4-Trichlorobenzene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,5-Trichlorophenol                  | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,6-Trichlorophenol                  | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Surr: 2,4,6-Tribromophenol             | 58.3   | 16.6-150 |      | %REC  | 1  | 10/27/2006    |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
Lab Order: 0610259  
Project: River Sampling 4th Qtr 2006  
Lab ID: 0610259-01

Client Sample ID: N of MW #45  
Collection Date: 10/23/2006 9:45:00 AM  
Date Received: 10/24/2006  
Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

|                        |      |           |  |      |   |            |
|------------------------|------|-----------|--|------|---|------------|
| Surr: 2-Fluorobiphenyl | 72.1 | 19.6-134  |  | %REC | 1 | 10/27/2006 |
| Surr: 2-Fluorophenol   | 53.4 | 9.54-113  |  | %REC | 1 | 10/27/2006 |
| Surr: 4-Terphenyl-d14  | 66.8 | 22.7-145  |  | %REC | 1 | 10/27/2006 |
| Surr: Nitrobenzene-d5  | 69.6 | 14.6-134  |  | %REC | 1 | 10/27/2006 |
| Surr: Phenol-d5        | 38.4 | 10.7-80.3 |  | %REC | 1 | 10/27/2006 |

## EPA METHOD 8260: VOLATILES SHORT LIST

Analyst: SMP

|                                |      |          |  |      |   |            |
|--------------------------------|------|----------|--|------|---|------------|
| Benzene                        | ND   | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Toluene                        | ND   | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Ethylbenzene                   | ND   | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Methyl tert-butyl ether (MTBE) | ND   | 1.5      |  | µg/L | 1 | 10/24/2006 |
| Xylenes, Total                 | ND   | 3.0      |  | µg/L | 1 | 10/24/2006 |
| Surr: 4-Bromofluorobenzene     | 99.5 | 71.2-123 |  | %REC | 1 | 10/24/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                              |    |     |  |            |   |            |
|------------------------------|----|-----|--|------------|---|------------|
| Alkalinity, Total (As CaCO3) | 84 | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |
| Carbonate                    | ND | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |
| Bicarbonate                  | 84 | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |     |       |  |          |   |            |
|----------------------|-----|-------|--|----------|---|------------|
| Specific Conductance | 310 | 0.010 |  | µmhos/cm | 1 | 10/26/2006 |
|----------------------|-----|-------|--|----------|---|------------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |     |    |  |      |   |            |
|------------------------|-----|----|--|------|---|------------|
| Total Dissolved Solids | 220 | 20 |  | mg/L | 1 | 10/25/2006 |
|------------------------|-----|----|--|------|---|------------|

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | MCL Maximum Contaminant Level                        |
|             | ND Not Detected at the Reporting Limit            | RL Reporting Limit                                   |
|             | S Spike recovery outside accepted recovery limits |                                                      |

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #46

Lab Order: 0610259

Collection Date: 10/23/2006 9:30:00 AM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-02

Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 10/26/2006 3:40:08 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 10/26/2006 3:40:08 PM |
| Surr: DNOP                                | 103    | 58-140   |      | %REC  | 1  | 10/26/2006 3:40:08 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 1:58:18 PM |
| Surr: BFB                                 | 95.8   | 84.5-129 |      | %REC  | 1  | 10/24/2006 1:58:18 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.17   | 0.10     |      | mg/L  | 1  | 10/24/2006 3:56:58 PM |
| Chloride                                  | 2.9    | 0.10     |      | mg/L  | 1  | 10/24/2006 3:56:58 PM |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 3:56:58 PM |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 3:56:58 PM |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 3:56:58 PM |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 3:56:58 PM |
| Sulfate                                   | 65     | 0.50     |      | mg/L  | 1  | 10/24/2006 3:56:58 PM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC          |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 11/1/2006             |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Barium                                    | 0.062  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Calcium                                   | 33     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Iron                                      | 0.075  | 0.020    |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Magnesium                                 | 5.3    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Manganese                                 | 0.013  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Potassium                                 | 1.6    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Selenium                                  | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Silver                                    | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Sodium                                    | 20     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Uranium                                   | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |
| Zinc                                      | 0.026  | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:28:12 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #46

Lab Order: 0610259

Collection Date: 10/23/2006 9:30:00 AM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-02

Matrix: AQUEOUS

| Analyses                                   | Result | PQL    | Qual | Units | DF | Date Analyzed          |
|--------------------------------------------|--------|--------|------|-------|----|------------------------|
| <b>EPA 6010B: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: NMO           |
| Arsenic                                    | ND     | 0.020  |      | mg/L  | 1  | 10/26/2006 10:11:17 AM |
| Barium                                     | 0.13   | 0.020  |      | mg/L  | 1  | 10/26/2006 10:11:17 AM |
| Cadmium                                    | ND     | 0.0020 |      | mg/L  | 1  | 10/26/2006 10:11:17 AM |
| Chromium                                   | ND     | 0.0060 |      | mg/L  | 1  | 10/26/2006 10:11:17 AM |
| Lead                                       | ND     | 0.0050 |      | mg/L  | 1  | 11/7/2006 2:46:25 PM   |
| Selenium                                   | ND     | 0.050  |      | mg/L  | 1  | 10/26/2006 10:11:17 AM |
| Silver                                     | ND     | 0.0050 |      | mg/L  | 1  | 10/26/2006 10:11:17 AM |

**EPA METHOD 8270C: SEMIVOLATILES**

Analyst: BL

|                             |    |    |  |      |   |            |
|-----------------------------|----|----|--|------|---|------------|
| Acenaphthene                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Acenaphthylene              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Aniline                     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Anthracene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Azobenzene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benz(a)anthracene           | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(a)pyrene              | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(b)fluoranthene        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(g,h,i)perylene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzo(k)fluoranthene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzoic acid                | ND | 50 |  | µg/L | 1 | 10/27/2006 |
| Benzyl alcohol              | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethoxy)methane  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethyl)ether     | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroisopropyl)ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-ethylhexyl)phthalate  | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| 4-Bromophenyl phenyl ether  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Butyl benzyl phthalate      | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Carbazole                   | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloro-3-methylphenol     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloroaniline             | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 2-Chloronaphthalene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 2-Chlorophenol              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chlorophenyl phenyl ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Chrysene                    | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Di-n-butyl phthalate        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Di-n-octyl phthalate        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Dibenz(a,h)anthracene       | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Dibenzofuran                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,2-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,3-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level

B Analyte detected in the associated Method Blank

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

MCL Maximum Contaminant Level

ND Not Detected at the Reporting Limit

RL Reporting Limit

S Spike recovery outside accepted recovery limits

Page 6 of 17

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #46

Lab Order: 0610259

Collection Date: 10/23/2006 9:30:00 AM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-02

Matrix: AQUEOUS

| Analyses                               | Result | PQL      | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|----------|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |          |      |       |    | Analyst: BL   |
| 1,4-Dichlorobenzene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 3,3'-Dichlorobenzidine                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Diethyl phthalate                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Dimethyl phthalate                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dichlorophenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dimethylphenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 4,6-Dinitro-2-methylphenol             | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,6-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluoranthene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluorene                               | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobenzene                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobutadiene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorocyclopentadiene              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachloroethane                       | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Isophorone                             | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylnaphthalene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylphenol                         | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 3+4-Methylphenol                       | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodi-n-propylamine              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodimethylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodiphenylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Naphthalene                            | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 3-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitroaniline                         | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| Nitrobenzene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitrophenol                          | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitrophenol                          | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Pentachlorophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Phenanthrene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Phenol                                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Pyrene                                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Pyridine                               | ND     | 30       |      | µg/L  | 1  | 10/27/2006    |
| 1,2,4-Trichlorobenzene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,5-Trichlorophenol                  | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,6-Trichlorophenol                  | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Surr: 2,4,6-Tribromophenol             | 61.6   | 16.6-150 |      | %REC  | 1  | 10/27/2006    |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
Lab Order: 0610259  
Project: River Sampling 4th Qtr 2006  
Lab ID: 0610259-02

Client Sample ID: N of MW #46  
Collection Date: 10/23/2006 9:30:00 AM  
Date Received: 10/24/2006  
Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

|                        |      |           |  |      |   |            |
|------------------------|------|-----------|--|------|---|------------|
| Surr: 2-Fluorobiphenyl | 82.1 | 19.6-134  |  | %REC | 1 | 10/27/2006 |
| Surr: 2-Fluorophenol   | 54.1 | 9.54-113  |  | %REC | 1 | 10/27/2006 |
| Surr: 4-Terphenyl-d14  | 69.0 | 22.7-145  |  | %REC | 1 | 10/27/2006 |
| Surr: Nitrobenzene-d5  | 77.4 | 14.6-134  |  | %REC | 1 | 10/27/2006 |
| Surr: Phenol-d5        | 39.0 | 10.7-80.3 |  | %REC | 1 | 10/27/2006 |

## EPA METHOD 8260: VOLATILES SHORT LIST

Analyst: SMP

|                                |     |          |  |      |   |            |
|--------------------------------|-----|----------|--|------|---|------------|
| Benzene                        | ND  | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Toluene                        | ND  | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Ethylbenzene                   | ND  | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Methyl tert-butyl ether (MTBE) | ND  | 1.5      |  | µg/L | 1 | 10/24/2006 |
| Xylenes, Total                 | ND  | 3.0      |  | µg/L | 1 | 10/24/2006 |
| Surr: 4-Bromofluorobenzene     | 103 | 71.2-123 |  | %REC | 1 | 10/24/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                              |    |     |  |            |   |            |
|------------------------------|----|-----|--|------------|---|------------|
| Alkalinity, Total (As CaCO3) | 86 | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |
| Carbonate                    | ND | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |
| Bicarbonate                  | 86 | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |     |       |  |          |   |            |
|----------------------|-----|-------|--|----------|---|------------|
| Specific Conductance | 320 | 0.010 |  | µmhos/cm | 1 | 10/26/2006 |
|----------------------|-----|-------|--|----------|---|------------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |     |    |  |      |   |            |
|------------------------|-----|----|--|------|---|------------|
| Total Dissolved Solids | 230 | 20 |  | mg/L | 1 | 10/25/2006 |
|------------------------|-----|----|--|------|---|------------|

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
 Lab Order: 0610259  
 Project: River Sampling 4th Qtr 2006  
 Lab ID: 0610259-03

Client Sample ID: River Upstream  
 Collection Date: 10/23/2006 10:15:00 AM  
 Date Received: 10/24/2006  
 Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 10/26/2006 4:15:16 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 10/26/2006 4:15:16 PM |
| Surr: DNOP                                | 105    | 58-140   |      | %REC  | 1  | 10/26/2006 4:15:16 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 2:28:59 PM |
| Surr: BFB                                 | 94.2   | 84.5-129 |      | %REC  | 1  | 10/24/2006 2:28:59 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.18   | 0.10     |      | mg/L  | 1  | 10/24/2006 4:49:10 PM |
| Chloride                                  | 3.0    | 0.10     |      | mg/L  | 1  | 10/24/2006 4:49:10 PM |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 4:49:10 PM |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 4:49:10 PM |
| Nitrogen, Nitrate (As N)                  | 0.12   | 0.10     |      | mg/L  | 1  | 10/24/2006 4:49:10 PM |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 4:49:10 PM |
| Sulfate                                   | 68     | 0.50     |      | mg/L  | 1  | 10/24/2006 4:49:10 PM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC          |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 11/1/2006             |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Barium                                    | 0.056  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Calcium                                   | 34     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Iron                                      | 0.12   | 0.020    |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Magnesium                                 | 5.7    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Manganese                                 | 0.019  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Potassium                                 | 1.7    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Selenium                                  | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Silver                                    | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Sodium                                    | 25     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Uranium                                   | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |
| Zinc                                      | 0.022  | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:31:18 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: River Upstream

Lab Order: 0610259

Collection Date: 10/23/2006 10:15:00 AM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-03

Matrix: AQUEOUS

| Analyses                                   | Result | PQL    | Qual | Units | DF | Date Analyzed          |
|--------------------------------------------|--------|--------|------|-------|----|------------------------|
| <b>EPA 6010B: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: NMO           |
| Arsenic                                    | ND     | 0.020  |      | mg/L  | 1  | 10/26/2006 10:14:09 AM |
| Barium                                     | 0.12   | 0.020  |      | mg/L  | 1  | 10/26/2006 10:14:09 AM |
| Cadmium                                    | ND     | 0.0020 |      | mg/L  | 1  | 10/26/2006 10:14:09 AM |
| Chromium                                   | ND     | 0.0060 |      | mg/L  | 1  | 10/26/2006 10:14:09 AM |
| Lead                                       | ND     | 0.0050 |      | mg/L  | 1  | 11/7/2006 2:49:04 PM   |
| Selenium                                   | ND     | 0.050  |      | mg/L  | 1  | 10/26/2006 10:14:09 AM |
| Silver                                     | ND     | 0.0050 |      | mg/L  | 1  | 10/26/2006 10:14:09 AM |

**EPA METHOD 8270C: SEMIVOLATILES**

Analyst: BL

|                             |    |    |  |      |   |            |
|-----------------------------|----|----|--|------|---|------------|
| Acenaphthene                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Acenaphthylene              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Aniline                     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Anthracene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Azobenzene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benz(a)anthracene           | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(a)pyrene              | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(b)fluoranthene        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(g,h,i)perylene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzo(k)fluoranthene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzoic acid                | ND | 50 |  | µg/L | 1 | 10/27/2006 |
| Benzyl alcohol              | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethoxy)methane  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethyl)ether     | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroisopropyl)ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-ethylhexyl)phthalate  | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| 4-Bromophenyl phenyl ether  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Butyl benzyl phthalate      | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Carbazole                   | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloro-3-methylphenol     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloroaniline             | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 2-Chloronaphthalene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 2-Chlorophenol              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chlorophenyl phenyl ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Chrysene                    | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Di-n-butyl phthalate        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Di-n-octyl phthalate        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Dibenz(a,h)anthracene       | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Dibenzofuran                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,2-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,3-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
Lab Order: 0610259  
Project: River Sampling 4th Qtr 2006  
Lab ID: 0610259-03

Client Sample ID: River Upstream  
Collection Date: 10/23/2006 10:15:00 AM  
Date Received: 10/24/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL      | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|----------|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |          |      |       |    | Analyst: BL   |
| 1,4-Dichlorobenzene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 3,3'-Dichlorobenzidine                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Diethyl phthalate                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Dimethyl phthalate                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dichlorophenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dimethylphenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 4,6-Dinitro-2-methylphenol             | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,6-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluoranthene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluorene                               | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobenzene                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobutadiene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorocyclopentadiene              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachloroethane                       | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Isophorone                             | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylnaphthalene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylphenol                         | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 3+4-Methylphenol                       | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodi-n-propylamine              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodimethylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodiphenylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Naphthalene                            | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 3-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitroaniline                         | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| Nitrobenzene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitrophenol                          | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitrophenol                          | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Pentachlorophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Phenanthrene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Phenol                                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Pyrene                                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Pyridine                               | ND     | 30       |      | µg/L  | 1  | 10/27/2006    |
| 1,2,4-Trichlorobenzene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,5-Trichlorophenol                  | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,6-Trichlorophenol                  | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Surr: 2,4,6-Tribromophenol             | 56.7   | 16.6-150 |      | %REC  | 1  | 10/27/2006    |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
Lab Order: 0610259  
Project: River Sampling 4th Qtr 2006  
Lab ID: 0610259-03

Client Sample ID: River Upstream  
Collection Date: 10/23/2006 10:15:00 AM  
Date Received: 10/24/2006  
Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

|                        |      |           |      |   |            |
|------------------------|------|-----------|------|---|------------|
| Surr: 2-Fluorobiphenyl | 73.1 | 19.6-134  | %REC | 1 | 10/27/2006 |
| Surr: 2-Fluorophenol   | 53.7 | 9.54-113  | %REC | 1 | 10/27/2006 |
| Surr: 4-Terphenyl-d14  | 65.4 | 22.7-145  | %REC | 1 | 10/27/2006 |
| Surr: Nitrobenzene-d5  | 65.0 | 14.6-134  | %REC | 1 | 10/27/2006 |
| Surr: Phenol-d5        | 39.4 | 10.7-80.3 | %REC | 1 | 10/27/2006 |

## EPA METHOD 8260: VOLATILES SHORT LIST

Analyst: SMP

|                                |      |          |      |   |            |
|--------------------------------|------|----------|------|---|------------|
| Benzene                        | ND   | 1.0      | µg/L | 1 | 10/24/2006 |
| Toluene                        | ND   | 1.0      | µg/L | 1 | 10/24/2006 |
| Ethylbenzene                   | ND   | 1.0      | µg/L | 1 | 10/24/2006 |
| Methyl tert-butyl ether (MTBE) | ND   | 1.5      | µg/L | 1 | 10/24/2006 |
| Xylenes, Total                 | ND   | 3.0      | µg/L | 1 | 10/24/2006 |
| Surr: 4-Bromofluorobenzene     | 99.4 | 71.2-123 | %REC | 1 | 10/24/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                              |    |     |            |   |            |
|------------------------------|----|-----|------------|---|------------|
| Alkalinity, Total (As CaCO3) | 86 | 2.0 | mg/L CaCO3 | 1 | 10/28/2006 |
| Carbonate                    | ND | 2.0 | mg/L CaCO3 | 1 | 10/28/2006 |
| Bicarbonate                  | 86 | 2.0 | mg/L CaCO3 | 1 | 10/28/2006 |

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |     |       |          |   |            |
|----------------------|-----|-------|----------|---|------------|
| Specific Conductance | 310 | 0.010 | µmhos/cm | 1 | 10/26/2006 |
|----------------------|-----|-------|----------|---|------------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |     |    |      |   |            |
|------------------------|-----|----|------|---|------------|
| Total Dissolved Solids | 230 | 20 | mg/L | 1 | 10/25/2006 |
|------------------------|-----|----|------|---|------------|

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits  
B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
 Lab Order: 0610259  
 Project: River Sampling 4th Qtr 2006  
 Lab ID: 0610259-04

Client Sample ID: River Downstream  
 Collection Date: 10/23/2006 12:30:00 PM  
 Date Received: 10/24/2006  
 Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 10/26/2006 4:50:23 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 10/26/2006 4:50:23 PM |
| Surr: DNOP                                | 113    | 58-140   |      | %REC  | 1  | 10/26/2006 4:50:23 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 2:59:35 PM |
| Surr: BFB                                 | 97.2   | 84.5-129 |      | %REC  | 1  | 10/24/2006 2:59:35 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.14   | 0.10     |      | mg/L  | 1  | 10/24/2006 5:06:35 PM |
| Chloride                                  | 4.1    | 0.10     |      | mg/L  | 1  | 10/24/2006 5:06:35 PM |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 5:06:35 PM |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 5:06:35 PM |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 5:06:35 PM |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 10/24/2006 5:06:35 PM |
| Sulfate                                   | 100    | 2.5      |      | mg/L  | 5  | 10/27/2006 5:45:22 AM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC          |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 11/1/2006             |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Barium                                    | 0.062  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Calcium                                   | 42     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Iron                                      | 0.11   | 0.020    |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Magnesium                                 | 6.4    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Manganese                                 | 0.078  | 0.0020   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Potassium                                 | 2.1    | 1.0      |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Selenium                                  | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Silver                                    | ND     | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Sodium                                    | 30     | 1.0      |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Uranium                                   | ND     | 0.10     |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |
| Zinc                                      | 0.032  | 0.0050   |      | mg/L  | 1  | 10/24/2006 3:34:22 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining

Client Sample ID: River Downstream

Lab Order: 0610259

Collection Date: 10/23/2006 12:30:00 PM

Project: River Sampling 4th Qtr 2006

Date Received: 10/24/2006

Lab ID: 0610259-04

Matrix: AQUEOUS

| Analyses                                   | Result | PQL    | Qual | Units | DF | Date Analyzed          |
|--------------------------------------------|--------|--------|------|-------|----|------------------------|
| <b>EPA 6010B: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: NMO           |
| Arsenic                                    | ND     | 0.020  |      | mg/L  | 1  | 10/26/2006 10:17:02 AM |
| Barium                                     | 0.11   | 0.020  |      | mg/L  | 1  | 10/26/2006 10:17:02 AM |
| Cadmium                                    | ND     | 0.0020 |      | mg/L  | 1  | 10/26/2006 10:17:02 AM |
| Chromium                                   | ND     | 0.0060 |      | mg/L  | 1  | 10/26/2006 10:17:02 AM |
| Lead                                       | ND     | 0.0050 |      | mg/L  | 1  | 11/7/2006 2:51:42 PM   |
| Selenium                                   | ND     | 0.050  |      | mg/L  | 1  | 10/26/2006 10:17:02 AM |
| Silver                                     | ND     | 0.0050 |      | mg/L  | 1  | 10/26/2006 10:17:02 AM |

## EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

|                             |    |    |  |      |   |            |
|-----------------------------|----|----|--|------|---|------------|
| Acenaphthene                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Acenaphthylene              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Aniline                     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Anthracene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Azobenzene                  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benz(a)anthracene           | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(a)pyrene              | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(b)fluoranthene        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Benzo(g,h,i)perylene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzo(k)fluoranthene        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Benzoic acid                | ND | 50 |  | µg/L | 1 | 10/27/2006 |
| Benzyl alcohol              | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethoxy)methane  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroethyl)ether     | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-chloroisopropyl)ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Bis(2-ethylhexyl)phthalate  | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| 4-Bromophenyl phenyl ether  | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Butyl benzyl phthalate      | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Carbazole                   | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloro-3-methylphenol     | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 4-Chloroaniline             | ND | 20 |  | µg/L | 1 | 10/27/2006 |
| 2-Chloronaphthalene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 2-Chlorophenol              | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 4-Chlorophenyl phenyl ether | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Chrysene                    | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Di-n-butyl phthalate        | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Di-n-octyl phthalate        | ND | 15 |  | µg/L | 1 | 10/27/2006 |
| Dibenz(a,h)anthracene       | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| Dibenzofuran                | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,2-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |
| 1,3-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 10/27/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level

E Value above quantitation range

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
 Lab Order: 0610259  
 Project: River Sampling 4th Qtr 2006  
 Lab ID: 0610259-04

Client Sample ID: River Downstream  
 Collection Date: 10/23/2006 12:30:00 PM  
 Date Received: 10/24/2006  
 Matrix: AQUEOUS

| Analyses                               | Result | PQL      | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|----------|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |          |      |       |    | Analyst: BL   |
| 1,4-Dichlorobenzene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 3,3'-Dichlorobenzidine                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Diethyl phthalate                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Dimethyl phthalate                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dichlorophenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dimethylphenol                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 4,6-Dinitro-2-methylphenol             | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 2,4-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,6-Dinitrotoluene                     | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluoranthene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Fluorene                               | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobenzene                      | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorobutadiene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachlorocyclopentadiene              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Hexachloroethane                       | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Isophorone                             | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylnaphthalene                    | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Methylphenol                         | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 3+4-Methylphenol                       | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodi-n-propylamine              | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodimethylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| N-Nitrosodiphenylamine                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Naphthalene                            | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 3-Nitroaniline                         | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitroaniline                         | ND     | 20       |      | µg/L  | 1  | 10/27/2006    |
| Nitrobenzene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2-Nitrophenol                          | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| 4-Nitrophenol                          | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Pentachlorophenol                      | ND     | 50       |      | µg/L  | 1  | 10/27/2006    |
| Phenanthrene                           | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Phenol                                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| Pyrene                                 | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Pyridine                               | ND     | 30       |      | µg/L  | 1  | 10/27/2006    |
| 1,2,4-Trichlorobenzene                 | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,5-Trichlorophenol                  | ND     | 10       |      | µg/L  | 1  | 10/27/2006    |
| 2,4,6-Trichlorophenol                  | ND     | 15       |      | µg/L  | 1  | 10/27/2006    |
| Surr: 2,4,6-Tribromophenol             | 68.7   | 16.6-150 |      | %REC  | 1  | 10/27/2006    |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

|                   |                             |                          |                        |
|-------------------|-----------------------------|--------------------------|------------------------|
| <b>CLIENT:</b>    | San Juan Refining           | <b>Client Sample ID:</b> | River Downstream       |
| <b>Lab Order:</b> | 0610259                     | <b>Collection Date:</b>  | 10/23/2006 12:30:00 PM |
| <b>Project:</b>   | River Sampling 4th Qtr 2006 | <b>Date Received:</b>    | 10/24/2006             |
| <b>Lab ID:</b>    | 0610259-04                  | <b>Matrix:</b>           | AQUEOUS                |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8270C: SEMIVOLATILES

Analyst: BL

|                        |      |           |  |      |   |            |
|------------------------|------|-----------|--|------|---|------------|
| Surr: 2-Fluorobiphenyl | 81.5 | 19.6-134  |  | %REC | 1 | 10/27/2006 |
| Surr: 2-Fluorophenol   | 59.0 | 9.54-113  |  | %REC | 1 | 10/27/2006 |
| Surr: 4-Terphenyl-d14  | 69.1 | 22.7-145  |  | %REC | 1 | 10/27/2006 |
| Surr: Nitrobenzene-d5  | 76.0 | 14.6-134  |  | %REC | 1 | 10/27/2006 |
| Surr: Phenol-d5        | 41.8 | 10.7-80.3 |  | %REC | 1 | 10/27/2006 |

## EPA METHOD 8260: VOLATILES SHORT LIST

Analyst: SMP

|                                |     |          |  |      |   |            |
|--------------------------------|-----|----------|--|------|---|------------|
| Benzene                        | ND  | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Toluene                        | ND  | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Ethylbenzene                   | ND  | 1.0      |  | µg/L | 1 | 10/24/2006 |
| Methyl tert-butyl ether (MTBE) | ND  | 1.5      |  | µg/L | 1 | 10/24/2006 |
| Xylenes, Total                 | ND  | 3.0      |  | µg/L | 1 | 10/24/2006 |
| Surr: 4-Bromofluorobenzene     | 100 | 71.2-123 |  | %REC | 1 | 10/24/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                              |    |     |  |            |   |            |
|------------------------------|----|-----|--|------------|---|------------|
| Alkalinity, Total (As CaCO3) | 94 | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |
| Carbonate                    | ND | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |
| Bicarbonate                  | 94 | 2.0 |  | mg/L CaCO3 | 1 | 10/28/2006 |

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |     |       |  |          |   |            |
|----------------------|-----|-------|--|----------|---|------------|
| Specific Conductance | 410 | 0.010 |  | µmhos/cm | 1 | 10/26/2006 |
|----------------------|-----|-------|--|----------|---|------------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |     |    |  |      |   |            |
|------------------------|-----|----|--|------|---|------------|
| Total Dissolved Solids | 290 | 20 |  | mg/L | 1 | 10/25/2006 |
|------------------------|-----|----|--|------|---|------------|

### Qualifiers:

\* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 RL Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 09-Nov-06

CLIENT: San Juan Refining  
Lab Order: 0610259  
Project: River Sampling 4th Qtr 2006  
Lab ID: 0610259-05

Client Sample ID: Trip Blank  
Collection Date:  
Date Received: 10/24/2006  
Matrix: TRIP BLANK

| Analyses                                     | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|----------------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>      |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)                | ND     | 0.050    |      | mg/L  | 1  | 10/24/2006 3:30:03 PM |
| Surr: BFB                                    | 97.7   | 84.5-129 |      | %REC  | 1  | 10/24/2006 3:30:03 PM |
| <b>EPA METHOD 8260: VOLATILES SHORT LIST</b> |        |          |      |       |    | Analyst: SMP          |
| Benzene                                      | ND     | 1.0      |      | µg/L  | 1  | 10/24/2006            |
| Toluene                                      | ND     | 1.0      |      | µg/L  | 1  | 10/24/2006            |
| Ethylbenzene                                 | ND     | 1.0      |      | µg/L  | 1  | 10/24/2006            |
| Methyl tert-butyl ether (MTBE)               | ND     | 1.5      |      | µg/L  | 1  | 10/24/2006            |
| Xylenes, Total                               | ND     | 3.0      |      | µg/L  | 1  | 10/24/2006            |
| Surr: 4-Bromofluorobenzene                   | 99.0   | 71.2-123 |      | %REC  | 1  | 10/24/2006            |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 4th Qtr 2006

Work Order: 0610259

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E300

Sample ID: MBLK

MBLK

Batch ID: R21156 Analysis Date: 10/24/2006 9:51:22 AM

|                                   |    |      |      |
|-----------------------------------|----|------|------|
| Fluoride                          | ND | mg/L | 0.10 |
| Chloride                          | ND | mg/L | 0.10 |
| Nitrogen, Nitrite (As N)          | ND | mg/L | 0.10 |
| Bromide                           | ND | mg/L | 0.10 |
| Nitrogen, Nitrate (As N)          | ND | mg/L | 0.10 |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |
| Sulfate                           | ND | mg/L | 0.50 |

Sample ID: MBLK

MBLK

Batch ID: R21184 Analysis Date: 10/26/2006 10:53:43 AM

|                                   |    |      |      |
|-----------------------------------|----|------|------|
| Fluoride                          | ND | mg/L | 0.10 |
| Chloride                          | ND | mg/L | 0.10 |
| Nitrogen, Nitrite (As N)          | ND | mg/L | 0.10 |
| Bromide                           | ND | mg/L | 0.10 |
| Nitrogen, Nitrate (As N)          | ND | mg/L | 0.10 |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |
| Sulfate                           | ND | mg/L | 0.50 |

Sample ID: LCS ST300-06019

LCS

Batch ID: R21156 Analysis Date: 10/25/2006 10:48:28 AM

|                                   |        |      |      |      |    |     |
|-----------------------------------|--------|------|------|------|----|-----|
| Fluoride                          | 0.5181 | mg/L | 0.10 | 104  | 90 | 110 |
| Chloride                          | 5.098  | mg/L | 0.10 | 102  | 90 | 110 |
| Nitrogen, Nitrite (As N)          | 1.080  | mg/L | 0.10 | 108  | 90 | 110 |
| Bromide                           | 2.599  | mg/L | 0.10 | 104  | 90 | 110 |
| Nitrogen, Nitrate (As N)          | 2.500  | mg/L | 0.10 | 100  | 90 | 110 |
| Phosphorus, Orthophosphate (As P) | 4.959  | mg/L | 0.50 | 99.2 | 90 | 110 |
| Sulfate                           | 10.03  | mg/L | 0.50 | 100  | 90 | 110 |

Sample ID: LCS ST300-06019

LCS

Batch ID: R21184 Analysis Date: 10/26/2006 11:11:08 AM

|                                   |        |      |      |      |    |     |
|-----------------------------------|--------|------|------|------|----|-----|
| Fluoride                          | 0.5266 | mg/L | 0.10 | 105  | 90 | 110 |
| Chloride                          | 4.900  | mg/L | 0.10 | 98.0 | 90 | 110 |
| Nitrogen, Nitrite (As N)          | 1.042  | mg/L | 0.10 | 104  | 90 | 110 |
| Bromide                           | 2.557  | mg/L | 0.10 | 102  | 90 | 110 |
| Nitrogen, Nitrate (As N)          | 2.413  | mg/L | 0.10 | 96.5 | 90 | 110 |
| Phosphorus, Orthophosphate (As P) | 5.127  | mg/L | 0.50 | 103  | 90 | 110 |
| Sulfate                           | 9.704  | mg/L | 0.50 | 97.0 | 90 | 110 |

Method: E310.1

Sample ID: MB

MBLK

Batch ID: R21191 Analysis Date: 10/28/2006

|                              |    |          |     |
|------------------------------|----|----------|-----|
| Alkalinity, Total (As CaCO3) | ND | mg/L CaC | 2.0 |
| Carbonate                    | ND | mg/L CaC | 2.0 |
| Bicarbonate                  | ND | mg/L CaC | 2.0 |

## Qualifiers:

- |   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 4th Qtr 2006

Work Order: 0610259

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8015

Sample ID: MB-11583 MBLK Batch ID: 11583 Analysis Date: 10/26/2006 12:44:23 PM

Diesel Range Organics (DRO) ND mg/L 1.0

Motor Oil Range Organics (MRO) ND mg/L 5.0

Sample ID: LCS-11583 LCS Batch ID: 11583 Analysis Date: 10/26/2006 1:19:45 PM

Diesel Range Organics (DRO) 5.969 mg/L 1.0 119 74 157

Sample ID: LCSD-11583 LCSD Batch ID: 11583 Analysis Date: 10/26/2006 1:54:57 PM

Diesel Range Organics (DRO) 5.813 mg/L 1.0 116 74 157 2.66 23

Method: SW8015

Sample ID: 5ML RB MBLK Batch ID: R21155 Analysis Date: 10/24/2006 8:46:50 AM

Gasoline Range Organics (GRO) ND mg/L 0.050

Sample ID: 2.5UG GRO LCS LCS Batch ID: R21155 Analysis Date: 10/24/2006 4:30:43 PM

Gasoline Range Organics (GRO) 0.4540 mg/L 0.050 90.8 73.3 119

Sample ID: 2.5UG GRO LCSD LCSD Batch ID: R21155 Analysis Date: 10/24/2006 5:01:01 PM

Gasoline Range Organics (GRO) 0.4420 mg/L 0.050 88.4 73.3 119 2.68 8.39

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 4th Qtr 2006

Work Order: 0610259

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8270C

Sample ID: MB-11582

MBLK

Batch ID: 11582 Analysis Date: 10/27/2006

|                             |    |      |    |
|-----------------------------|----|------|----|
| Acenaphthene                | ND | µg/L | 10 |
| Acenaphthylene              | ND | µg/L | 10 |
| Aniline                     | ND | µg/L | 20 |
| Anthracene                  | ND | µg/L | 10 |
| Azobenzene                  | ND | µg/L | 10 |
| Benz(a)anthracene           | ND | µg/L | 15 |
| Benzo(a)pyrene              | ND | µg/L | 15 |
| Benzo(b)fluoranthene        | ND | µg/L | 15 |
| Benzo(g,h,i)perylene        | ND | µg/L | 10 |
| Benzo(k)fluoranthene        | ND | µg/L | 10 |
| Benzoic acid                | ND | µg/L | 50 |
| Benzyl alcohol              | ND | µg/L | 20 |
| Bis(2-chloroethoxy)methane  | ND | µg/L | 10 |
| Bis(2-chloroethyl)ether     | ND | µg/L | 15 |
| Bis(2-chloroisopropyl)ether | ND | µg/L | 15 |
| Bis(2-ethylhexyl)phthalate  | ND | µg/L | 15 |
| 4-Bromophenyl phenyl ether  | ND | µg/L | 10 |
| Butyl benzyl phthalate      | ND | µg/L | 15 |
| Carbazole                   | ND | µg/L | 10 |
| 4-Chloro-3-methylphenol     | ND | µg/L | 20 |
| 4-Chloroaniline             | ND | µg/L | 20 |
| 2-Chloronaphthalene         | ND | µg/L | 10 |
| 2-Chlorophenol              | ND | µg/L | 10 |
| 4-Chlorophenyl phenyl ether | ND | µg/L | 15 |
| Chrysene                    | ND | µg/L | 15 |
| Di-n-butyl phthalate        | ND | µg/L | 10 |
| Di-n-octyl phthalate        | ND | µg/L | 15 |
| Dibenz(a,h)anthracene       | ND | µg/L | 10 |
| Dibenzofuran                | ND | µg/L | 10 |
| 1,2-Dichlorobenzene         | ND | µg/L | 10 |
| 1,3-Dichlorobenzene         | ND | µg/L | 10 |
| 1,4-Dichlorobenzene         | ND | µg/L | 10 |
| 3,3'-Dichlorobenzidine      | ND | µg/L | 15 |
| Diethyl phthalate           | ND | µg/L | 10 |
| Dimethyl phthalate          | ND | µg/L | 10 |
| 2,4-Dichlorophenol          | ND | µg/L | 10 |
| 2,4-Dimethylphenol          | ND | µg/L | 10 |
| 4,6-Dinitro-2-methylphenol  | ND | µg/L | 50 |
| 2,4-Dinitrophenol           | ND | µg/L | 50 |
| 2,4-Dinitrotoluene          | ND | µg/L | 10 |
| 2,6-Dinitrotoluene          | ND | µg/L | 10 |
| Fluoranthene                | ND | µg/L | 10 |
| Fluorene                    | ND | µg/L | 10 |
| Hexachlorobenzene           | ND | µg/L | 10 |

## Qualifiers:

E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: River Sampling 4th Qtr 2006

Work Order: 0610258

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8270C

Sample ID: MB-11582

MBLK

Batch ID: 11582 Analysis Date: 10/27/2006

|                           |    |      |    |
|---------------------------|----|------|----|
| Hexachlorobutadiene       | ND | µg/L | 10 |
| Hexachlorocyclopentadiene | ND | µg/L | 10 |
| Hexachloroethane          | ND | µg/L | 10 |
| Indeno(1,2,3-cd)pyrene    | ND | µg/L | 10 |
| Isophorone                | ND | µg/L | 10 |
| 2-Methylnaphthalene       | ND | µg/L | 10 |
| 2-Methylphenol            | ND | µg/L | 15 |
| 3+4-Methylphenol          | ND | µg/L | 20 |
| N-Nitrosodi-n-propylamine | ND | µg/L | 10 |
| N-Nitrosodimethylamine    | ND | µg/L | 10 |
| N-Nitrosodiphenylamine    | ND | µg/L | 10 |
| Naphthalene               | ND | µg/L | 10 |
| 2-Nitroaniline            | ND | µg/L | 50 |
| 3-Nitroaniline            | ND | µg/L | 50 |
| 4-Nitroaniline            | ND | µg/L | 20 |
| Nitrobenzene              | ND | µg/L | 10 |
| 2-Nitrophenol             | ND | µg/L | 15 |
| 4-Nitrophenol             | ND | µg/L | 50 |
| Pentachlorophenol         | ND | µg/L | 50 |
| Phenanthrene              | ND | µg/L | 10 |
| Phenol                    | ND | µg/L | 10 |
| Pyrene                    | ND | µg/L | 15 |
| Pyridine                  | ND | µg/L | 30 |
| 1,2,4-Trichlorobenzene    | ND | µg/L | 10 |
| 2,4,5-Trichlorophenol     | ND | µg/L | 10 |
| 2,4,6-Trichlorophenol     | ND | µg/L | 15 |

Sample ID: LCS-11582

LCS

Batch ID: 11582 Analysis Date: 10/27/2006

|                           |       |      |    |      |      |      |
|---------------------------|-------|------|----|------|------|------|
| Acenaphthene              | 81.30 | µg/L | 10 | 81.3 | 11   | 123  |
| 4-Chloro-3-methylphenol   | 141.2 | µg/L | 20 | 70.6 | 15.4 | 119  |
| 2-Chlorophenol            | 129.5 | µg/L | 10 | 64.8 | 12.2 | 122  |
| 1,4-Dichlorobenzene       | 61.54 | µg/L | 10 | 61.5 | 16.9 | 100  |
| 2,4-Dinitrotoluene        | 69.86 | µg/L | 10 | 69.9 | 13   | 138  |
| N-Nitrosodi-n-propylamine | 66.62 | µg/L | 10 | 66.6 | 9.93 | 122  |
| 4-Nitrophenol             | 50.36 | µg/L | 50 | 25.2 | 12.5 | 87.4 |
| Pentachlorophenol         | 113.5 | µg/L | 50 | 56.8 | 3.55 | 114  |
| Phenol                    | 70.70 | µg/L | 10 | 35.4 | 7.53 | 73.1 |
| Pyrene                    | 91.02 | µg/L | 15 | 91.0 | 12.6 | 140  |
| 1,2,4-Trichlorobenzene    | 70.26 | µg/L | 10 | 70.3 | 17.4 | 98.7 |

Sample ID: LCSD-11582

LCSD

Batch ID: 11582 Analysis Date: 10/27/2006

|                         |       |      |    |      |      |     |      |      |
|-------------------------|-------|------|----|------|------|-----|------|------|
| Acenaphthene            | 68.90 | µg/L | 10 | 68.9 | 11   | 123 | 16.5 | 30.5 |
| 4-Chloro-3-methylphenol | 121.3 | µg/L | 20 | 60.6 | 15.4 | 119 | 15.1 | 28.6 |
| 2-Chlorophenol          | 114.5 | µg/L | 10 | 57.2 | 12.2 | 122 | 12.3 | 107  |
| 1,4-Dichlorobenzene     | 53.42 | µg/L | 10 | 53.4 | 16.9 | 100 | 14.1 | 62.1 |
| 2,4-Dinitrotoluene      | 63.16 | µg/L | 10 | 63.2 | 13   | 138 | 10.1 | 14.7 |

## Qualifiers:

- E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: River Sampling 4th Qtr 2006

Work Order: 0610259

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8270C

Sample ID: LCSD-11582      LCSD      Batch ID: 11582      Analysis Date: 10/27/2006

|                           |       |      |    |      |      |      |      |      |
|---------------------------|-------|------|----|------|------|------|------|------|
| N-Nitrosodi-n-propylamine | 58.62 | µg/L | 10 | 58.6 | 9.93 | 122  | 12.8 | 30.3 |
| 4-Nitrophenol             | ND    | µg/L | 50 | 21.4 | 12.5 | 87.4 | 0    | 36.3 |
| Pentachlorophenol         | 97.04 | µg/L | 50 | 48.5 | 3.55 | 114  | 15.7 | 49   |
| Phenol                    | 67.42 | µg/L | 10 | 33.7 | 7.53 | 73.1 | 4.75 | 52.4 |
| Pyrene                    | 80.82 | µg/L | 15 | 80.8 | 12.6 | 140  | 11.9 | 16.3 |
| 1,2,4-Trichlorobenzene    | 58.76 | µg/L | 10 | 58.8 | 17.4 | 98.7 | 17.8 | 36.4 |

Method: SW7470

Sample ID: MB-11634      MBLK      Batch ID: 11634      Analysis Date: 11/1/2006

Mercury      ND      mg/L      0.00020

Sample ID: LCS-11634      LCS      Batch ID: 11634      Analysis Date: 11/1/2006

Mercury      0.004830      mg/L      0.00020      96.6      80      120

## Qualifiers:

- |   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 4th Qtr 2006

Work Order: 0610259

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: MB

MBLK

Batch ID: R21153 Analysis Date: 10/24/2006 2:34:31 PM

|           |    |      |        |
|-----------|----|------|--------|
| Arsenic   | ND | mg/L | 0.020  |
| Barium    | ND | mg/L | 0.020  |
| Cadmium   | ND | mg/L | 0.0020 |
| Calcium   | ND | mg/L | 1.0    |
| Chromium  | ND | mg/L | 0.0060 |
| Copper    | ND | mg/L | 0.0060 |
| Iron      | ND | mg/L | 0.020  |
| Lead      | ND | mg/L | 0.0050 |
| Magnesium | ND | mg/L | 1.0    |
| Manganese | ND | mg/L | 0.0020 |
| Potassium | ND | mg/L | 1.0    |
| Selenium  | ND | mg/L | 0.050  |
| Silver    | ND | mg/L | 0.0050 |
| Sodium    | ND | mg/L | 1.0    |
| Uranium   | ND | mg/L | 0.10   |
| Zinc      | ND | mg/L | 0.050  |

Sample ID: LCS

LCS

Batch ID: R21153 Analysis Date: 10/24/2006 2:37:37 PM

|           |        |      |        |      |    |     |
|-----------|--------|------|--------|------|----|-----|
| Arsenic   | 0.5151 | mg/L | 0.020  | 99.8 | 80 | 120 |
| Barium    | 0.5164 | mg/L | 0.020  | 103  | 80 | 120 |
| Cadmium   | 0.5208 | mg/L | 0.0020 | 104  | 80 | 120 |
| Calcium   | 49.33  | mg/L | 1.0    | 97.7 | 80 | 120 |
| Chromium  | 0.5094 | mg/L | 0.0060 | 102  | 80 | 120 |
| Copper    | 0.5214 | mg/L | 0.0060 | 104  | 80 | 120 |
| Iron      | 0.4994 | mg/L | 0.020  | 99.9 | 80 | 120 |
| Lead      | 0.5070 | mg/L | 0.0050 | 101  | 80 | 120 |
| Magnesium | 49.66  | mg/L | 1.0    | 98.3 | 80 | 120 |
| Manganese | 0.5152 | mg/L | 0.0020 | 103  | 80 | 120 |
| Potassium | 53.75  | mg/L | 1.0    | 97.7 | 80 | 120 |
| Selenium  | 0.4234 | mg/L | 0.050  | 84.7 | 80 | 120 |
| Silver    | 0.5308 | mg/L | 0.0050 | 106  | 80 | 120 |
| Sodium    | 53.37  | mg/L | 1.0    | 106  | 80 | 120 |
| Uranium   | 0.4864 | mg/L | 0.10   | 97.3 | 80 | 120 |
| Zinc      | 0.5072 | mg/L | 0.050  | 101  | 80 | 120 |

## Qualifiers:

- |   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 4th Qtr 2006

Work Order: 0610259

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: MB-11572

MBLK

Batch ID: 11572 Analysis Date: 10/26/2006 9:09:03 AM

|          |    |      |        |
|----------|----|------|--------|
| Arsenic  | ND | mg/L | 0.020  |
| Barium   | ND | mg/L | 0.020  |
| Cadmium  | ND | mg/L | 0.0020 |
| Chromium | ND | mg/L | 0.0060 |
| Lead     | ND | mg/L | 0.0050 |
| Selenium | ND | mg/L | 0.050  |

Sample ID: LCS-11572

LCS

Batch ID: 11572 Analysis Date: 10/26/2006 9:12:04 AM

|          |        |      |        |      |    |     |
|----------|--------|------|--------|------|----|-----|
| Arsenic  | 0.5847 | mg/L | 0.020  | 117  | 80 | 120 |
| Barium   | 0.5069 | mg/L | 0.020  | 101  | 80 | 120 |
| Cadmium  | 0.5091 | mg/L | 0.0020 | 102  | 80 | 120 |
| Chromium | 0.5188 | mg/L | 0.0060 | 104  | 80 | 120 |
| Lead     | 0.5094 | mg/L | 0.0050 | 102  | 80 | 120 |
| Selenium | 0.4219 | mg/L | 0.050  | 84.4 | 80 | 120 |

Method: E160.1

Sample ID: MB-11569

MBLK

Batch ID: 11569 Analysis Date: 10/25/2006

|                        |    |      |    |
|------------------------|----|------|----|
| Total Dissolved Solids | ND | mg/L | 20 |
|------------------------|----|------|----|

Sample ID: LCS-11569

LCS

Batch ID: 11569 Analysis Date: 10/25/2006

|                        |      |      |    |     |    |     |
|------------------------|------|------|----|-----|----|-----|
| Total Dissolved Solids | 1012 | mg/L | 20 | 101 | 80 | 120 |
|------------------------|------|------|----|-----|----|-----|

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: River Sampling 4th Qtr 2006

Work Order: 0610259

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb

MBLK

Batch ID: R21151

Analysis Date:

10/24/2006

|                                |    |      |     |  |  |  |  |  |  |
|--------------------------------|----|------|-----|--|--|--|--|--|--|
| Benzene                        | ND | µg/L | 1.0 |  |  |  |  |  |  |
| Toluene                        | ND | µg/L | 1.0 |  |  |  |  |  |  |
| Ethylbenzene                   | ND | µg/L | 1.0 |  |  |  |  |  |  |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |  |  |  |  |  |  |
| Xylenes, Total                 | ND | µg/L | 3.0 |  |  |  |  |  |  |

Sample ID: 100ng lcs

LCS

Batch ID: R21151

Analysis Date:

10/24/2006

|         |       |      |     |      |      |     |  |  |  |
|---------|-------|------|-----|------|------|-----|--|--|--|
| Benzene | 21.18 | µg/L | 1.0 | 106  | 74.9 | 113 |  |  |  |
| Toluene | 19.08 | µg/L | 1.0 | 95.4 | 77   | 121 |  |  |  |

Sample ID: 100ng lcsd

LCSD

Batch ID: R21151

Analysis Date:

10/24/2006

|         |       |      |     |     |      |     |      |    |  |
|---------|-------|------|-----|-----|------|-----|------|----|--|
| Benzene | 20.34 | µg/L | 1.0 | 102 | 74.9 | 113 | 4.06 | 20 |  |
|---------|-------|------|-----|-----|------|-----|------|----|--|

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike recovery outside accepted recovery limits    |



# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

10/24/2006

Work Order Number 0610259

Received by AT

Checklist completed by

Signature

Date

10/24/06

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

5°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

Std  Level 4 

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**  
4901 Hawkins NE, Suite D  
Albuquerque, New Mexico 87109  
Tel. 505.345.3975 Fax 505.345.4900  
[www.hallenvironmental.com](http://www.hallenvironmental.com)

Project Name: River Sample  
4th Quarter 2006

Project #:

Project Manager:

Project Manager: Indy Hinkdo

|                        |                                       |
|------------------------|---------------------------------------|
| Phone #: SDS-6032-4161 | Sampler: Cindy Hurtado / Holly Cardon |
| Fax #: SDS-6032-3911   | Sample temperature:                   |

Sample Temperature:

| Date    | Time | Matrix           | Sample I.D. No. | Number/Volume | Preservative      |                  | HEAL No. |
|---------|------|------------------|-----------------|---------------|-------------------|------------------|----------|
|         |      |                  |                 |               | HgCl <sub>2</sub> | HNO <sub>3</sub> |          |
| 9/23/10 | 9:15 | H <sub>2</sub> O | N&MW #45        | 2-VOL         |                   |                  | 0610259  |
|         |      |                  | 7               | 2-VOL         |                   |                  | -1       |
|         |      |                  |                 | 1-500mL       | X                 |                  |          |
|         |      |                  |                 | 1-250mL       | X                 |                  |          |
|         |      |                  |                 | 1-500mL       |                   |                  |          |
|         |      |                  |                 | 1-500mL       |                   |                  |          |
|         |      |                  |                 | 1-liter       |                   |                  |          |

|       |         |       |          |                              |                          |
|-------|---------|-------|----------|------------------------------|--------------------------|
| Date: | 11/2/06 | Time: | 10:11 AM | Relinquished By: (Signature) | Received By: (Signature) |
| Date: |         | Time: |          | Relinquished By: (Signature) | Received By: (Signature) |

# ANALYSIS REQUEST

[illegible]

Remarks:









## COVER LETTER

Tuesday, March 07, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413  
TEL: (505) 632-4161  
FAX (505) 632-3911  
RE: TK #33 - 1st Qtr - 2006

Order No.: 0603015

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/2/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



4901 Hawkins NE Suite D Albuquerque, NM 87109  
505.345.3975 Fax 505.345.4107  
[www.hallenvironmental.com](http://www.hallenvironmental.com)



# Hall Environmental Analysis Laboratory

Date: 07-Mar-06

CLIENT: San Juan Refining  
Project: TK #33 - 1st Qtr - 2006

Lab Order: 0603015

Lab ID: 0603015-01

Collection Date: 3/1/2006 11:15:00 AM

Client Sample ID: Tk #33

Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8021B: VOLATILES

Analyst: NSB

|                            |     |          |  |      |   |                      |
|----------------------------|-----|----------|--|------|---|----------------------|
| Benzene                    | ND  | 1.0      |  | µg/L | 1 | 3/4/2006 10:03:20 AM |
| Toluene                    | ND  | 1.0      |  | µg/L | 1 | 3/4/2006 10:03:20 AM |
| Ethylbenzene               | ND  | 1.0      |  | µg/L | 1 | 3/4/2006 10:03:20 AM |
| Xylenes, Total             | ND  | 3.0      |  | µg/L | 1 | 3/4/2006 10:03:20 AM |
| Surr: 4-Bromofluorobenzene | 101 | 82.2-119 |  | %REC | 1 | 3/4/2006 10:03:20 AM |

Lab ID: 0603015-02

Collection Date: 3/1/2006 11:20:00 AM

Client Sample ID: Fresh Water Pond

Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8021B: VOLATILES

Analyst: NSB

|                            |     |          |  |      |   |                      |
|----------------------------|-----|----------|--|------|---|----------------------|
| Benzene                    | ND  | 1.0      |  | µg/L | 1 | 3/4/2006 10:31:20 AM |
| Toluene                    | ND  | 1.0      |  | µg/L | 1 | 3/4/2006 10:31:20 AM |
| Ethylbenzene               | ND  | 1.0      |  | µg/L | 1 | 3/4/2006 10:31:20 AM |
| Xylenes, Total             | ND  | 3.0      |  | µg/L | 1 | 3/4/2006 10:31:20 AM |
| Surr: 4-Bromofluorobenzene | 101 | 82.2-119 |  | %REC | 1 | 3/4/2006 10:31:20 AM |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory

Date: 07-Mar-06

CLIENT:

San Juan Refining

Work Order:

0603015

Project:

TK #33 - 1st Qtr - 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                   |                  |                      |             |                         |               |          |           |             |      |          |      |
|-------------------|------------------|----------------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 5ML RB | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:              | RunNo: 18480  |          |           |             |      |          |      |
| Client ID: ZZZZZ  | Batch ID: R18480 | TestNo: SW8021       |             | Analysis Date: 3/3/2006 | SeqNo: 456368 |          |           |             |      |          |      |
| Analyte           | Result           | PQL                  | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Benzene

ND

Toluene

ND

Ethylbenzene

ND

Xylenes, Total

ND

|                           |                  |                      |             |                         |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:              | RunNo: 18480  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R18480 | TestNo: SW8021       |             | Analysis Date: 3/4/2006 | SeqNo: 456369 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Benzene

20.14

Toluene

20.49

Ethylbenzene

20.28

Xylenes, Total

41.45

114

114

113

114

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

3/2/2006

Work Order Number 0603015

Received by LMM

Checklist completed by

Lisa Hedrick 3/2/06

Signature

Date

Matrix

Carrier name UPS

|                                                         |                                                 |                                         |                                         |                                      |
|---------------------------------------------------------|-------------------------------------------------|-----------------------------------------|-----------------------------------------|--------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    |                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>  | N/A <input type="checkbox"/>            |                                      |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>             |                                      |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/> |                                      |

Container/Temp Blank temperature?

5°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D  
Albuquerque, New Mexico 87109  
Tel. 505.345.3975 Fax 505.345.4  
[www.hallenvironmental.com](http://www.hallenvironmental.com)

Std  Level 4 

**Project Name:**

TK #33-15<sup>+</sup> QTR-2006

Project #:

Address: #50 Rd 4990

Bloomfield, NM 87410

Project Manager:

Phone #: 505-632-4161

Fax #: 505-632-3911

| Date | Time | Matrix |
|------|------|--------|
|------|------|--------|

Sample I.D. No.

Number/Volume

Preservative

HEAL No.

|          |            |
|----------|------------|
| HEAL No. | HL 0603015 |
|----------|------------|

Number/Volume

|         |       |
|---------|-------|
| 3/01/06 | 1115A |
|---------|-------|

L20.

T#33

2-V0A

1

|    |         |
|----|---------|
| 11 | 1170 Am |
|----|---------|

Fresh Water Pond.

2.4 V/A

7

Date: 01/06/20 Time: 1 pm

Relinquished By: (Signature) 

Received By: Signature: *[Signature]* 0920  
Date: *3/2/26*

|       |       |
|-------|-------|
| Date: | Time: |
|-------|-------|

Relinquished By: (Signature)

Received By: (Signature)

# ANALYSIS REQUEST

[illegible]

Remarks:



## COVER LETTER

Tuesday, June 20, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: TK #33 - 2nd Qtr - 2006

Order No.: 0606171

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 6/16/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory, Inc.

Date: 20-Jun-06

CLIENT: San Juan Refining  
Project: TK #33 - 2nd Qtr - 2006

Lab Order: 0606171

Lab ID: 0606171-01

Collection Date: 6/15/2006 9:20:00 AM

Client Sample ID: TK #33

Matrix: AQUEOUS

| Analyses                    | Result | PQL    | Qual | Units | DF | Date Analyzed         |
|-----------------------------|--------|--------|------|-------|----|-----------------------|
| EPA METHOD 8021B: VOLATILES |        |        |      |       |    | Analyst: HLM          |
| Benzene                     | 1.2    | 1.0    |      | µg/L  | 1  | 6/16/2006 12:27:18 PM |
| Toluene                     | ND     | 1.0    |      | µg/L  | 1  | 6/16/2006 12:27:18 PM |
| Ethylbenzene                | ND     | 1.0    |      | µg/L  | 1  | 6/16/2006 12:27:18 PM |
| Xylenes, Total              | ND     | 3.0    |      | µg/L  | 1  | 6/16/2006 12:27:18 PM |
| Surr: 4-Bromofluorobenzene  | 88.6   | 85-115 |      | %REC  | 1  | 6/16/2006 12:27:18 PM |

Lab ID: 0606171-02

Collection Date: 6/15/2006 9:25:00 AM

Client Sample ID: Fresh Water Pond

Matrix: AQUEOUS

| Analyses                    | Result | PQL    | Qual | Units | DF | Date Analyzed         |
|-----------------------------|--------|--------|------|-------|----|-----------------------|
| EPA METHOD 8021B: VOLATILES |        |        |      |       |    | Analyst: HLM          |
| Benzene                     | ND     | 1.0    |      | µg/L  | 1  | 6/16/2006 12:56:21 PM |
| Toluene                     | ND     | 1.0    |      | µg/L  | 1  | 6/16/2006 12:56:21 PM |
| Ethylbenzene                | ND     | 1.0    |      | µg/L  | 1  | 6/16/2006 12:56:21 PM |
| Xylenes, Total              | ND     | 3.0    |      | µg/L  | 1  | 6/16/2006 12:56:21 PM |
| Surr: 4-Bromofluorobenzene  | 88.7   | 85-115 |      | %REC  | 1  | 6/16/2006 12:56:21 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



## QA/QC SUMMARY REPORT

nt: San Juan Refining  
ject: TK #33 - 2nd Qtr - 2006

Work Order: 0606171

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8021

Batch ID: R19631

Sample ID: 5ML RB

MBLK

Analysis Date: 6/16/2006

Benzene ND µg/L 1.0

Toluene ND µg/L 1.0

Ethylbenzene ND µg/L 1.0

Xylenes, Total ND µg/L 3.0

Sample ID: 100NG BTEX LCS

LCS

Analysis Date: 6/16/2006

Benzene 19.07 µg/L 1.0 95.3 85 115

Toluene 17.79 µg/L 1.0 89.0 85 118

Ethylbenzene 18.12 µg/L 1.0 90.6 85 116

Xylenes, Total 55.36 µg/L 3.0 92.3 85 119

## Qualifiers:

Value above quantitation range

H Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

Page 1

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

6/16/2006

Work Order Number 0606171

Received by AT

Checklist completed by



Date

6/16/06

Matrix

Carrier name UPS

|                                                         |                                                 |                                                          |                                                                           |
|---------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/>                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/> Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>                   | N/A <input type="checkbox"/>                                              |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/>                  | No <input type="checkbox"/>                                               |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>                              | N/A <input checked="" type="checkbox"/>                                   |
| Container/Temp Blank temperature?                       | 7°                                              | 4° C ± 2 Acceptable<br>If given sufficient time to cool. |                                                                           |

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Corrective Action \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



COVER LETTER

Friday, September 22, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: TK #33 - 3rd Qtr - 2006

Order No.: 0609152

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 9/14/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



## Hall Environmental Analysis Laboratory, Inc.

Date: 22-Sep-06

CLIENT: San Juan Refining  
Project: TK #33 - 3rd Qtr - 2006

Lab Order: 0609152

Lab ID: 0609152-01  
Client Sample ID: TK#33 Effluent

Collection Date: 9/13/2006 9:00:00 AM  
Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8021B: VOLATILES

Analyst: NSB

|                            |      |          |  |      |   |                      |
|----------------------------|------|----------|--|------|---|----------------------|
| Benzene                    | ND   | 1.0      |  | µg/L | 1 | 9/21/2006 3:40:15 PM |
| Toluene                    | ND   | 1.0      |  | µg/L | 1 | 9/21/2006 3:40:15 PM |
| Ethylbenzene               | ND   | 1.0      |  | µg/L | 1 | 9/21/2006 3:40:15 PM |
| Xylenes, Total             | ND   | 3.0      |  | µg/L | 1 | 9/21/2006 3:40:15 PM |
| Surr: 4-Bromofluorobenzene | 94.4 | 72.2-125 |  | %REC | 1 | 9/21/2006 3:40:15 PM |

Lab ID: 0609152-02  
Client Sample ID: Fresh Water Ponds

Collection Date: 9/13/2006 9:15:00 AM  
Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8021B: VOLATILES

Analyst: NSB

|                            |      |          |  |      |   |                      |
|----------------------------|------|----------|--|------|---|----------------------|
| Benzene                    | ND   | 1.0      |  | µg/L | 1 | 9/21/2006 4:09:19 PM |
| Toluene                    | ND   | 1.0      |  | µg/L | 1 | 9/21/2006 4:09:19 PM |
| Ethylbenzene               | ND   | 1.0      |  | µg/L | 1 | 9/21/2006 4:09:19 PM |
| Xylenes, Total             | ND   | 3.0      |  | µg/L | 1 | 9/21/2006 4:09:19 PM |
| Surr: 4-Bromofluorobenzene | 97.7 | 72.2-125 |  | %REC | 1 | 9/21/2006 4:09:19 PM |

Qualifiers: + Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: TK #33 - 3rd Qtr - 2006

Work Order: 0609152

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8021

Sample ID: b 5

MBLK

Batch ID: R20767 Analysis Date: 9/21/2006 10:48:20 AM

|                |    |      |     |
|----------------|----|------|-----|
| Benzene        | ND | µg/L | 1.0 |
| Toluene        | ND | µg/L | 1.0 |
| Ethylbenzene   | ND | µg/L | 1.0 |
| Xylenes, Total | ND | µg/L | 3.0 |

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R20767 Analysis Date: 9/21/2006 6:07:28 PM

|                |       |      |     |      |    |     |
|----------------|-------|------|-----|------|----|-----|
| Benzene        | 19.01 | µg/L | 1.0 | 95.0 | 85 | 115 |
| Toluene        | 19.38 | µg/L | 1.0 | 96.9 | 85 | 118 |
| Ethylbenzene   | 20.21 | µg/L | 1.0 | 101  | 85 | 116 |
| Xylenes, Total | 60.43 | µg/L | 3.0 | 101  | 85 | 119 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |



Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

9/14/2006

Work Order Number 0609152

Received by GLS

Checklist completed by

Signature

Date

Matrix

Carrier name UPS

|                                                         |                                                 |                                         |                                         |                                      |
|---------------------------------------------------------|-------------------------------------------------|-----------------------------------------|-----------------------------------------|--------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    |                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/> |                                      |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>             |                                      |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/> |                                      |
| Container/Temp Blank temperature?                       | 14°                                             | 4° C ± 2 Acceptable                     |                                         |                                      |
|                                                         |                                                 | If given sufficient time to cool.       |                                         |                                      |

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

—

20-4-06

# ANALYSIS REQUEST

[illegible]

Remarks:



## COVER LETTER

Tuesday, October 24, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: TK #33 - 4TH Qtr - 2006

Order No.: 0610183

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 10/18/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over the typed name.

Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425  
AZ license # AZ0682  
ORELAP Lab # NM100001



## Hall Environmental Analysis Laboratory, Inc.

Date: 24-Oct-06

CLIENT: San Juan Refining  
Project: TK #33 - 4TH Qtr - 2006

Lab Order: 0610183

Lab ID: 0610183-01

Collection Date: 10/17/2006 8:45:00 AM

Client Sample ID: TK#33

Matrix: AQUEOUS

| Analyses                    | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-----------------------------|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8021B: VOLATILES |        |          |      |       |    | Analyst: NSB          |
| Benzene                     | ND     | 1.0      |      | µg/L  | 1  | 10/20/2006 4:38:48 PM |
| Toluene                     | ND     | 1.0      |      | µg/L  | 1  | 10/20/2006 4:38:48 PM |
| Ethylbenzene                | ND     | 1.0      |      | µg/L  | 1  | 10/20/2006 4:38:48 PM |
| Xylenes, Total              | ND     | 3.0      |      | µg/L  | 1  | 10/20/2006 4:38:48 PM |
| Surr: 4-Bromofluorobenzene  | 91.4   | 72.2-125 |      | %REC  | 1  | 10/20/2006 4:38:48 PM |

Lab ID: 0610183-02

Collection Date: 10/17/2006 8:50:00 AM

Client Sample ID: Fresh Water Ponds

Matrix: AQUEOUS

| Analyses                    | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-----------------------------|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8021B: VOLATILES |        |          |      |       |    | Analyst: NSB          |
| Benzene                     | ND     | 1.0      |      | µg/L  | 1  | 10/20/2006 5:09:04 PM |
| Toluene                     | ND     | 1.0      |      | µg/L  | 1  | 10/20/2006 5:09:04 PM |
| Ethylbenzene                | ND     | 1.0      |      | µg/L  | 1  | 10/20/2006 5:09:04 PM |
| Xylenes, Total              | ND     | 3.0      |      | µg/L  | 1  | 10/20/2006 5:09:04 PM |
| Surr: 4-Bromofluorobenzene  | 90.5   | 72.2-125 |      | %REC  | 1  | 10/20/2006 5:09:04 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: TK #33 - 4TH Qtr - 2006

Work Order: 0610183

| Analyte                    | Result | Units | PQL                                                   | %Rec | LowLimit | HighLimit | %RPD  | RPDLimit | Qual |
|----------------------------|--------|-------|-------------------------------------------------------|------|----------|-----------|-------|----------|------|
| Method: SW8021             |        |       |                                                       |      |          |           |       |          |      |
| Sample ID: 0610183-01A MSD |        | MSD   | Batch ID: R21120 Analysis Date: 10/20/2006 8:10:59 PM |      |          |           |       |          |      |
| Benzene                    | 21.34  | µg/L  | 1.0                                                   | 103  | 85       | 115       | 0.765 | 27       |      |
| Toluene                    | 21.46  | µg/L  | 1.0                                                   | 105  | 85       | 118       | 0.561 | 19       |      |
| Ethylbenzene               | 21.36  | µg/L  | 1.0                                                   | 107  | 85       | 116       | 0.375 | 10       |      |
| Xylenes, Total             | 44.09  | µg/L  | 3.0                                                   | 107  | 85       | 119       | 0.423 | 13       |      |
| Sample ID: 5ML RB          |        | MBLK  | Batch ID: R21120 Analysis Date: 10/20/2006 9:53:58 AM |      |          |           |       |          |      |
| Benzene                    | ND     | µg/L  | 1.0                                                   |      |          |           |       |          |      |
| Toluene                    | ND     | µg/L  | 1.0                                                   |      |          |           |       |          |      |
| Ethylbenzene               | ND     | µg/L  | 1.0                                                   |      |          |           |       |          |      |
| Xylenes, Total             | ND     | µg/L  | 3.0                                                   |      |          |           |       |          |      |
| Sample ID: 100NG BTEX LCS  |        | LCS   | Batch ID: R21120 Analysis Date: 10/20/2006 7:09:58 PM |      |          |           |       |          |      |
| Benzene                    | 20.90  | µg/L  | 1.0                                                   | 104  | 85       | 115       |       |          |      |
| Toluene                    | 20.98  | µg/L  | 1.0                                                   | 105  | 85       | 118       |       |          |      |
| Ethylbenzene               | 20.91  | µg/L  | 1.0                                                   | 105  | 85       | 116       |       |          |      |
| Xylenes, Total             | 43.13  | µg/L  | 3.0                                                   | 108  | 85       | 119       |       |          |      |
| Sample ID: 0610183-01A MS  |        | MS    | Batch ID: R21120 Analysis Date: 10/20/2006 7:40:33 PM |      |          |           |       |          |      |
| Benzene                    | 21.51  | µg/L  | 1.0                                                   | 104  | 85       | 115       |       |          |      |
| Toluene                    | 21.34  | µg/L  | 1.0                                                   | 104  | 85       | 118       |       |          |      |
| Ethylbenzene               | 21.28  | µg/L  | 1.0                                                   | 106  | 85       | 116       |       |          |      |
| Xylenes, Total             | 43.91  | µg/L  | 3.0                                                   | 107  | 85       | 119       |       |          |      |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike recovery outside accepted recovery limits    |

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

10/18/2006

Work Order Number 0610183

Received by GLS

Checklist completed by

Signature

Date

Matrix

Carrier name UPS

|                                                         |                                                 |                                         |                                                                           |
|---------------------------------------------------------|-------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/> Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/>                                   |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                                                           |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                                                           |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                                                           |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                                                           |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                                                           |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                                                           |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                                                           |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>                                               |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/>                                   |

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action



# CHAIN-OF-CUSTODY RECORD

Client: SAN JUAN REFUGIO  
 Address: #50 Rd 4990  
Bloomfield, NM  
87413  
 Phone #: 505-632-4161  
 Fax #: 505-632-3911

QA / QC Package:  
 Std ☐ Level 4 ☐  
 Other: TK #33-4th QTR-2006

Project Name: TK #33-4th QTR-2006

Project #: TK #33-4th QTR-2006

Project Manager: Blair Hartsch

Sample: TK #33-4th QTR-2006

Sample Temperature: 26°C

Number/Volume: 2-VOA

HEAL No. ACC 060183

Preservative: X

HgCl<sub>2</sub> X

HNO<sub>3</sub> X

2-VOA

2-VOA

Fresh Water Pond

"

85DA

10/17/06

9:15A

10/17/06

9:15A

10/17/06

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COVER LETTER

Friday, April 14, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Phase II-Semi-Annual 2006

Order No.: 0604013

Dear Cindy Hurtado:

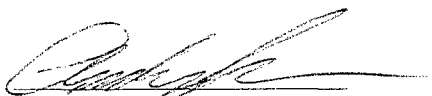
Hall Environmental Analysis Laboratory received 12 sample(s) on 4/4/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Project: Phase II-Semi-Annual 2006  
Lab Order: 0604013

## CASE NARRATIVE

Analytical Comments for METHOD 8015DRO\_S, SAMPLE 0604065-11A: DNOP not recovered due to dilution

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-01

Client Sample ID: CW-0+60  
Collection Date: 4/3/2006 12:40:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)     | ND     | 25       |      | µg/L  | 10 | 4/11/2006 6:46:21 PM |
| Benzene                            | 360    | 10       |      | µg/L  | 10 | 4/11/2006 6:46:21 PM |
| Toluene                            | 15     | 10       |      | µg/L  | 10 | 4/11/2006 6:46:21 PM |
| Ethylbenzene                       | 48     | 10       |      | µg/L  | 10 | 4/11/2006 6:46:21 PM |
| Xylenes, Total                     | 160    | 30       |      | µg/L  | 10 | 4/11/2006 6:46:21 PM |
| Surr: 4-Bromofluorobenzene         | 106    | 82.2-119 |      | %REC  | 10 | 4/11/2006 6:46:21 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-02

Client Sample ID: CW-1+50  
Collection Date: 4/3/2006 12:55:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | ND     | 50       |      | µg/L  | 20 | 4/11/2006 7:17:30 PM |
| Benzene                        | 130    | 20       |      | µg/L  | 20 | 4/11/2006 7:17:30 PM |
| Toluene                        | 24     | 20       |      | µg/L  | 20 | 4/11/2006 7:17:30 PM |
| Ethylbenzene                   | 120    | 20       |      | µg/L  | 20 | 4/11/2006 7:17:30 PM |
| Xylenes, Total                 | 1700   | 60       |      | µg/L  | 20 | 4/11/2006 7:17:30 PM |
| Surr: 4-Bromofluorobenzene     | 105    | 82.2-119 |      | %REC  | 20 | 4/11/2006 7:17:30 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-03

Client Sample ID: CW-3+85  
Collection Date: 4/3/2006 1:10:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | ND     | 12       |      | µg/L  | 5  | 4/11/2006 7:48:35 PM |
| Benzene                        | 12     | 5.0      |      | µg/L  | 5  | 4/11/2006 7:48:35 PM |
| Toluene                        | 12     | 5.0      |      | µg/L  | 5  | 4/11/2006 7:48:35 PM |
| Ethylbenzene                   | 20     | 5.0      |      | µg/L  | 5  | 4/11/2006 7:48:35 PM |
| Xylenes, Total                 | 220    | 15       |      | µg/L  | 5  | 4/11/2006 7:48:35 PM |
| Surr: 4-Bromofluorobenzene     | 108    | 82.2-119 |      | %REC  | 5  | 4/11/2006 7:48:35 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-04

Client Sample ID: CW-5+50  
Collection Date: 4/3/2006 1:20:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)     | 87     | 25       |      | µg/L  | 10 | 4/11/2006 8:19:19 PM |
| Benzene                            | 44     | 10       |      | µg/L  | 10 | 4/11/2006 8:19:19 PM |
| Toluene                            | ND     | 10       |      | µg/L  | 10 | 4/11/2006 8:19:19 PM |
| Ethylbenzene                       | 12     | 10       |      | µg/L  | 10 | 4/11/2006 8:19:19 PM |
| Xylenes, Total                     | 150    | 30       |      | µg/L  | 10 | 4/11/2006 8:19:19 PM |
| Surr: 4-Bromofluorobenzene         | 102    | 82.2-119 |      | %REC  | 10 | 4/11/2006 8:19:19 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-05

Client Sample ID: CW-6+70  
Collection Date: 4/3/2006 1:40:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | 110    | 5.0      |      | µg/L  | 2  | 4/11/2006 8:51:04 PM |
| Benzene                        | 19     | 2.0      |      | µg/L  | 2  | 4/11/2006 8:51:04 PM |
| Toluene                        | ND     | 2.0      |      | µg/L  | 2  | 4/11/2006 8:51:04 PM |
| Ethylbenzene                   | ND     | 2.0      |      | µg/L  | 2  | 4/11/2006 8:51:04 PM |
| Xylenes, Total                 | ND     | 6.0      |      | µg/L  | 2  | 4/11/2006 8:51:04 PM |
| Surr: 4-Bromofluorobenzene     | 98.5   | 82.2-119 |      | %REC  | 2  | 4/11/2006 8:51:04 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-06

Client Sample ID: CW-8+10  
Collection Date: 4/3/2006 1:55:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | 91     | 12       |      | µg/L  | 5  | 4/11/2006 9:22:27 PM |
| Benzene                        | 170    | 5.0      |      | µg/L  | 5  | 4/11/2006 9:22:27 PM |
| Toluene                        | ND     | 5.0      |      | µg/L  | 5  | 4/11/2006 9:22:27 PM |
| Ethylbenzene                   | 9.8    | 5.0      |      | µg/L  | 5  | 4/11/2006 9:22:27 PM |
| Xylenes, Total                 | 110    | 15       |      | µg/L  | 5  | 4/11/2006 9:22:27 PM |
| Surr: 4-Bromofluorobenzene     | 96.4   | 82.2-119 |      | %REC  | 5  | 4/11/2006 9:22:27 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-07

Client Sample ID: CW-11+15  
Collection Date: 4/3/2006 2:15:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | 1200   | 50       |      | µg/L  | 20 | 4/11/2006 9:52:52 PM |
| Benzene                        | 1700   | 20       |      | µg/L  | 20 | 4/11/2006 9:52:52 PM |
| Toluene                        | ND     | 20       |      | µg/L  | 20 | 4/11/2006 9:52:52 PM |
| Ethylbenzene                   | 24     | 20       |      | µg/L  | 20 | 4/11/2006 9:52:52 PM |
| Xylenes, Total                 | 380    | 60       |      | µg/L  | 20 | 4/11/2006 9:52:52 PM |
| Surr: 4-Bromofluorobenzene     | 108    | 82.2-119 |      | %REC  | 20 | 4/11/2006 9:52:52 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-08

Client Sample ID: CW-14+10  
Collection Date: 4/3/2006 2:30:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF  | Date Analyzed         |
|--------------------------------|--------|----------|------|-------|-----|-----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |     | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE) | 1200   | 250      |      | µg/L  | 100 | 4/11/2006 10:24:13 PM |
| Benzene                        | 8800   | 100      |      | µg/L  | 100 | 4/11/2006 10:24:13 PM |
| Toluene                        | ND     | 100      |      | µg/L  | 100 | 4/11/2006 10:24:13 PM |
| Ethylbenzene                   | 1100   | 100      |      | µg/L  | 100 | 4/11/2006 10:24:13 PM |
| Xylenes, Total                 | ND     | 300      |      | µg/L  | 100 | 4/11/2006 10:24:13 PM |
| Surr: 4-Bromofluorobenzene     | 102    | 82.2-119 |      | %REC  | 100 | 4/11/2006 10:24:13 PM |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining

Client Sample ID: CW-16+60

Lab Order: 0604013

Collection Date: 4/3/2006 2:40:00 PM

Project: Phase II-Semi-Annual 2006

Date Received: 4/4/2006

Lab ID: 0604013-09

Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF  | Date Analyzed         |
|--------------------------------|--------|----------|------|-------|-----|-----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |     | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE) | 7600   | 250      |      | µg/L  | 100 | 4/11/2006 11:57:51 PM |
| Benzene                        | 6300   | 100      |      | µg/L  | 100 | 4/11/2006 11:57:51 PM |
| Toluene                        | ND     | 100      |      | µg/L  | 100 | 4/11/2006 11:57:51 PM |
| Ethylbenzene                   | 3100   | 100      |      | µg/L  | 100 | 4/11/2006 11:57:51 PM |
| Xylenes, Total                 | 6300   | 300      |      | µg/L  | 100 | 4/11/2006 11:57:51 PM |
| Surr: 4-Bromofluorobenzene     | 108    | 82.2-119 |      | %REC  | 100 | 4/11/2006 11:57:51 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604013  
Project: Phase II-Semi-Annual 2006  
Lab ID: 0604013-10

Client Sample ID: CW-19+50  
Collection Date: 4/3/2006 2:45:00 PM  
Date Received: 4/4/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF  | Date Analyzed         |
|------------------------------------|--------|----------|------|-------|-----|-----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |     | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)     | 80000  | 1200     |      | µg/L  | 500 | 4/12/2006 1:02:01 AM  |
| Benzene                            | 4900   | 100      |      | µg/L  | 100 | 4/12/2006 12:29:38 AM |
| Toluene                            | ND     | 100      |      | µg/L  | 100 | 4/12/2006 12:29:38 AM |
| Ethylbenzene                       | 1300   | 100      |      | µg/L  | 100 | 4/12/2006 12:29:38 AM |
| Xylenes, Total                     | 2600   | 300      |      | µg/L  | 100 | 4/12/2006 12:29:38 AM |
| Surr: 4-Bromofluorobenzene         | 107    | 82.2-119 |      | %REC  | 100 | 4/12/2006 12:29:38 AM |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 14-Apr-06

CLIENT: San Juan Refining

Client Sample ID: CW-22+00

Lab Order: 0604013

Collection Date: 4/3/2006 3:00:00 PM

Project: Phase II-Semi-Annual 2006

Date Received: 4/4/2006

Lab ID: 0604013-11

Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|-----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |     | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE) | 6700   | 250      |      | µg/L  | 100 | 4/12/2006 1:34:39 AM |
| Benzene                        | 7200   | 100      |      | µg/L  | 100 | 4/12/2006 1:34:39 AM |
| Toluene                        | ND     | 100      |      | µg/L  | 100 | 4/12/2006 1:34:39 AM |
| Ethylbenzene                   | ND     | 100      |      | µg/L  | 100 | 4/12/2006 1:34:39 AM |
| Xylenes, Total                 | ND     | 300      |      | µg/L  | 100 | 4/12/2006 1:34:39 AM |
| Surr: 4-Bromofluorobenzene     | 99.0   | 82.2-119 |      | %REC  | 100 | 4/12/2006 1:34:39 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 27-Apr-06

CLIENT: San Juan Refining

Client Sample ID: OW-0+60

Lab Order: 0604013

Collection Date: 4/3/2006 11:10:00 AM

Project: Phase II-Semi-Annual 2006

Date Received: 4/4/2006

Lab ID: 0604013-12

Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 110    | 10       |      | mg/L  | 10 | 4/11/2006 9:51:13 AM |
| Motor Oil Range Organics (MRO)        | ND     | 50       |      | mg/L  | 10 | 4/11/2006 9:51:13 AM |
| Surr: DNOP                            | 86.2   | 58-140   |      | %REC  | 10 | 4/11/2006 9:51:13 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)        | ND     | 25       |      | µg/L  | 10 | 4/12/2006 2:07:43 AM |
| Benzene                               | 65     | 10       |      | µg/L  | 10 | 4/12/2006 2:07:43 AM |
| Toluene                               | 33     | 10       |      | µg/L  | 10 | 4/12/2006 2:07:43 AM |
| Ethylbenzene                          | 340    | 10       |      | µg/L  | 10 | 4/12/2006 2:07:43 AM |
| Xylenes, Total                        | 1600   | 30       |      | µg/L  | 10 | 4/12/2006 2:07:43 AM |
| Surr: 4-Bromofluorobenzene            | 113    | 82.2-119 |      | %REC  | 10 | 4/12/2006 2:07:43 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

CLIENT: San Juan Refining

Work Order: 0604013

Project: Phase II-Semi-Annual 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO\_W

|                     |                 |                     |             |                         |               |          |           |             |      |          |      |
|---------------------|-----------------|---------------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10126 | SampType: MBLK  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/6/2006     | RunNo: 18854  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10126 | TestNo: SW8015      |             | Analysis Date: 4/7/2006 | SeqNo: 468281 |          |           |             |      |          |      |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                             |                 |                     |             |                         |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10126        | SampType: LCS   | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/6/2006     | RunNo: 18854  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10126 | TestNo: SW8015      |             | Analysis Date: 4/7/2006 | SeqNo: 468282 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 6.771           | 1.0                 | 5           | 0                       | 135           | 81.2     | 149       |             |      |          |      |

|                             |                 |                     |             |                         |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-10126       | SampType: LCSD  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/6/2006     | RunNo: 18854  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10126 | TestNo: SW8015      |             | Analysis Date: 4/7/2006 | SeqNo: 468283 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 7.155           | 1.0                 | 5           | 0                       | 143           | 81.2     | 149       | 6.771       | 5.52 | 23       |      |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0604013  
 Project: Phase II-Semi-Annual 2006

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887                                           |
| Client ID: ZZZZZ           | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468647                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18902                                           |
| Client ID: ZZZZZ           | Batch ID: R18902 | TestNo: SW8021       |             | Analysis Date: 4/11/2006 | SeqNo: 469572                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887                                           |
| Client ID: ZZZZZ          | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468648                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18902                                           |
| Client ID: ZZZZZ          | Batch ID: R18902 | TestNo: SW8021       |             | Analysis Date: 4/11/2006 | SeqNo: 469573                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit

J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
Work Order: 0604013  
Project: Phase II-Semi-Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18902  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R18902 | TestNo: SW8021       |             | Analysis Date: 4/11/2006 | SeqNo: 469573 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |       |      |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|-------|------|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 19.34 | 2.5 | 20 | 0     | 96.7 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 21.29 | 1.0 | 20 | 0     | 106  | 88.5 | 114 |  |  |  |  |
| Toluene                        | 20.86 | 1.0 | 20 | 0     | 104  | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 21.21 | 1.0 | 20 | 0     | 106  | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 43.80 | 3.0 | 40 | 0.692 | 108  | 83.3 | 114 |  |  |  |  |

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468649 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |       |      |    |  |
|--------------------------------|-------|-----|----|---|------|------|-----|-------|------|----|--|
| Methyl tert-butyl ether (MTBE) | 14.74 | 2.5 | 20 | 0 | 73.7 | 64.5 | 133 | 16.24 | 9.70 | 28 |  |
| Benzene                        | 22.44 | 1.0 | 20 | 0 | 112  | 88.5 | 114 | 21.4  | 4.77 | 27 |  |
| Toluene                        | 22.28 | 1.0 | 20 | 0 | 111  | 87.2 | 114 | 21.19 | 5.04 | 19 |  |
| Ethylbenzene                   | 21.19 | 1.0 | 20 | 0 | 106  | 88.6 | 113 | 20.64 | 2.60 | 10 |  |
| Xylenes, Total                 | 42.92 | 3.0 | 40 | 0 | 107  | 83.3 | 114 | 41.64 | 3.02 | 13 |  |

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18902  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18902 | TestNo: SW8021       |             | Analysis Date: 4/11/2006 | SeqNo: 469574 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |       |      |      |     |       |       |    |  |
|--------------------------------|-------|-----|----|-------|------|------|-----|-------|-------|----|--|
| Methyl tert-butyl ether (MTBE) | 18.66 | 2.5 | 20 | 0     | 93.3 | 64.5 | 133 | 19.34 | 3.55  | 28 |  |
| Benzene                        | 20.70 | 1.0 | 20 | 0     | 103  | 88.5 | 114 | 21.29 | 2.82  | 27 |  |
| Toluene                        | 20.78 | 1.0 | 20 | 0     | 104  | 87.2 | 114 | 20.86 | 0.384 | 19 |  |
| Ethylbenzene                   | 20.98 | 1.0 | 20 | 0     | 105  | 88.6 | 113 | 21.21 | 1.10  | 10 |  |
| Xylenes, Total                 | 43.48 | 3.0 | 40 | 0.692 | 107  | 83.3 | 114 | 43.8  | 0.752 | 13 |  |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit  
H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits



# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/4/2006

Work Order Number 0604013

Received by GLS

Checklist completed by

Signature

*[Signature]*

4-4-06  
Date

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

per CH sample I D 15 CW-16+60

*[Signature]*

4/4/06

Corrective Action



COVER LETTER

Monday, April 17, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Phase II-Semi Annual 2006

Order No.: 0604058

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/7/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604058  
Project: Phase II-Semi Annual 2006  
Lab ID: 0604058-01

Client Sample ID: CW 23+10  
Collection Date: 4/5/2006 10:00:00 AM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|------------------------------------|--------|----------|------|-------|-----|----------------------|
| <b>EPA METHOD 8021B: VOLATILES</b> |        |          |      |       |     | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)     | 2900   | 250      |      | µg/L  | 100 | 4/17/2006 1:28:06 PM |
| Benzene                            | 4200   | 100      |      | µg/L  | 100 | 4/17/2006 1:28:06 PM |
| Toluene                            | ND     | 10       |      | µg/L  | 10  | 4/14/2006 8:40:40 PM |
| Ethylbenzene                       | ND     | 10       |      | µg/L  | 10  | 4/14/2006 8:40:40 PM |
| Xylenes, Total                     | 110    | 30       |      | µg/L  | 10  | 4/14/2006 8:40:40 PM |
| Surr: 4-Bromofluorobenzene         | 95.1   | 82.2-119 |      | %REC  | 10  | 4/14/2006 8:40:40 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604058  
Project: Phase II-Semi Annual 2006  
Lab ID: 0604058-02

Client Sample ID: CW 23+90  
Collection Date: 4/5/2006 9:45:00 AM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF  | Date Analyzed        |
|--------------------------------|--------|----------|------|-------|-----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |     | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE) | 940    | 250      |      | µg/L  | 100 | 4/17/2006 1:58:48 PM |
| Benzene                        | 2900   | 100      |      | µg/L  | 100 | 4/17/2006 1:58:48 PM |
| Toluene                        | ND     | 100      |      | µg/L  | 100 | 4/17/2006 1:58:48 PM |
| Ethylbenzene                   | 110    | 100      |      | µg/L  | 100 | 4/17/2006 1:58:48 PM |
| Xylenes, Total                 | ND     | 300      |      | µg/L  | 100 | 4/17/2006 1:58:48 PM |
| Surr: 4-Bromofluorobenzene     | 89.6   | 82.2-119 |      | %REC  | 100 | 4/17/2006 1:58:48 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604058  
Project: Phase II-Semi Annual 2006  
Lab ID: 0604058-03

Client Sample ID: CW 25+95  
Collection Date: 4/5/2006 9:15:00 AM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|--------------------------------|--------|----------|------|-------|----|-----------------------|
| EPA METHOD 8021B: VOLATILES    |        |          |      |       |    | Analyst: BDH          |
| Methyl tert-butyl ether (MTBE) | 5.4    | 2.5      |      | µg/L  | 1  | 4/17/2006 12:57:18 PM |
| Benzene                        | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 12:57:18 PM |
| Toluene                        | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 12:57:18 PM |
| Ethylbenzene                   | ND     | 1.0      |      | µg/L  | 1  | 4/17/2006 12:57:18 PM |
| Xylenes, Total                 | ND     | 3.0      |      | µg/L  | 1  | 4/17/2006 12:57:18 PM |
| Surr: 4-Bromofluorobenzene     | 102    | 82.2-119 |      | %REC  | 1  | 4/17/2006 12:57:18 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604058  
Project: Phase II-Semi Annual 2006  
Lab ID: 0604058-04

Client Sample ID: OW 5+50  
Collection Date: 4/6/2006 9:00:00 AM  
Date Received: 4/7/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 130    | 10       |      | mg/L  | 10 | 4/13/2006 2:15:15 AM |
| Motor Oil Range Organics (MRO)        | ND     | 50       |      | mg/L  | 10 | 4/13/2006 2:15:15 AM |
| Surr: DNOP                            | 99.3   | 58-140   |      | %REC  | 10 | 4/13/2006 2:15:15 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | ND     | 25       |      | µg/L  | 10 | 4/14/2006 5:14:58 PM |
| Benzene                               | 15     | 10       |      | µg/L  | 10 | 4/14/2006 5:14:58 PM |
| Toluene                               | 14     | 10       |      | µg/L  | 10 | 4/14/2006 5:14:58 PM |
| Ethylbenzene                          | 89     | 10       |      | µg/L  | 10 | 4/14/2006 5:14:58 PM |
| Xylenes, Total                        | 970    | 30       |      | µg/L  | 10 | 4/14/2006 5:14:58 PM |
| Surr: 4-Bromofluorobenzene            | 109    | 82.2-119 |      | %REC  | 10 | 4/14/2006 5:14:58 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining

Work Order: 0604058

Project: Phase II-Semi Annual 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO\_W

|                     |                 |                     |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10154 | SampType: MBLK  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18888  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/11/2006 | SeqNo: 468734 |          |           |             |      |          |      |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                             |                 |                     |             |                          |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10154        | SampType: LCS   | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18888  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/11/2006 | SeqNo: 468947 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 4.983           | 1.0                 | 5           | 0                        | 99.7          | 81.2     | 149       |             |      |          |      |

|                             |                 |                     |             |                          |               |          |           |             |      |          |      |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-10154       | SampType: LCSD  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18922  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/14/2006 | SeqNo: 470075 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 7.200           | 1.0                 | 5           | 0                        | 144           | 81.2     | 149       | 4.983       | 36.4 | 23       | R    |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
Work Order: 0604058  
Project: Phase II-Semi Annual 2006

TestCode: 8021BTEX\_W

|                   |                  |                      |             |                          |                                                        |
|-------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940                                           |
| Client ID: ZZZZZ  | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/14/2006 | SeqNo: 470575                                          |
| Analyte           | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 2.5  
Toluene 1.0  
Ethylbenzene 1.0  
Xylenes, Total 3.0

|                          |                  |                      |             |                          |                                                        |
|--------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB 041706 | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945                                           |
| Client ID: ZZZZZ         | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470688                                          |
| Analyte                  | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 2.5  
Toluene 1.0  
Ethylbenzene 1.0  
Xylenes, Total 3.0

|                      |                  |                      |             |                          |                                                        |
|----------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940                                           |
| Client ID: ZZZZZ     | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/15/2006 | SeqNo: 470576                                          |
| Analyte              | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 15.36 2.5 20 0 76.8 64.5 133  
Toluene 20.61 1.0 20 0 103 88.5 114  
Ethylbenzene 20.97 1.0 20 0 105 87.2 114  
Xylenes, Total 20.34 1.0 20 0 102 88.6 113  
41.18 3.0 40 0 103 83.3 114

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945                                           |
| Client ID: ZZZZZ          | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470689                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit  
H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0604058  
 Project: Phase II-Semi Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470689 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |  |  |  |   |
|--------------------------------|-------|-----|----|---|-----|------|-----|--|--|--|---|
| Methyl tert-butyl ether (MTBE) | 21.65 | 2.5 | 20 | 0 | 108 | 64.5 | 133 |  |  |  |   |
| Benzene                        | 21.40 | 1.0 | 20 | 0 | 107 | 88.5 | 114 |  |  |  |   |
| Toluene                        | 22.33 | 1.0 | 20 | 0 | 112 | 87.2 | 114 |  |  |  |   |
| Ethylbenzene                   | 22.57 | 1.0 | 20 | 0 | 113 | 88.6 | 113 |  |  |  |   |
| Xylenes, Total                 | 46.82 | 3.0 | 40 | 0 | 117 | 83.3 | 114 |  |  |  | S |

|                       |                  |                      |             |                          |               |          |           |             |      |          |      |
|-----------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940  |          |           |             |      |          |      |
| Client ID: ZZZZZ      | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/15/2006 | SeqNo: 470577 |          |           |             |      |          |      |
| Analyte               | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |       |       |    |  |
|--------------------------------|-------|-----|----|---|------|------|-----|-------|-------|----|--|
| Methyl tert-butyl ether (MTBE) | 15.62 | 2.5 | 20 | 0 | 78.1 | 64.5 | 133 | 15.36 | 1.67  | 28 |  |
| Benzene                        | 20.70 | 1.0 | 20 | 0 | 103  | 88.5 | 114 | 20.61 | 0.416 | 27 |  |
| Toluene                        | 21.80 | 1.0 | 20 | 0 | 109  | 87.2 | 114 | 20.97 | 3.87  | 19 |  |
| Ethylbenzene                   | 20.98 | 1.0 | 20 | 0 | 105  | 88.6 | 113 | 20.34 | 3.10  | 10 |  |
| Xylenes, Total                 | 42.75 | 3.0 | 40 | 0 | 107  | 83.3 | 114 | 41.18 | 3.74  | 13 |  |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

## Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/7/2006

Work Order Number 0604058

Received by GLS

Checklist completed by

Signature

Date

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒No ☐Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒No ☐Not Present ☐Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐No ☐N/A ☒

Chain of custody present?

Yes ☒No ☐

Chain of custody signed when relinquished and received?

Yes ☒No ☐

Chain of custody agrees with sample labels?

Yes ☒No ☐

Samples in proper container/bottle?

Yes ☒No ☐

Sample containers intact?

Yes ☒No ☐

Sufficient sample volume for indicated test?

Yes ☒No ☐

All samples received within holding time?

Yes ☒No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐Yes ☒No ☐

Water - pH acceptable upon receipt?

Yes ☐No ☐N/A ☒

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Per. Cindy Hurtado confirmed tests for sample  
0604058-4 as 8021 BTEX+MTBE, 8015 DRO. GLS 4-7-06

Corrective Action

# CHAIN-OF-CUSTODY RECORD

Client: San Juan Refining

Address: #50 ROAD 4990

Bloomfield, NM. 87413

Phone #: 505-632-4161

Fax #: 505-632-3911

| Date   | Time  | Matrix | Sample I.D. No. | Number/Volume | Preservative | HEAL No. |
|--------|-------|--------|-----------------|---------------|--------------|----------|
| 4/6/06 | 10:00 | H2O    | CW 23+10        | 3-VOL         | H2O          | 0604058  |
|        | 9:45  | 1      | CW 23+90        | 1             | 1            | 2        |
|        | 9:15  | 1      | CW 25+95        | 1             | 1            | 3        |

4/6/06 9AM H2O CW 5+50 3-VOL

Date: 4/6/06 Time: 10AM  
 Date: 4/6/06 Time: 10AM

Relinquished By: (Signature) Cindy Hurtado  
 Relinquished By: (Signature)

Received By: (Signature) C. Hurtado  
 Received By: (Signature)

Remarks: 4-7-06  
915

QA/QC Package:  
 Std ☐ Level 4 ☐

Other: Phase II-Semiannual-2006

Project Name:

Project #:

Project Manager: Cindy Hurtado

Sample: Cindy Hurtado / Shelly Corcoran

Sample Temperature: 10

| BTX + MTBE + TPH (Gasoline Only) (8021) | BTX + MTBE + TPH (Gasoline Only) | TPH Method 8015B (40) | TPH (Method 418.1) | EDB (Method 504.1) | EDC (Method 8021) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) | 8081 Pesticides / PCB's (8082) | 8260B (VOA) | 8270 (Semi-VOA) | Air Bubbles or Headspace (Y or N) |
|-----------------------------------------|----------------------------------|-----------------------|--------------------|--------------------|-------------------|-------------------|---------------|----------------------------------------------------------------------------------------|--------------------------------|-------------|-----------------|-----------------------------------|
| X                                       | X                                | X                     | X                  | X                  | X                 | X                 | X             | X                                                                                      | X                              | X           | X               | X                                 |

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 4901 Hawkins NE, Suite D  
 Albuquerque, New Mexico 87109  
 Tel. 505.345.3975 Fax 505.345.4107  
 www.hallenvironmental.com

## ANALYSIS REQUEST



COVER LETTER

Monday, April 17, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: Phase II Semi-Annual 2006

Order No.: 0604042

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 6 sample(s) on 4/6/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



## Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Project: Phase II Semi-Annual 2006  
Lab Order: 0604042

## CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604042  
Project: Phase II Semi-Annual 2006  
Lab ID: 0604042-01

Client Sample ID: OW 11+15  
Collection Date: 4/4/2006 8:30:00 AM  
Date Received: 4/6/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 15     | 1.0      |      | mg/L  | 1  | 4/11/2006 2:49:38 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 2:49:38 PM |
| Surr: DNOP                            | 130    | 58-140   |      | %REC  | 1  | 4/11/2006 2:49:38 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | 1600   | 50       |      | µg/L  | 20 | 4/14/2006 5:45:48 PM |
| Benzene                               | 230    | 20       |      | µg/L  | 20 | 4/14/2006 5:45:48 PM |
| Toluene                               | ND     | 20       |      | µg/L  | 20 | 4/14/2006 5:45:48 PM |
| Ethylbenzene                          | ND     | 20       |      | µg/L  | 20 | 4/14/2006 5:45:48 PM |
| Xylenes, Total                        | ND     | 60       |      | µg/L  | 20 | 4/14/2006 5:45:48 PM |
| Surr: 4-Bromofluorobenzene            | 95.8   | 82.2-119 |      | %REC  | 20 | 4/14/2006 5:45:48 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604042  
Project: Phase II Semi-Annual 2006  
Lab ID: 0604042-02

Client Sample ID: OW 19+50  
Collection Date: 4/4/2006 8:40:00 AM  
Date Received: 4/6/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 3.4    | 1.0      |      | mg/L  | 1  | 4/11/2006 3:23:14 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 3:23:14 PM |
| Surr: DNOP                            | 79.7   | 58-140   |      | %REC  | 1  | 4/11/2006 3:23:14 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | 180    | 2.5      |      | µg/L  | 1  | 4/14/2006 6:14:02 PM |
| Benzene                               | 3.5    | 1.0      |      | µg/L  | 1  | 4/14/2006 6:14:02 PM |
| Toluene                               | ND     | 1.0      |      | µg/L  | 1  | 4/14/2006 6:14:02 PM |
| Ethylbenzene                          | 12     | 1.0      |      | µg/L  | 1  | 4/14/2006 6:14:02 PM |
| Xylenes, Total                        | 77     | 3.0      |      | µg/L  | 1  | 4/14/2006 6:14:02 PM |
| Surr: 4-Bromofluorobenzene            | 97.2   | 82.2-119 |      | %REC  | 1  | 4/14/2006 6:14:02 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604042  
Project: Phase II Semi-Annual 2006  
Lab ID: 0604042-03

Client Sample ID: OW 22+00  
Collection Date: 4/4/2006 2:10:00 PM  
Date Received: 4/6/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|---------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)           | 13     | 1.0      |      | mg/L  | 1  | 4/11/2006 3:56:51 PM  |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 3:56:51 PM  |
| Surr: DNOP                            | 76.5   | 58-140   |      | %REC  | 1  | 4/11/2006 3:56:51 PM  |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH          |
| Methyl tert-butyl ether (MTBE)        | 3900   | 50       |      | µg/L  | 20 | 4/17/2006 12:14:41 PM |
| Benzene                               | ND     | 1.0      |      | µg/L  | 1  | 4/14/2006 6:42:12 PM  |
| Toluene                               | ND     | 1.0      |      | µg/L  | 1  | 4/14/2006 6:42:12 PM  |
| Ethylbenzene                          | ND     | 1.0      |      | µg/L  | 1  | 4/14/2006 6:42:12 PM  |
| Xylenes, Total                        | ND     | 3.0      |      | µg/L  | 1  | 4/14/2006 6:42:12 PM  |
| Surr: 4-Bromofluorobenzene            | 106    | 82.2-119 |      | %REC  | 1  | 4/14/2006 6:42:12 PM  |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0604042  
**Project:** Phase II Semi-Annual 2006  
**Lab ID:** 0604042-04

**Client Sample ID:** OW 23+10  
**Collection Date:** 4/4/2006 2:30:00 PM  
**Date Received:** 4/6/2006  
**Matrix:** AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 20     | 1.0      |      | mg/L  | 1  | 4/11/2006 4:30:31 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 4:30:31 PM |
| Surr: DNOP                            | 96.7   | 58-140   |      | %REC  | 1  | 4/11/2006 4:30:31 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | 310    | 25       |      | µg/L  | 10 | 4/14/2006 7:12:54 PM |
| Benzene                               | 26     | 10       |      | µg/L  | 10 | 4/14/2006 7:12:54 PM |
| Toluene                               | 12     | 10       |      | µg/L  | 10 | 4/14/2006 7:12:54 PM |
| Ethylbenzene                          | 18     | 10       |      | µg/L  | 10 | 4/14/2006 7:12:54 PM |
| Xylenes, Total                        | 180    | 30       |      | µg/L  | 10 | 4/14/2006 7:12:54 PM |
| Surr: 4-Bromofluorobenzene            | 107    | 82.2-119 |      | %REC  | 10 | 4/14/2006 7:12:54 PM |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 17-Apr-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0604042  
**Project:** Phase II Semi-Annual 2006  
**Lab ID:** 0604042-05

**Client Sample ID:** OW 23+90  
**Collection Date:** 4/4/2006 3:30:00 PM  
**Date Received:** 4/6/2006  
**Matrix:** AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 24     | 1.0      |      | mg/L  | 1  | 4/11/2006 5:04:10 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 5:04:10 PM |
| Surr: DNOP                            | 95.5   | 58-140   |      | %REC  | 1  | 4/11/2006 5:04:10 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | 34     | 2.5      |      | µg/L  | 1  | 4/14/2006 7:41:12 PM |
| Benzene                               | 12     | 1.0      |      | µg/L  | 1  | 4/14/2006 7:41:12 PM |
| Toluene                               | 3.2    | 1.0      |      | µg/L  | 1  | 4/14/2006 7:41:12 PM |
| Ethylbenzene                          | 14     | 1.0      |      | µg/L  | 1  | 4/14/2006 7:41:12 PM |
| Xylenes, Total                        | 29     | 3.0      |      | µg/L  | 1  | 4/14/2006 7:41:12 PM |
| Surr: 4-Bromofluorobenzene            | 132    | 82.2-119 | S    | %REC  | 1  | 4/14/2006 7:41:12 PM |

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory**

Date: 17-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604042  
Project: Phase II Semi-Annual 2006  
Lab ID: 0604042-06

Client Sample ID: OW 25+70  
Collection Date: 4/4/2006 3:00:00 PM  
Date Received: 4/6/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | ND     | 1.0      |      | mg/L  | 1  | 4/11/2006 5:38:02 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 4/11/2006 5:38:02 PM |
| Surr: DNOP                            | 95.3   | 58-140   |      | %REC  | 1  | 4/11/2006 5:38:02 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: BDH         |
| Methyl tert-butyl ether (MTBE)        | ND     | 2.5      |      | µg/L  | 1  | 4/14/2006 8:09:32 PM |
| Benzene                               | ND     | 1.0      |      | µg/L  | 1  | 4/14/2006 8:09:32 PM |
| Toluene                               | ND     | 1.0      |      | µg/L  | 1  | 4/14/2006 8:09:32 PM |
| Ethylbenzene                          | ND     | 1.0      |      | µg/L  | 1  | 4/14/2006 8:09:32 PM |
| Xylenes, Total                        | ND     | 3.0      |      | µg/L  | 1  | 4/14/2006 8:09:32 PM |
| Surr: 4-Bromofluorobenzene            | 93.9   | 82.2-119 |      | %REC  | 1  | 4/14/2006 8:09:32 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO\_W

CLIENT: San Juan Refining

Work Order: 0604042

Project: Phase II Semi-Annual 2006

|                                |                 |                     |             |                          |                                                        |
|--------------------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MB-10154            | SampType: MBLK  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18888                                           |
| Client ID: ZZZZZ               | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/11/2006 | SeqNo: 468734                                          |
| Analyte                        | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Diesel Range Organics (DRO)    | ND              | 1.0                 |             |                          |                                                        |
| Motor Oil Range Organics (MRO) | ND              | 5.0                 |             |                          |                                                        |

|                             |                 |                     |             |                          |                                                        |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCS-10154        | SampType: LCS   | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18888                                           |
| Client ID: ZZZZZ            | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/11/2006 | SeqNo: 468947                                          |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 4.983           | 1.0                 | 5           | 0                        | 99.7 81.2 149                                          |

|                             |                 |                     |             |                          |                                                        |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCSD-10154       | SampType: LCSD  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/11/2006     | RunNo: 18922                                           |
| Client ID: ZZZZZ            | Batch ID: 10154 | TestNo: SW8015      |             | Analysis Date: 4/14/2006 | SeqNo: 470075                                          |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 7.200           | 1.0                 | 5           | 0                        | 144 81.2 149 4.983 36.4 23 R                           |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0604042  
 Project: Phase II Semi-Annual 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887                                           |
| Client ID: ZZZZZ           | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468647                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                   |                  |                      |             |                          |                                                        |
|-------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940                                           |
| Client ID: ZZZZZ  | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/14/2006 | SeqNo: 470575                                          |
| Analyte           | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                          |                  |                      |             |                          |                                                        |
|--------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB 041706 | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945                                           |
| Client ID: ZZZZZ         | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470688                                          |
| Analyte                  | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887                                           |
| Client ID: ZZZZZ          | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468648                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604042

Project: Phase II Semi-Annual 2006

TestCode: 8021BTEX\_W

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468648 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|------|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 16.24 | 2.5 | 20 | 0 | 81.2 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 21.40 | 1.0 | 20 | 0 | 107  | 88.5 | 114 |  |  |  |  |
| Toluene                        | 21.19 | 1.0 | 20 | 0 | 106  | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 20.64 | 1.0 | 20 | 0 | 103  | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 41.64 | 3.0 | 40 | 0 | 104  | 83.3 | 114 |  |  |  |  |

|                      |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/15/2006 | SeqNo: 470576 |          |           |             |      |          |      |
| Analyte              | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|------|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 15.36 | 2.5 | 20 | 0 | 76.8 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 20.61 | 1.0 | 20 | 0 | 103  | 88.5 | 114 |  |  |  |  |
| Toluene                        | 20.97 | 1.0 | 20 | 0 | 105  | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 20.34 | 1.0 | 20 | 0 | 102  | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 41.18 | 3.0 | 40 | 0 | 103  | 83.3 | 114 |  |  |  |  |

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18945  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R18945 | TestNo: SW8021       |             | Analysis Date: 4/17/2006 | SeqNo: 470689 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |  |  |  |   |
|--------------------------------|-------|-----|----|---|-----|------|-----|--|--|--|---|
| Methyl tert-butyl ether (MTBE) | 21.65 | 2.5 | 20 | 0 | 108 | 64.5 | 133 |  |  |  |   |
| Benzene                        | 21.40 | 1.0 | 20 | 0 | 107 | 88.5 | 114 |  |  |  |   |
| Toluene                        | 22.33 | 1.0 | 20 | 0 | 112 | 87.2 | 114 |  |  |  |   |
| Ethylbenzene                   | 22.57 | 1.0 | 20 | 0 | 113 | 88.6 | 113 |  |  |  |   |
| Xylenes, Total                 | 46.82 | 3.0 | 40 | 0 | 117 | 83.3 | 114 |  |  |  | S |

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468649 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Qualifiers: E Value above quantitation range ND Not Detected at the Reporting Limit H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

**CLIENT:** San Juan Refining  
**Work Order:** 0604042  
**Project:** Phase II Semi-Annual 2006

**TestCode:** 8021BTEX\_W

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18887  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18887 | TestNo: SW8021       |             | Analysis Date: 4/10/2006 | SeqNo: 468649 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |       |      |    |  |
|--------------------------------|-------|-----|----|---|------|------|-----|-------|------|----|--|
| Methyl tert-butyl ether (MTBE) | 14.74 | 2.5 | 20 | 0 | 73.7 | 64.5 | 133 | 16.24 | 9.70 | 28 |  |
| Benzene                        | 22.44 | 1.0 | 20 | 0 | 112  | 88.5 | 114 | 21.4  | 4.77 | 27 |  |
| Toluene                        | 22.28 | 1.0 | 20 | 0 | 111  | 87.2 | 114 | 21.19 | 5.04 | 19 |  |
| Ethylbenzene                   | 21.19 | 1.0 | 20 | 0 | 106  | 88.6 | 113 | 20.64 | 2.60 | 10 |  |
| Xylenes, Total                 | 42.92 | 3.0 | 40 | 0 | 107  | 83.3 | 114 | 41.64 | 3.02 | 13 |  |

|                       |                  |                      |             |                          |               |          |           |             |      |          |      |
|-----------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG LCSD | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 18940  |          |           |             |      |          |      |
| Client ID: ZZZZZ      | Batch ID: R18940 | TestNo: SW8021       |             | Analysis Date: 4/15/2006 | SeqNo: 470577 |          |           |             |      |          |      |
| Analyte               | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |       |       |    |  |
|--------------------------------|-------|-----|----|---|------|------|-----|-------|-------|----|--|
| Methyl tert-butyl ether (MTBE) | 15.62 | 2.5 | 20 | 0 | 78.1 | 64.5 | 133 | 15.36 | 1.67  | 28 |  |
| Benzene                        | 20.70 | 1.0 | 20 | 0 | 103  | 88.5 | 114 | 20.61 | 0.416 | 27 |  |
| Toluene                        | 21.80 | 1.0 | 20 | 0 | 109  | 87.2 | 114 | 20.97 | 3.87  | 19 |  |
| Ethylbenzene                   | 20.98 | 1.0 | 20 | 0 | 105  | 88.6 | 113 | 20.34 | 3.10  | 10 |  |
| Xylenes, Total                 | 42.75 | 3.0 | 40 | 0 | 107  | 83.3 | 114 | 41.18 | 3.74  | 13 |  |

| Qualifiers: | E  | Value above quantitation range      | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits      |
|-------------|----|-------------------------------------|---|----------------------------------------------------|---|-------------------------------------------------|
|             | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits               | S | Spike Recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/6/2006

Work Order Number 0604042

Received by AT

Checklist completed by

Signature

Date

4/16/06

Matrix

Carrier name UPS

|                                                         |                                                 |                                                          |                                                                           |
|---------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/>                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/> Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>                   | N/A <input type="checkbox"/>                                              |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                                                           |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/>                  | No <input type="checkbox"/>                                               |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>                              | N/A <input checked="" type="checkbox"/>                                   |
| Container/Temp Blank temperature?                       | 2°                                              | 4° C ± 2 Acceptable<br>If given sufficient time to cool. |                                                                           |

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

Project Name: Phase II - Semi Annual - 2006

Project #:

Project Manager:

| Sample | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Sample Temperature:

Number/Volume

- XE

4-V04

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| × | × | × | × | × | × |
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Remarks:



## COVER LETTER

Thursday, August 31, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Annual Sampling 2006

Order No.: 0608279

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 7 sample(s) on 8/23/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory, Inc.

Date: 31-Aug-06

CLIENT: San Juan Refining  
Lab Order: 0608279  
Project: Annual Sampling 2006  
Lab ID: 0608279-01

Client Sample ID: OW 0+60  
Collection Date: 8/21/2006 12:35:00 PM  
Date Received: 8/23/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|---------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)           | 34     | 1.0      |      | mg/L  | 1  | 8/24/2006 12:47:21 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 8/24/2006 12:47:21 PM |
| Surr: DNOP                            | 126    | 58-140   |      | %REC  | 1  | 8/24/2006 12:47:21 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)        | ND     | 25       |      | µg/L  | 10 | 8/29/2006 10:43:50 AM |
| Benzene                               | 57     | 10       |      | µg/L  | 10 | 8/29/2006 10:43:50 AM |
| Toluene                               | 120    | 10       |      | µg/L  | 10 | 8/29/2006 10:43:50 AM |
| Ethylbenzene                          | 310    | 10       |      | µg/L  | 10 | 8/29/2006 10:43:50 AM |
| Xylenes, Total                        | 1200   | 30       |      | µg/L  | 10 | 8/29/2006 10:43:50 AM |
| Surr: 4-Bromofluorobenzene            | 104    | 72.2-125 |      | %REC  | 10 | 8/29/2006 10:43:50 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 31-Aug-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0608279  
**Project:** Annual Sampling 2006  
**Lab ID:** 0608279-02

**Client Sample ID:** OW 11+15  
**Collection Date:** 8/21/2006 1:15:00 PM  
**Date Received:** 8/23/2006  
**Matrix:** AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|---------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: <b>SCC</b>   |
| Diesel Range Organics (DRO)           | 16     | 1.0      |      | mg/L  | 1  | 8/24/2006 1:20:28 PM  |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 8/24/2006 1:20:28 PM  |
| Surr: DNOP                            | 120    | 58-140   |      | %REC  | 1  | 8/24/2006 1:20:28 PM  |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: <b>NSB</b>   |
| Methyl tert-butyl ether (MTBE)        | 1800   | 50       |      | µg/L  | 20 | 8/28/2006 12:34:16 PM |
| Benzene                               | 860    | 20       |      | µg/L  | 20 | 8/28/2006 12:34:16 PM |
| Toluene                               | ND     | 20       |      | µg/L  | 20 | 8/28/2006 12:34:16 PM |
| Ethylbenzene                          | 26     | 20       |      | µg/L  | 20 | 8/28/2006 12:34:16 PM |
| Xylenes, Total                        | 96     | 60       |      | µg/L  | 20 | 8/28/2006 12:34:16 PM |
| Surr: 4-Bromofluorobenzene            | 105    | 72.2-125 |      | %REC  | 20 | 8/28/2006 12:34:16 PM |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 31-Aug-06

CLIENT: San Juan Refining  
Lab Order: 0608279  
Project: Annual Sampling 2006  
Lab ID: 0608279-03

Client Sample ID: OW 22+00  
Collection Date: 8/21/2006 1:30:00 PM  
Date Received: 8/23/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF  | Date Analyzed         |
|---------------------------------------|--------|----------|------|-------|-----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |     | Analyst: SCC          |
| Diesel Range Organics (DRO)           | 87     | 1.0      |      | mg/L  | 1   | 8/24/2006 1:53:31 PM  |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1   | 8/24/2006 1:53:31 PM  |
| Surr: DNOP                            | 127    | 58-140   |      | %REC  | 1   | 8/24/2006 1:53:31 PM  |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |     | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)        | 3600   | 250      |      | µg/L  | 100 | 8/28/2006 1:05:48 PM  |
| Benzene                               | ND     | 10       |      | µg/L  | 10  | 8/29/2006 11:47:05 AM |
| Toluene                               | 12     | 10       |      | µg/L  | 10  | 8/29/2006 11:47:05 AM |
| Ethylbenzene                          | ND     | 10       |      | µg/L  | 10  | 8/29/2006 11:47:05 AM |
| Xylenes, Total                        | ND     | 30       |      | µg/L  | 10  | 8/29/2006 11:47:05 AM |
| Surr: 4-Bromofluorobenzene            | 101    | 72.2-125 |      | %REC  | 10  | 8/29/2006 11:47:05 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 31-Aug-06

CLIENT: San Juan Refining  
Lab Order: 0608279  
Project: Annual Sampling 2006  
Lab ID: 0608279-04

Client Sample ID: OW 23+10  
Collection Date: 8/21/2006 1:40:00 PM  
Date Received: 8/23/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|---------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)           | 290    | 10       |      | mg/L  | 10 | 8/25/2006 10:17:44 AM |
| Motor Oil Range Organics (MRO)        | ND     | 50       |      | mg/L  | 10 | 8/25/2006 10:17:44 AM |
| Surr: DNOP                            | 106    | 58-140   |      | %REC  | 10 | 8/25/2006 10:17:44 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)        | 170    | 12       |      | µg/L  | 5  | 8/29/2006 12:50:20 PM |
| Benzene                               | 15     | 5.0      |      | µg/L  | 5  | 8/29/2006 12:50:20 PM |
| Toluene                               | 12     | 5.0      |      | µg/L  | 5  | 8/29/2006 12:50:20 PM |
| Ethylbenzene                          | 13     | 5.0      |      | µg/L  | 5  | 8/29/2006 12:50:20 PM |
| Xylenes, Total                        | 270    | 15       |      | µg/L  | 5  | 8/29/2006 12:50:20 PM |
| Surr: 4-Bromofluorobenzene            | 107    | 72.2-125 |      | %REC  | 5  | 8/29/2006 12:50:20 PM |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 31-Aug-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0608279  
**Project:** Annual Sampling 2006  
**Lab ID:** 0608279-05

**Client Sample ID:** OW 23+90  
**Collection Date:** 8/21/2006 2:30:00 PM  
**Date Received:** 8/23/2006  
**Matrix:** AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: <b>SCC</b>  |
| Diesel Range Organics (DRO)           | 4.5    | 1.0      |      | mg/L  | 1  | 8/24/2006 3:00:03 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 8/24/2006 3:00:03 PM |
| Surr: DNOP                            | 127    | 58-140   |      | %REC  | 1  | 8/24/2006 3:00:03 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: <b>NSB</b>  |
| Methyl tert-butyl ether (MTBE)        | 3.4    | 2.5      |      | µg/L  | 1  | 8/29/2006 1:50:56 PM |
| Benzene                               | 1.7    | 1.0      |      | µg/L  | 1  | 8/29/2006 1:50:56 PM |
| Toluene                               | 2.4    | 1.0      |      | µg/L  | 1  | 8/29/2006 1:50:56 PM |
| Ethylbenzene                          | 3.9    | 1.0      |      | µg/L  | 1  | 8/29/2006 1:50:56 PM |
| Xylenes, Total                        | ND     | 3.0      |      | µg/L  | 1  | 8/29/2006 1:50:56 PM |
| Surr: 4-Bromofluorobenzene            | 109    | 72.2-125 |      | %REC  | 1  | 8/29/2006 1:50:56 PM |

**Qualifiers:**

|   |                                                 |    |                                                    |
|---|-------------------------------------------------|----|----------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
| E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
| S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

Date: 31-Aug-06

CLIENT: San Juan Refining  
Lab Order: 0608279  
Project: Annual Sampling 2006  
Lab ID: 0608279-06

Client Sample ID: OW 25+70  
Collection Date: 8/21/2006 2:50:00 PM  
Date Received: 8/23/2006  
Matrix: AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | ND     | 1.0      |      | mg/L  | 1  | 8/24/2006 3:31:51 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 8/24/2006 3:31:51 PM |
| Surr: DNOP                            | 127    | 58-140   |      | %REC  | 1  | 8/24/2006 3:31:51 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)        | ND     | 2.5      |      | µg/L  | 1  | 8/28/2006 3:09:45 PM |
| Benzene                               | ND     | 1.0      |      | µg/L  | 1  | 8/28/2006 3:09:45 PM |
| Toluene                               | ND     | 1.0      |      | µg/L  | 1  | 8/28/2006 3:09:45 PM |
| Ethylbenzene                          | ND     | 1.0      |      | µg/L  | 1  | 8/28/2006 3:09:45 PM |
| Xylenes, Total                        | ND     | 3.0      |      | µg/L  | 1  | 8/28/2006 3:09:45 PM |
| Surr: 4-Bromofluorobenzene            | 110    | 72.2-125 |      | %REC  | 1  | 8/28/2006 3:09:45 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 31-Aug-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0608279  
**Project:** Annual Sampling 2006  
**Lab ID:** 0608279-07

**Client Sample ID:** MW #39  
**Collection Date:** 8/21/2006 3:20:00 PM  
**Date Received:** 8/23/2006  
**Matrix:** AQUEOUS

| Analyses                              | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|---------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b> |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)           | 3.3    | 1.0      |      | mg/L  | 1  | 8/24/2006 4:05:10 PM |
| Motor Oil Range Organics (MRO)        | ND     | 5.0      |      | mg/L  | 1  | 8/24/2006 4:05:10 PM |
| Surr: DNOP                            | 119    | 58-140   |      | %REC  | 1  | 8/24/2006 4:05:10 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>    |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)        | ND     | 12       |      | µg/L  | 5  | 8/28/2006 3:41:17 PM |
| Benzene                               | 330    | 5.0      |      | µg/L  | 5  | 8/28/2006 3:41:17 PM |
| Toluene                               | ND     | 5.0      |      | µg/L  | 5  | 8/28/2006 3:41:17 PM |
| Ethylbenzene                          | 890    | 20       |      | µg/L  | 20 | 8/29/2006 2:22:37 PM |
| Xylenes, Total                        | 880    | 15       |      | µg/L  | 5  | 8/28/2006 3:41:17 PM |
| Surr: 4-Bromofluorobenzene            | 94.1   | 72.2-125 |      | %REC  | 5  | 8/28/2006 3:41:17 PM |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608279

| Analyte                        | Result | Units       | PQL | %Rec | LowLimit | HighLimit       | %RPD                                 | RPDLimit | Qual |
|--------------------------------|--------|-------------|-----|------|----------|-----------------|--------------------------------------|----------|------|
| <b>Method: SW8015</b>          |        |             |     |      |          |                 |                                      |          |      |
| <b>Sample ID: MB-11110</b>     |        | <i>MBLK</i> |     |      |          | Batch ID: 11110 | Analysis Date: 8/24/2006 11:08:49 AM |          |      |
| Diesel Range Organics (DRO)    | ND     | mg/L        | 1.0 |      |          |                 |                                      |          |      |
| Motor Oil Range Organics (MRO) | ND     | mg/L        | 5.0 |      |          |                 |                                      |          |      |
| <b>Sample ID: LCS-11110</b>    |        | <i>LCS</i>  |     |      |          | Batch ID: 11110 | Analysis Date: 8/24/2006 11:41:32 AM |          |      |
| Diesel Range Organics (DRO)    | 5.449  | mg/L        | 1.0 | 109  | 74       | 157             |                                      |          |      |
| <b>Sample ID: LCSD-11110</b>   |        | <i>LCSD</i> |     |      |          | Batch ID: 11110 | Analysis Date: 8/24/2006 12:14:18 PM |          |      |
| Diesel Range Organics (DRO)    | 5.977  | mg/L        | 1.0 | 120  | 74       | 157             | 9.24                                 | 23       |      |

## Qualifiers:

E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S 8/10<sup>2</sup> recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 060827

| Analyte                           | Result | Units       | PQL | %Rec | LowLimit | HighLimit               | %RPD                                | RPDLimit | Qual |
|-----------------------------------|--------|-------------|-----|------|----------|-------------------------|-------------------------------------|----------|------|
| <b>Method: SW8021</b>             |        |             |     |      |          |                         |                                     |          |      |
| <b>Sample ID: 5ML REAGENT BLA</b> |        | <i>MBLK</i> |     |      |          | Batch ID: <b>R20460</b> | Analysis Date: 8/28/2006 9:03:02 AM |          |      |
| Methyl tert-butyl ether (MTBE)    | ND     | µg/L        | 2.5 |      |          |                         |                                     |          |      |
| Benzene                           | ND     | µg/L        | 1.0 |      |          |                         |                                     |          |      |
| Toluene                           | ND     | µg/L        | 1.0 |      |          |                         |                                     |          |      |
| Ethylbenzene                      | ND     | µg/L        | 1.0 |      |          |                         |                                     |          |      |
| Xylenes, Total                    | ND     | µg/L        | 3.0 |      |          |                         |                                     |          |      |
| <b>Sample ID: 5ML REAGENT BLA</b> |        | <i>MBLK</i> |     |      |          | Batch ID: <b>R20484</b> | Analysis Date: 8/29/2006 8:44:46 AM |          |      |
| Methyl tert-butyl ether (MTBE)    | ND     | µg/L        | 2.5 |      |          |                         |                                     |          |      |
| Benzene                           | ND     | µg/L        | 1.0 |      |          |                         |                                     |          |      |
| Toluene                           | ND     | µg/L        | 1.0 |      |          |                         |                                     |          |      |
| Ethylbenzene                      | ND     | µg/L        | 1.0 |      |          |                         |                                     |          |      |
| Xylenes, Total                    | ND     | µg/L        | 3.0 |      |          |                         |                                     |          |      |
| <b>Sample ID: 100NG BTEX LCS</b>  |        | <i>LCS</i>  |     |      |          | Batch ID: <b>R20460</b> | Analysis Date: 8/28/2006 6:35:20 PM |          |      |
| Methyl tert-butyl ether (MTBE)    | 38.53  | µg/L        | 2.5 | 96.3 | 51.2     | 138                     |                                     |          |      |
| Benzene                           | 21.94  | µg/L        | 1.0 | 110  | 85       | 115                     |                                     |          |      |
| Toluene                           | 22.83  | µg/L        | 1.0 | 114  | 85       | 118                     |                                     |          |      |
| Ethylbenzene                      | 22.42  | µg/L        | 1.0 | 112  | 85       | 116                     |                                     |          |      |
| Xylenes, Total                    | 66.05  | µg/L        | 3.0 | 110  | 85       | 119                     |                                     |          |      |
| <b>Sample ID: 100NG BTEX LCS</b>  |        | <i>LCS</i>  |     |      |          | Batch ID: <b>R20484</b> | Analysis Date: 8/29/2006 7:41:35 PM |          |      |
| Methyl tert-butyl ether (MTBE)    | 38.66  | µg/L        | 2.5 | 96.6 | 51.2     | 138                     |                                     |          |      |
| Benzene                           | 22.25  | µg/L        | 1.0 | 111  | 85       | 115                     |                                     |          |      |
| Toluene                           | 22.69  | µg/L        | 1.0 | 113  | 85       | 118                     |                                     |          |      |
| Ethylbenzene                      | 22.17  | µg/L        | 1.0 | 111  | 85       | 116                     |                                     |          |      |
| Xylenes, Total                    | 65.41  | µg/L        | 3.0 | 109  | 85       | 119                     |                                     |          |      |
| <b>Sample ID: 100NG BTEX LCSD</b> |        | <i>LCSD</i> |     |      |          | Batch ID: <b>R20460</b> | Analysis Date: 8/28/2006 7:04:26 PM |          |      |
| Methyl tert-butyl ether (MTBE)    | 37.16  | µg/L        | 2.5 | 92.9 | 51.2     | 138                     | 3.62                                | 28       |      |
| Benzene                           | 20.70  | µg/L        | 1.0 | 104  | 85       | 115                     | 5.78                                | 27       |      |
| Toluene                           | 20.60  | µg/L        | 1.0 | 103  | 85       | 118                     | 10.3                                | 19       |      |
| Ethylbenzene                      | 20.75  | µg/L        | 1.0 | 104  | 85       | 116                     | 7.74                                | 10       |      |
| Xylenes, Total                    | 61.70  | µg/L        | 3.0 | 103  | 85       | 119                     | 6.82                                | 13       |      |
| <b>Sample ID: 100NG BTEX LCSD</b> |        | <i>LCSD</i> |     |      |          | Batch ID: <b>R20484</b> | Analysis Date: 8/29/2006 8:10:39 PM |          |      |
| Methyl tert-butyl ether (MTBE)    | 39.21  | µg/L        | 2.5 | 98.0 | 51.2     | 138                     | 1.42                                | 28       |      |
| Benzene                           | 22.25  | µg/L        | 1.0 | 111  | 85       | 115                     | 0.00899                             | 27       |      |
| Toluene                           | 22.58  | µg/L        | 1.0 | 113  | 85       | 118                     | 0.486                               | 19       |      |
| Ethylbenzene                      | 22.18  | µg/L        | 1.0 | 111  | 85       | 116                     | 0.0631                              | 10       |      |
| Xylenes, Total                    | 65.37  | µg/L        | 3.0 | 109  | 85       | 119                     | 0.0673                              | 13       |      |

## Qualifiers:

E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

8/23/2006

Work Order Number 0608279

Received by AT

Checklist completed by

Signature

Date

8/23/06

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

Std  Level 4 

Client: San Juan Preliminary

Annual Sampling 2006

Address: #50 bd 4990

Elcomfield, JM 87413

Project Manager:

|                       |                                     |
|-----------------------|-------------------------------------|
| Phone #: 505-639-4161 | Sample: Cindy Waters / Kelly Carter |
| Fax #: 505-639-2811   | Sample Temperature: 32              |

Sample Temperature:

| Date    | Time  | Matrix           | Sample I.D. No. | Number/Volume | HgCl <sub>2</sub> |  | HNO <sub>3</sub> |  | HEAL No.   |
|---------|-------|------------------|-----------------|---------------|-------------------|--|------------------|--|------------|
|         |       |                  |                 |               |                   |  |                  |  |            |
| 3/21/06 | 1235p | H <sub>2</sub> O | OW 0760         | 4-VOA         |                   |  |                  |  | HC476079-1 |
|         | 115p  |                  | OW 1115         | 4-VOA         |                   |  |                  |  | " -2       |
|         | 130pm |                  | OW 22+00        | 4-VOA         |                   |  |                  |  | " -3       |
|         | 140pm |                  | OW 23+10        | 4-VOA         |                   |  |                  |  | " -4       |
|         | 230pm |                  | OW 23+90        | 4-VOA         |                   |  |                  |  | " -5       |
|         | 250pm |                  | OW 25+70        | 4-VOA         |                   |  |                  |  | " -6       |
|         | 320pm |                  | MW #39          | 4-VOA         |                   |  |                  |  | " -7       |

|                |                  |                                                    |                                                |
|----------------|------------------|----------------------------------------------------|------------------------------------------------|
| Date:<br>12-16 | Time:<br>9:30 AM | Relinquished By: (Signature)<br><i>[Signature]</i> | Received By: (Signature)<br><i>[Signature]</i> |
| Date:          | Time:            | Relinquished By: (Signature)                       | Received By: (Signature)                       |

Remarks:

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel 505.345.3975 Fax 505.345.4107

tel: 008:340:337, 0133:340:337  
www.hallenvironmental.com

# ANALYSIS REQUEST

[illegible]

## ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604154

Project: Semi-Annual - 2006

TestCode: 8015DRO\_W

|                     |                 |                     |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10270 | SampType: MBLK  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/26/2006     | RunNo: 19081  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10270 | TestNo: SW8015      |             | Analysis Date: 4/27/2006 | SeqNo: 474478 |          |           |             |      |          |      |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                      |                 |                     |             |                          |               |          |           |             |      |          |      |
|----------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10270 | SampType: LCS   | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/26/2006     | RunNo: 19081  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 10270 | TestNo: SW8015      |             | Analysis Date: 4/27/2006 | SeqNo: 474479 |          |           |             |      |          |      |
| Analyte              | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                             |                 |                     |             |                          |               |          |           |             |       |          |      |
|-----------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|-------|----------|------|
| Sample ID: LCSD-10270       | SampType: LCSD  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/26/2006     | RunNo: 19081  |          |           |             |       |          |      |
| Client ID: ZZZZZ            | Batch ID: 10270 | TestNo: SW8015      |             | Analysis Date: 4/27/2006 | SeqNo: 474481 |          |           |             |       |          |      |
| Analyte                     | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 5.477           | 1.0                 | 5           | 0                        | 110           | 81.2     | 149       | 5.461       | 0.294 |          | 23   |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
Work Order: 0604154  
Project: Semi-Annual - 2006

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ           | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472742                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 2.5  
Toluene 1.0  
Ethylbenzene 1.0  
Xylenes, Total 1.0 3.0

|                      |                  |                      |             |                          |                                                        |
|----------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB-II | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ     | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472803                                          |
| Analyte              | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 2.5  
Toluene 1.0  
Ethylbenzene 1.0  
Xylenes, Total 1.0 3.0

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19029                                           |
| Client ID: ZZZZZ           | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/24/2006 | SeqNo: 473100                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
Benzene 2.5  
Toluene 1.0  
Ethylbenzene 1.0  
Xylenes, Total 1.0 3.0

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ          | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472743                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit  
H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits



CLIENT: San Juan Refining  
 Work Order: 0604154  
 Project: Semi-Annual - 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEx\_W

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472743 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |      |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|------|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 18.90 | 2.5 | 20 | 0 | 94.5 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 20.49 | 1.0 | 20 | 0 | 102  | 88.5 | 114 |  |  |  |  |
| Toluene                        | 20.65 | 1.0 | 20 | 0 | 103  | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 20.53 | 1.0 | 20 | 0 | 103  | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 42.11 | 3.0 | 40 | 0 | 105  | 83.3 | 114 |  |  |  |  |

|                              |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS-II | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ             | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472804 |          |           |             |      |          |      |
| Analyte                      | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|-----|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 20.50 | 2.5 | 20 | 0 | 102 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 21.40 | 1.0 | 20 | 0 | 107 | 88.5 | 114 |  |  |  |  |
| Toluene                        | 22.09 | 1.0 | 20 | 0 | 110 | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 21.67 | 1.0 | 20 | 0 | 108 | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 44.41 | 3.0 | 40 | 0 | 111 | 83.3 | 114 |  |  |  |  |

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19029  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473101 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|-----|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 21.33 | 2.5 | 20 | 0 | 107 | 51.2 | 138 |  |  |  |  |
| Benzene                        | 22.07 | 1.0 | 20 | 0 | 110 | 85   | 115 |  |  |  |  |
| Toluene                        | 22.68 | 1.0 | 20 | 0 | 113 | 85   | 118 |  |  |  |  |
| Ethylbenzene                   | 22.07 | 1.0 | 20 | 0 | 110 | 85   | 116 |  |  |  |  |
| Xylenes, Total                 | 46.39 | 3.0 | 40 | 0 | 116 | 85   | 119 |  |  |  |  |

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD | SampType: LCSD   | TestCode: 8021BTEx_W | Units: µg/L | Prep Date:               | RunNo: 19029  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473102 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0604154  
 Project: Semi-Annual - 2006

TestCode: 8021BTEX\_W

|                                |                  |                      |             |                          |               |          |           |             |      |          |      |
|--------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCSD     | SampType: LCSD   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19029  |          |           |             |      |          |      |
| Client ID: ZZZZZ               | Batch ID: R19029 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473102 |          |           |             |      |          |      |
| Analyte                        | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 21.02            | 2.5                  | 20          | 0                        | 105           | 51.2     | 138       | 21.33       | 1.45 | 28       |      |
| Benzene                        | 21.13            | 1.0                  | 20          | 0                        | 106           | 85       | 115       | 22.07       | 4.37 | 27       |      |
| Toluene                        | 21.83            | 1.0                  | 20          | 0                        | 109           | 85       | 118       | 22.68       | 3.81 | 19       |      |
| Ethylbenzene                   | 20.68            | 1.0                  | 20          | 0                        | 103           | 85       | 116       | 22.07       | 6.50 | 10       |      |
| Xylenes, Total                 | 43.04            | 3.0                  | 40          | 0                        | 108           | 85       | 119       | 46.39       | 7.50 | 13       |      |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/18/2006

Work Order Number 0604154

Received by LMM

Checklist completed by

Lisa Hadukas  
Signature

4/18/06  
Date

Matrix

Carrier name UPS

|                                                         |                                                 |                                         |                                         |                                      |
|---------------------------------------------------------|-------------------------------------------------|-----------------------------------------|-----------------------------------------|--------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    |                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>  | N/A <input type="checkbox"/>            |                                      |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>             |                                      |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/> |                                      |
| Container/Temp Blank temperature?                       | 1°                                              | 4° C ± 2 Acceptable                     |                                         | If given sufficient time to cool.    |

COMMENTS:

-----

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Corrective Action \_\_\_\_\_

\_\_\_\_\_

Client: SAN Juan Refining

Address: #50 Rd 4990  
Bloomfield, NM  
87413

Phone #: 505-632-4161  
Fax #: 505-632-3911

| Date   | Time | Matrix           | Sample I.D. No. |
|--------|------|------------------|-----------------|
| 1/7/06 | 940A | H <sub>2</sub> O | MW # 11         |
| /      | 115F | /                | MW # 30         |
| /      | 145  | /                | RW # 14         |
| /      | 3pm  | /                | RW # 3          |

|                |               |                                                 |
|----------------|---------------|-------------------------------------------------|
| Date: 07/17/06 | Time: 3:30 PM | Relinquished By: (Signature) <i>[Signature]</i> |
| Date:          | Time:         | Relinquished By: (Signature) <i>[Signature]</i> |

QA/QC Package:      Std ☐ Level 4 ☐

Other:

Project Name:

Semi-Annual - 2006

Project #:

Project Manager:

## Sampler

Sample Temperature: \_\_\_\_\_

Number/Volume

|              |          |
|--------------|----------|
| Preservative | HEAL No. |
|--------------|----------|

HEAL No.

|       |   |    |
|-------|---|----|
| 4-VOA | X | -1 |
| 3-VOA | X | -2 |
|       | X | -3 |
|       | X | -4 |

Received By: (Signature) *Lisa Lee* 0913  
Received By: (Signature) *Lisa Lee* 4/18/06

Relinquished By: (Signature)  Michael J. Smith

Relinquished By: (Signature)  Michael J. Smith

|       |         |       |        |
|-------|---------|-------|--------|
| Date: | 4/17/06 | Time: | 3:30pm |
| Date: |         | Time: |        |

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

www.hallenvironmental.com

## ANALYSIS REQUEST

|                                                                                        |   |
|----------------------------------------------------------------------------------------|---|
| BTEX + MTBE + TMB's (8021)                                                             | X |
| BTEX + MTBE + TPH (Gasoline Only)                                                      | X |
| TPH Method 8015B ( <del>GSC/Niesel</del> )                                             | X |
| TPH (Method 418.1)                                                                     |   |
| EDB (Method 504.1)                                                                     |   |
| EDC (Method 8021)                                                                      |   |
| 8310 (PNA or PAH)                                                                      |   |
| RCA 8 Metals                                                                           |   |
| Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) |   |
| 8081 Pesticides / PCB's (8082)                                                         |   |
| 8260B (VOA)                                                                            |   |
| 8270 (Semi-VOA)                                                                        |   |
| Air Bubbles or Headspace (Y or N)                                                      |   |

Remarks:

COVER LETTER

Thursday, April 27, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Semi Annual 2006

Order No.: 0604205

Dear Cindy Hurtado:

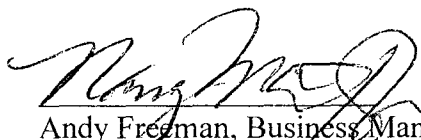
Hall Environmental Analysis Laboratory received 1 sample(s) on 4/21/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory

Date: 27-Apr-06

CLIENT: San Juan Refining  
Project: Semi Annual 2006

Lab Order: 0604205

Lab ID: 0604205-01

Collection Date: 4/20/2006 10:30:00 AM

Client Sample ID: RW #16

Matrix: AQUEOUS

| Analyses                       | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|--------------------------------|--------|--------|------|-------|----|----------------------|
| EPA METHOD 8021B: VOLATILES    |        |        |      |       |    | Analyst: HLM         |
| Methyl tert-butyl ether (MTBE) | ND     | 50     |      | µg/L  | 20 | 4/26/2006 6:05:19 PM |
| Benzene                        | 810    | 20     |      | µg/L  | 20 | 4/26/2006 6:05:19 PM |
| Toluene                        | ND     | 20     |      | µg/L  | 20 | 4/26/2006 6:05:19 PM |
| Ethylbenzene                   | 56     | 20     |      | µg/L  | 20 | 4/26/2006 6:05:19 PM |
| Xylenes, Total                 | ND     | 60     |      | µg/L  | 20 | 4/26/2006 6:05:19 PM |
| Surr: 4-Bromofluorobenzene     | 107    | 85-115 |      | %REC  | 20 | 4/26/2006 6:05:19 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

CLIENT:

San Juan Refining

Work Order:

0604205

Project:

Semi Annual 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19044  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R19044 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473411 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19069  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R19069 | TestNo: SW8021       |             | Analysis Date: 4/26/2006 | SeqNo: 474175 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19044  |          |           |             |      |          |      |
| Client ID: ZZZZZ          | Batch ID: R19044 | TestNo: SW8021       |             | Analysis Date: 4/25/2006 | SeqNo: 473412 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

S Spike Recovery outside accepted recovery limits



# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0604205  
 Project: Semi Annual 2006

TestCode: 8021BTEX\_W

|                                |        |                  |           |                      |      |             |           |                          |      |               |      |
|--------------------------------|--------|------------------|-----------|----------------------|------|-------------|-----------|--------------------------|------|---------------|------|
| Sample ID: 100NG BTEX LCS      |        | SampType: LCS    |           | TestCode: 8021BTEX_W |      | Units: µg/L |           | Prep Date:               |      | RunNo: 19069  |      |
| Client ID: ZZZZZ               |        | Batch ID: R19069 |           | TestNo: SW8021       |      |             |           | Analysis Date: 4/26/2006 |      | SeqNo: 474203 |      |
| Analyte                        | Result | PQL              | SPK value | SPK Ref Val          | %REC | LowLimit    | HighLimit | RPD Ref Val              | %RPD | RPDLimit      | Qual |
| Methyl tert-butyl ether (MTBE) | 21.37  | 2.5              | 20        | 0                    | 107  | 51.2        | 138       |                          |      |               |      |
| Benzene                        | 21.61  | 1.0              | 20        | 0                    | 108  | 85          | 115       |                          |      |               |      |
| Toluene                        | 22.04  | 1.0              | 20        | 0                    | 110  | 85          | 118       |                          |      |               |      |
| Ethylbenzene                   | 21.77  | 1.0              | 20        | 0                    | 109  | 85          | 116       |                          |      |               |      |
| Xylenes, Total                 | 44.32  | 3.0              | 40        | 0                    | 111  | 85          | 119       |                          |      |               |      |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/21/2006

Work Order Number 0604205

Received by AT

Checklist completed by

Signature

Date

4/21/06

Matrix

Carrier name UPS

|                                                         |                                                 |                                         |                                         |                                      |
|---------------------------------------------------------|-------------------------------------------------|-----------------------------------------|-----------------------------------------|--------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    |                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | Not Present <input type="checkbox"/>    | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             | N/A <input type="checkbox"/>            |                                      |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>             |                                         |                                      |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>             |                                      |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input type="checkbox"/>             | N/A <input checked="" type="checkbox"/> |                                      |
| Container/Temp Blank temperature?                       | 1°                                              | 4° C ± 2 Acceptable                     |                                         |                                      |
|                                                         |                                                 | If given sufficient time to cool.       |                                         |                                      |

COMMENTS:

pH 6.0

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_



## COVER LETTER

Thursday, September 07, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Annual Sampling 2006

Order No.: 0608191

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 7 sample(s) on 8/16/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682

ORELAP Lab # NM100001



# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-01

Client Sample ID: MW #12  
Collection Date: 8/15/2006 8:15:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |         |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | ND     | 1.0     |      | mg/L  | 1  | 8/17/2006 4:31:20 AM  |
| Motor Oil Range Organics (MRO)            | ND     | 5.0     |      | mg/L  | 1  | 8/17/2006 4:31:20 AM  |
| Surr: DNOP                                | 124    | 58-140  |      | %REC  | 1  | 8/17/2006 4:31:20 AM  |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.36   | 0.10    |      | mg/L  | 1  | 8/16/2006 7:59:40 PM  |
| Chloride                                  | 19     | 0.10    |      | mg/L  | 1  | 8/16/2006 7:59:40 PM  |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 7:59:40 PM  |
| Bromide                                   | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 7:59:40 PM  |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 7:59:40 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 7:59:40 PM  |
| Sulfate                                   | 140    | 5.0     |      | mg/L  | 10 | 8/17/2006 12:20:47 AM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Barium                                    | 0.040  | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Calcium                                   | 73     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Chromium                                  | 0.0078 | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Iron                                      | 0.069  | 0.020   |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Magnesium                                 | 14     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Manganese                                 | 0.30   | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Potassium                                 | 1.1    | 1.0     |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Sodium                                    | 100    | 2.0     |      | mg/L  | 2  | 8/31/2006 1:06:53 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| Zinc                                      | 0.036  | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:49:46 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                  | 0.039  | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:33:36 AM |
| Lead                                      | 0.025  | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:33:36 AM |

Qualifiers:  
\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #12

Lab Order: 0608191

Collection Date: 8/15/2006 8:15:00 AM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-01

Matrix: AQUEOUS

| Analyses                       | Result | PQL | Qual | Units | DF | Date Analyzed |
|--------------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8260B VOLATILES     |        |     |      |       |    | Analyst: LMM  |
| Benzene                        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Toluene                        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Ethylbenzene                   | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Methyl tert-butyl ether (MTBE) | ND     | 1.5 |      | µg/L  | 1  | 8/21/2006     |
| 1,2,4-Trimethylbenzene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3,5-Trimethylbenzene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloroethane (EDC)       | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromoethane (EDB)        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Naphthalene                    | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1-Methylnaphthalene            | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Methylnaphthalene            | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| Acetone                        | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Bromobenzene                   | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromochloromethane             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromodichloromethane           | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromoform                      | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromomethane                   | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Butanone                     | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon disulfide               | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon Tetrachloride           | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chlorobenzene                  | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroethane                   | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroform                     | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloromethane                  | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Chlorotoluene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 4-Chlorotoluene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,2-DCE                    | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,3-Dichloropropene        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromo-3-chloropropane    | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromochloromethane           | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromomethane                 | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichlorobenzene            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichlorobenzene            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,4-Dichlorobenzene            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dichlorodifluoromethane        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethane             | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethene             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloropropane            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichloropropane            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2,2-Dichloropropane            | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 NS Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #12

Lab Order: 0608191

Collection Date: 8/15/2006 8:15:00 AM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-01

Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: LMM  |
| 1,1-Dichloropropene                     | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Hexachlorobutadiene                     | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| 2-Hexanone                              | ND     | 10       |      | µg/L       | 1  | 8/21/2006     |
| Isopropylbenzene                        | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 4-Isopropyltoluene                      | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 4-Methyl-2-pentanone                    | ND     | 10       |      | µg/L       | 1  | 8/21/2006     |
| Methylene Chloride                      | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Butylbenzene                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Propylbenzene                         | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| sec-Butylbenzene                        | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Styrene                                 | ND     | 1.5      |      | µg/L       | 1  | 8/21/2006     |
| tert-Butylbenzene                       | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Tetrachloroethene (PCE)                 | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,2-DCE                           | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,3-Dichloropropene               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichloroethene (TCE)                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichlorofluoromethane                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichloropropane                  | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Vinyl chloride                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| Surr. 1,2-Dichloroethane-d4             | 99.9   | 69.9-130 |      | %REC       | 1  | 8/21/2006     |
| Surr. 4-Bromofluorobenzene              | 99.3   | 75-139   |      | %REC       | 1  | 8/21/2006     |
| Surr. Dibromofluoromethane              | 106    | 57.3-135 |      | %REC       | 1  | 8/21/2006     |
| Surr. Toluene-d8                        | 92.5   | 81.9-122 |      | %REC       | 1  | 8/21/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 290    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Bicarbonate                             | 290    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 260    | 1.0      |      | mg CO2/L   | 1  | 8/24/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level

E Value above quantitation range

J Analyte detected below quantitation limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #12

Lab Order: 0608191

Collection Date: 8/15/2006 8:15:00 AM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-01

Matrix: AQUEOUS

| Analyses                        | Result | PQL   | Qual | Units    | DF | Date Analyzed |
|---------------------------------|--------|-------|------|----------|----|---------------|
| EPA 120.1: SPECIFIC CONDUCTANCE |        |       |      |          |    |               |
| Specific Conductance            | 890    | 0.010 |      | µmhos/cm | 1  | 8/23/2006     |
| EPA METHOD 160.1: TDS           |        |       |      |          |    |               |
| Total Dissolved Solids          | 560    | 20    |      | mg/L     | 1  | 8/17/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-02

Client Sample ID: MW #38  
Collection Date: 8/15/2006 9:20:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |         |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | 3.5    | 1.0     |      | mg/L  | 1  | 8/17/2006 7:13:09 AM  |
| Motor Oil Range Organics (MRO)            | ND     | 5.0     |      | mg/L  | 1  | 8/17/2006 7:13:09 AM  |
| Surr. DNOP                                | 126    | 58-140  |      | %REC  | 1  | 8/17/2006 7:13:09 AM  |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.67   | 10.10   |      | mg/L  | 1  | 8/16/2006 8:17:04 PM  |
| Chloride                                  | 96     | 1.0     |      | mg/L  | 10 | 8/17/2006 12:38:12 AM |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 8:17:04 PM  |
| Bromide                                   | 1.1    | 0.50    |      | mg/L  | 1  | 8/16/2006 8:17:04 PM  |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 8:17:04 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 8:17:04 PM  |
| Sulfate                                   | 490    | 5.0     |      | mg/L  | 10 | 8/17/2006 12:38:12 AM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Barium                                    | 0.093  | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Calcium                                   | 240    | 10      |      | mg/L  | 10 | 8/31/2006 1:09:13 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Iron                                      | 3.1    | 0.20    |      | mg/L  | 10 | 8/31/2006 1:09:13 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Magnesium                                 | 36     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Manganese                                 | 3.5    | 0.020   |      | mg/L  | 10 | 8/31/2006 1:09:13 PM  |
| Potassium                                 | 4.3    | 1.0     |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Sodium                                    | 290    | 10      |      | mg/L  | 10 | 8/31/2006 1:09:13 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| Zinc                                      | 0.059  | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:52:59 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                  | 0.010  | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:36:31 AM |
| Lead                                      | 0.011  | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:36:31 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #38

Lab Order: 0608191

Collection Date: 8/15/2006 9:20:00 AM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-02

Matrix: AQUEOUS

| Analyses                       | Result | PQL | Qual | Units | DF | Date Analyzed |
|--------------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8260B: VOLATILES    |        |     |      |       |    | Analyst: LMM  |
| Benzene                        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Toluene                        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Ethylbenzene                   | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Methyl tert-butyl ether (MTBE) | 3.8    | 1.5 |      | µg/L  | 1  | 8/21/2006     |
| 1,2,4-Trimethylbenzene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3,5-Trimethylbenzene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloroethane (EDC)       | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromoethane (EDB)        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Naphthalene                    | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1-Methylnaphthalene            | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Methylnaphthalene            | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| Acetone                        | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Bromobenzene                   | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromochloromethane             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromodichloromethane           | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromoform                      | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromomethane                   | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Butanone                     | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon disulfide               | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon Tetrachloride           | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chlorobenzene                  | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroethane                   | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroform                     | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloromethane                  | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Chlorotoluene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 4-Chlorotoluene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,2-DCE                    | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,3-Dichloropropene        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromo-3-chloropropane    | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromochloromethane           | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromomethane                 | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichlorobenzene            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichlorobenzene            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,4-Dichlorobenzene            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dichlorodifluoromethane        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethane             | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethene             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloropropane            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichloropropane            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2,2-Dichloropropane            | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-02

Client Sample ID: MW #38  
Collection Date: 8/15/2006 9:20:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: LMM  |
| 1,1-Dichloropropene                     | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Hexachlorobutadiene                     | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| 2-Hexanone                              | ND     | 10       |      | µg/L       | 1  | 8/21/2006     |
| Isopropylbenzene                        | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 4-Isopropyltoluene                      | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 4-Methyl-2-pentanone                    | ND     | 10       |      | µg/L       | 1  | 8/21/2006     |
| Methylene Chloride                      | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Butylbenzene                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Propylbenzene                         | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| sec-Butylbenzene                        | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Styrene                                 | ND     | 1.5      |      | µg/L       | 1  | 8/21/2006     |
| tert-Butylbenzene                       | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Tetrachloroethene (PCE)                 | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,2-DCE                           | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,3-Dichloropropene               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichloroethene (TCE)                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichlorofluoromethane                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichloropropane                  | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Vinyl chloride                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| Surr: 1,2-Dichloroethane-d4             | 102    | 69.9-130 |      | %REC       | 1  | 8/21/2006     |
| Surr: 4-Bromofluorobenzene              | 108    | 75-139   |      | %REC       | 1  | 8/21/2006     |
| Surr: Dibromofluoromethane              | 92.9   | 57.3-135 |      | %REC       | 1  | 8/21/2006     |
| Surr: Toluene-d8                        | 99.5   | 81.9-122 |      | %REC       | 1  | 8/21/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 640    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Bicarbonate                             | 640    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 600    | 1.0      |      | mg CO2/L   | 1  | 8/24/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-02

Client Sample ID: MW #38  
Collection Date: 8/15/2006 9:20:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL   | Qual | Units    | DF | Date Analyzed             |
|----------------------------------------|--------|-------|------|----------|----|---------------------------|
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |       |      |          |    |                           |
| Specific Conductance                   | 2300   | 0.010 |      | umhos/cm | 1  | Analyst: CMC<br>8/23/2006 |
| <b>EPA METHOD 160.1: TDS</b>           |        |       |      |          |    |                           |
| Total Dissolved Solids                 | 1600   | 20    |      | mg/L     | 1  | Analyst: KS<br>8/17/2006  |

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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-03

Client Sample ID: MW #37  
Collection Date: 8/15/2006 9:50:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.45   | 0.10    |      | mg/L  | 1  | 8/16/2006 8:34:29 PM  |
| Chloride                                  | 390    | 1.0     |      | mg/L  | 10 | 8/17/2006 12:55:36 AM |
| Nitrogen, Nitrite (As N)                  | ND     | 1.0     |      | mg/L  | 10 | 8/17/2006 12:55:36 AM |
| Bromide                                   | 4.2    | 0.50    |      | mg/L  | 1  | 8/16/2006 8:34:29 PM  |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 8:34:29 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 8:34:29 PM  |
| Sulfate                                   | 290    | 5.0     |      | mg/L  | 10 | 8/17/2006 12:55:36 AM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Barium                                    | 0.30   | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Calcium                                   | 180    | 10      |      | mg/L  | 10 | 8/31/2006 1:12:21 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Iron                                      | 1.3    | 0.20    |      | mg/L  | 10 | 8/31/2006 1:12:21 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Magnesium                                 | 44     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Manganese                                 | 2.9    | 0.020   |      | mg/L  | 10 | 8/31/2006 1:12:21 PM  |
| Potassium                                 | 3.5    | 1.0     |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Sodium                                    | 550    | 10      |      | mg/L  | 10 | 8/31/2006 1:12:21 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| Zinc                                      | 0.032  | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:55:14 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:40:34 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:40:34 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: LMM          |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/21/2006             |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/21/2006             |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1  | 8/21/2006             |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1  | 8/21/2006             |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-03

Client Sample ID: MW #37  
Collection Date: 8/15/2006 9:50:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    | Analyst: LMM  |
| 1,2,4-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Naphthalene                        | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromochloromethane                 | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromomethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon Tetrachloride               | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloromethane                      | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromomethane                     | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethane                 | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Hexachlorobutadiene                | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Hexanone                         | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Isopropylbenzene                   | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
B Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-03

Client Sample ID: MW #37  
Collection Date: 8/15/2006 9:50:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B VOLATILES</b>       |        |          |      |            |    | Analyst: LMM  |
| 4-Isopropyltoluene                      | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 4-Methyl-2-pentanone                    | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Methylene Chloride                      | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Butylbenzene                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Propylbenzene                         | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| sec-Butylbenzene                        | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Styrene                                 | ND     | 1.5      |      | µg/L       | 1  | 8/21/2006     |
| tert-Butylbenzene                       | 1.1    | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Tetrachloroethene (PCE)                 | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,2-DCE                           | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,3-Dichloropropene               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichloroethene (TCE)                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichlorofluoromethane                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichloropropane                  | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Vinyl chloride                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| Surr. 1,2-Dichloroethane-d4             | 89.5   | 69.9-130 |      | %REC       | 1  | 8/21/2006     |
| Surr. 4-Bromofluorobenzene              | 118    | 75-139   |      | %REC       | 1  | 8/21/2006     |
| Surr. Dibromofluoromethane              | 96.0   | 57.3-135 |      | %REC       | 1  | 8/21/2006     |
| Surr. Toluene-d8                        | 110    | 81.9-122 |      | %REC       | 1  | 8/21/2006     |
| <b>EPA METHOD 310.1 ALKALINITY</b>      |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 780    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Bicarbonate                             | 780    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 720    | 1.0      |      | mg CO2/L   | 1  | 8/24/2006     |
| <b>EPA 120.1 SPECIFIC CONDUCTANCE</b>   |        |          |      |            |    | Analyst: CMC  |
| Specific Conductance                    | 3100   | 0.010    |      | umhos/cm   | 1  | 8/23/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits  
B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-03

Client Sample ID: MW #37  
Collection Date: 8/15/2006 9:50:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                     | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 160.1: TDS</b> |        |     |      |       |    |               |
| Total Dissolved Solids       | 1900   | 20  |      | mg/L  | 1  | 8/17/2006     |

Analyst: KS

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

Client: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-04

Client Sample ID: MW #34  
Collection Date: 8/15/2006 10:20:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                   | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|--------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>            |        |         |      |       |    | Analyst: TES          |
| Fluoride                                   | 0.95   | 0.10    |      | mg/L  | 1  | 8/16/2006 8:51:54 PM  |
| Chloride                                   | 60     | 1.0     |      | mg/L  | 10 | 8/17/2006 1:13:00 AM  |
| Nitrogen, Nitrite (As N)                   | ND     | 1.0     |      | mg/L  | 10 | 8/17/2006 1:13:00 AM  |
| Bromide                                    | 0.80   | 0.50    |      | mg/L  | 1  | 8/16/2006 8:51:54 PM  |
| Nitrogen, Nitrate (As N)                   | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 8:51:54 PM  |
| Phosphorus, Orthophosphate (As P)          | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 8:51:54 PM  |
| Sulfate                                    | 27     | 0.50    |      | mg/L  | 1  | 8/16/2006 8:51:54 PM  |
| <b>EPA METHOD 7470: MERCURY</b>            |        |         |      |       |    | Analyst: MAP          |
| Mercury                                    | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 60.10: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                    | ND     | 0.020   |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Barium                                     | 0.44   | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Cadmium                                    | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Calcium                                    | 61     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Chromium                                   | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Copper                                     | 0.0065 | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Iron                                       | 3.0    | 0.20    |      | mg/L  | 10 | 8/31/2006 1:15:31 PM  |
| Lead                                       | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Magnesium                                  | 12     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Manganese                                  | 2.4    | 0.020   |      | mg/L  | 10 | 8/31/2006 1:15:31 PM  |
| Potassium                                  | ND     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Selenium                                   | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Silver                                     | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Sodium                                     | 310    | 10      |      | mg/L  | 10 | 8/31/2006 1:15:31 PM  |
| Uranium                                    | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| Zinc                                       | 0.11   | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:57:26 AM |
| <b>EPA 60.10: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                   | ND     | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:44:31 AM |
| Lead                                       | ND     | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:44:31 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>         |        |         |      |       |    | Analyst: LMM          |
| Benzene                                    | 32     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Toluene                                    | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Ethylbenzene                               | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Methyl tert-butyl ether (MTBE)             | ND     | 7.5     |      | µg/L  | 5  | 8/21/2006             |

Qualifiers:  
\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-04

Client Sample ID: MW #34  
Collection Date: 8/15/2006 10:20:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                    | Result | PQL | Qual | Units | DF | Date Analyzed |
|-----------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8260B VOLATILES  |        |     |      |       |    | Analyst: LMM  |
| 1,2,4-Trimethylbenzene      | 380    | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3,5-Trimethylbenzene      | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichloroethane (EDC)    | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dibromoethane (EDB)     | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Naphthalene                 | 19     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1-Methylnaphthalene         | ND     | 20  |      | µg/L  | 5  | 8/21/2006     |
| 2-Methylnaphthalene         | ND     | 20  |      | µg/L  | 5  | 8/21/2006     |
| Acetone                     | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Bromobenzene                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromochloromethane          | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromodichloromethane        | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromoform                   | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromomethane                | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 2-Butanone                  | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Carbon disulfide            | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Carbon Tetrachloride        | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Chlorobenzene               | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Chloroethane                | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Chloroform                  | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Chloromethane               | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 2-Chlorotoluene             | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 4-Chlorotoluene             | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| cis-1,2-DCE                 | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| cis-1,3-Dichloropropene     | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dibromo-3-chloropropane | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Dibromochloromethane        | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Dibromomethane              | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichlorobenzene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3-Dichlorobenzene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,4-Dichlorobenzene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Dichlorodifluoromethane     | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloroethane          | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloroethene          | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichloropropane         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3-Dichloropropane         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 2,2-Dichloropropane         | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloropropene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Hexachlorobutadiene         | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 2-Hexanone                  | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Isopropylbenzene            | 49     | 5.0 |      | µg/L  | 5  | 8/21/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-04

Client Sample ID: MW #34  
Collection Date: 8/15/2006 10:20:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8260B VOLATILES

Analyst: LMM

|                             |      |          |  |      |   |           |
|-----------------------------|------|----------|--|------|---|-----------|
| 4-Isopropyltoluene          | 8.9  | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 4-Methyl-2-pentanone        | ND   | 50       |  | µg/L | 5 | 8/21/2006 |
| Methylene Chloride          | ND   | 15       |  | µg/L | 5 | 8/21/2006 |
| n-Butylbenzene              | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| n-Propylbenzene             | 44   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| sec-Butylbenzene            | ND   | 10       |  | µg/L | 5 | 8/21/2006 |
| Styrene                     | ND   | 7.5      |  | µg/L | 5 | 8/21/2006 |
| tert-Butylbenzene           | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 1,1,2,2-Tetrachloroethane   | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| Tetrachloroethene (PCE)     | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| trans-1,2-DCE               | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| trans-1,3-Dichloropropene   | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 1,1,1-Trichloroethane       | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 1,1,2-Trichloroethane       | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| Trichloroethene (TCE)       | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| Trichlorofluoromethane      | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| 1,2,3-Trichloropropane      | ND   | 10       |  | µg/L | 5 | 8/21/2006 |
| Vinyl chloride              | ND   | 5.0      |  | µg/L | 5 | 8/21/2006 |
| Xylenes, Total              | ND   | 15       |  | µg/L | 5 | 8/21/2006 |
| Surr: 1,2-Dichloroethane-d4 | 93.6 | 69.9-130 |  | %REC | 5 | 8/21/2006 |
| Surr: 4-Bromofluorobenzene  | 108  | 75-139   |  | %REC | 5 | 8/21/2006 |
| Surr: Dibromofluoromethane  | 86.4 | 57.3-135 |  | %REC | 5 | 8/21/2006 |
| Surr: Toluene-d8            | 114  | 81.9-122 |  | %REC | 5 | 8/21/2006 |

## EPA METHOD 310.1 ALKALINITY

Analyst: CMC

|                              |     |     |  |            |   |           |
|------------------------------|-----|-----|--|------------|---|-----------|
| Alkalinity, Total (As CaCO3) | 760 | 2.0 |  | mg/L CaCO3 | 1 | 8/24/2006 |
| Carbonate                    | ND  | 2.0 |  | mg/L CaCO3 | 1 | 8/24/2006 |
| Bicarbonate                  | 760 | 2.0 |  | mg/L CaCO3 | 1 | 8/24/2006 |

## TOTAL CARBON DIOXIDE CALCULATION

Analyst: CMC

|                      |     |     |  |          |   |           |
|----------------------|-----|-----|--|----------|---|-----------|
| Total Carbon Dioxide | 730 | 1.0 |  | mg CO2/L | 1 | 8/24/2006 |
|----------------------|-----|-----|--|----------|---|-----------|

## EPA 120.1 SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |      |       |  |          |   |           |
|----------------------|------|-------|--|----------|---|-----------|
| Specific Conductance | 1600 | 0.010 |  | µmhos/cm | 1 | 8/23/2006 |
|----------------------|------|-------|--|----------|---|-----------|

Qualifiers:  
\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.****Date:** 07-Sep-06**CLIENT:** San Juan Refining**Client Sample ID:** MW #34**Lab Order:** 0608191**Collection Date:** 8/15/2006 10:20:00 AM**Project:** Annual Sampling 2006**Date Received:** 8/16/2006**Lab ID:** 0608191-04**Matrix:** AQUEOUS

| Analyses               | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 160.1 TDS   |        |     |      |       |    | Analyst: KS   |
| Total Dissolved Solids | 1100   | 20  |      | mg/L  | 1  | 8/17/2006     |

**Qualifiers:** \*\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike/Recovery outside accepted/recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-05

Client Sample ID: MW #35  
Collection Date: 8/15/2006 1:15:00 PM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.48   | 0.10    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Chloride                                  | 180    | 1.0     |      | mg/L  | 10 | 8/17/2006 1:30:25 AM  |
| Nitrogen, Nitrite (As N)                  | ND     | 1.0     |      | mg/L  | 10 | 8/17/2006 1:30:25 AM  |
| Bromide                                   | 2.3    | 0.50    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Sulfate                                   | 3.2    | 0.50    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | 0.027  | 0.020   |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Barium                                    | 0.71   | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Calcium                                   | 110    | 10      |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Iron                                      | 2.8    | 0.20    |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Magnesium                                 | 26     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Manganese                                 | 2.9    | 0.020   |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Potassium                                 | 211    | 1.0     |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Sodium                                    | 410    | 10      |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Zinc                                      | 0.061  | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:50:07 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:50:07 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: LMM          |
| Benzene                                   | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Toluene                                   | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Ethylbenzene                              | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Methyl tert-butyl ether (MTBE)            | ND     | 7.5     |      | µg/L  | 5  | 8/21/2006             |

Qualifiers:  
\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-05

Client Sample ID: MW #35  
Collection Date: 8/15/2006 1:15:00 PM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                    | Result | PQL | Qual | Units | DF | Date Analyzed |
|-----------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8260B: VOLATILES |        |     |      |       |    | Analyst: LMM  |
| 1,2,4-Trimethylbenzene      | 150    | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3,5-Trimethylbenzene      | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichloroethane (EDC)    | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dibromoethane (EDB)     | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Naphthalene                 | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1-Methylnaphthalene         | ND     | 20  |      | µg/L  | 5  | 8/21/2006     |
| 2-Methylnaphthalene         | ND     | 20  |      | µg/L  | 5  | 8/21/2006     |
| Acetone                     | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Bromobenzene                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromochloromethane          | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromodichloromethane        | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromoform                   | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromomethane                | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 2-Butanone                  | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Carbon disulfide            | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Carbon Tetrachloride        | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Chlorobenzene               | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Chloroethane                | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Chloroform                  | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Chloromethane               | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 2-Chlorotoluene             | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 4-Chlorotoluene             | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| cis-1,2-DCE                 | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| cis-1,3-Dichloropropene     | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dibromo-3-chloropropane | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Dibromochloromethane        | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Dibromomethane              | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichlorobenzene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3-Dichlorobenzene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,4-Dichlorobenzene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Dichlorodifluoromethane     | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloroethane          | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloroethene          | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichloropropane         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3-Dichloropropane         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 2,2-Dichloropropane         | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloropropene         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Hexachlorobutadiene         | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 2-Hexanone                  | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Isopropylbenzene            | 11     | 5.0 |      | µg/L  | 5  | 8/21/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike/Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-05

Client Sample ID: MW#35  
Collection Date: 8/15/2006 1:15:00 PM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                         | Result | PQL      | Qual | Units      | DF | Date Analyzed | Analyst |
|----------------------------------|--------|----------|------|------------|----|---------------|---------|
| EPA METHOD 8260B VOLATILES       |        |          |      |            |    |               |         |
| 4-Isopropyltoluene               | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     | LMM     |
| 4-Methyl-2-pentanone             | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| Methylene Chloride               | ND     | 15       |      | µg/L       | 5  | 8/21/2006     |         |
| n-Butylbenzene                   | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| n-Propylbenzene                  | 12     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| sec-Butylbenzene                 | ND     | 10       |      | µg/L       | 5  | 8/21/2006     |         |
| Styrene                          | ND     | 7.5      |      | µg/L       | 5  | 8/21/2006     |         |
| tert-Butylbenzene                | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| 1,1,1,2-Tetrachloroethane        | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| 1,1,2,2-Tetrachloroethane        | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| Tetrachloroethene (PCE)          | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| trans-1,2-DCE                    | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| trans-1,3-Dichloropropene        | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| 1,2,3-Trichlorobenzene           | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| 1,2,4-Trichlorobenzene           | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| 1,1,1-Trichloroethane            | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| 1,1,2-Trichloroethane            | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| Trichloroethene (TCE)            | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| Trichlorofluoromethane           | ND     | 10       |      | µg/L       | 5  | 8/21/2006     |         |
| 1,2,3-Trichloropropane           | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |         |
| Vinyl chloride                   | ND     | 15       |      | µg/L       | 5  | 8/21/2006     |         |
| Xylenes, Total                   | 98.1   | 69.9-130 |      | %REC       | 5  | 8/21/2006     |         |
| Surr: 1,2-Dichloroethane-d4      | 113    | 75-139   |      | %REC       | 5  | 8/21/2006     |         |
| Surr: 4-Bromofluorobenzene       | 105    | 57.3-135 |      | %REC       | 5  | 8/21/2006     |         |
| Surr: Dibromofluoromethane       | 102    | 81.9-122 |      | %REC       | 5  | 8/21/2006     |         |
| Surr: Toluene-d8                 |        |          |      |            |    |               |         |
| EPA METHOD 310.1 ALKALINITY      |        |          |      |            |    |               |         |
| Alkalinity, Total (As CaCO3)     | 1000   | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     | CMC     |
| Carbonate                        | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |         |
| Bicarbonate                      | 1000   | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |         |
| TOTAL CARBON DIOXIDE CALCULATION |        |          |      |            |    |               |         |
| Total Carbon Dioxide             | 980    | 1.0      |      | mg CO2/L   | 1  | 8/24/2006     | CMC     |
| EPA 120.1 SPECIFIC CONDUCTANCE   |        |          |      |            |    |               |         |
| Specific Conductance             | 2400   | 0.010    |      | µmhos/cm   | 1  | 8/23/2006     | CMC     |

Qualifiers:  
\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #35

Lab Order: 0608191

Collection Date: 8/15/2006 1:15:00 PM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-05

Matrix: AQUEOUS

| Analyses               | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 160.1 TDS   |        |     |      |       |    | Analyst: KS   |
| Total Dissolved Solids | 1500   | 20  |      | mg/L  | 1  | 8/17/2006     |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-05

Client Sample ID: MW #35  
Collection Date: 8/15/2006 11:35:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.48   | 0.10    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Chloride                                  | 180    | 1.0     |      | mg/L  | 10 | 8/17/2006 1:30:25 AM  |
| Nitrogen, Nitrite (As N)                  | ND     | 1.0     |      | mg/L  | 10 | 8/17/2006 1:30:25 AM  |
| Bromide                                   | 2.3    | 0.50    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| Sulfate                                   | 3.2    | 0.50    |      | mg/L  | 1  | 8/16/2006 9:09:18 PM  |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | 0.027  | 0.020   |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Barium                                    | 0.71   | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Calcium                                   | 110    | 10      |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Iron                                      | 2.8    | 0.20    |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Magnesium                                 | 26     | 1.0     |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Manganese                                 | 2.9    | 0.020   |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Potassium                                 | 2.1    | 1.0     |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Sodium                                    | 410    | 10      |      | mg/L  | 10 | 8/31/2006 1:18:40 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| Zinc                                      | 0.061  | 0.0050  |      | mg/L  | 1  | 8/31/2006 11:59:34 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:50:07 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:50:07 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: LMM          |
| Benzene                                   | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Toluene                                   | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Ethylbenzene                              | ND     | 5.0     |      | µg/L  | 5  | 8/21/2006             |
| Methyl tert-butyl ether (MTBE)            | ND     | 7.5     |      | µg/L  | 5  | 8/21/2006             |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-05

Client Sample ID: MW #35  
Collection Date: 8/15/2006 11:15:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    | Analyst: LMM  |
| 1,2,4-Trimethylbenzene             | 150    | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3,5-Trimethylbenzene             | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichloroethane (EDC)           | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dibromoethane (EDB)            | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Naphthalene                        | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1-Methylnaphthalene                | ND     | 20  |      | µg/L  | 5  | 8/21/2006     |
| 2-Methylnaphthalene                | ND     | 20  |      | µg/L  | 5  | 8/21/2006     |
| Acetone                            | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Bromobenzene                       | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromochloromethane                 | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromodichloromethane               | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromoform                          | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Bromomethane                       | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 2-Butanone                         | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Carbon disulfide                   | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Carbon Tetrachloride               | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Chlorobenzene                      | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Chloroethane                       | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Chloroform                         | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Chloromethane                      | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 2-Chlorotoluene                    | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 4-Chlorotoluene                    | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| cis-1,2-DCE                        | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| cis-1,3-Dichloropropene            | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dibromo-3-chloropropane        | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| Dibromochloromethane               | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Dibromomethane                     | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichlorobenzene                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3-Dichlorobenzene                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,4-Dichlorobenzene                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Dichlorodifluoromethane            | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloroethane                 | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloroethene                 | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,2-Dichloropropane                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 1,3-Dichloropropane                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| 2,2-Dichloropropane                | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 1,1-Dichloropropene                | ND     | 5.0 |      | µg/L  | 5  | 8/21/2006     |
| Hexachlorobutadiene                | ND     | 10  |      | µg/L  | 5  | 8/21/2006     |
| 2-Hexanone                         | ND     | 50  |      | µg/L  | 5  | 8/21/2006     |
| Isopropylbenzene                   | 11     | 5.0 |      | µg/L  | 5  | 8/21/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-05

Client Sample ID: MW #35  
Collection Date: 8/15/2006 11:15:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: LMM  |
| 4-Isopropyltoluene                      | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 4-Methyl-2-pentanone                    | ND     | 50       |      | µg/L       | 5  | 8/21/2006     |
| Methylene Chloride                      | ND     | 15       |      | µg/L       | 5  | 8/21/2006     |
| n-Butylbenzene                          | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| n-Propylbenzene                         | 12     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| sec-Butylbenzene                        | ND     | 10       |      | µg/L       | 5  | 8/21/2006     |
| Styrene                                 | ND     | 7.5      |      | µg/L       | 5  | 8/21/2006     |
| tert-Butylbenzene                       | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| Tetrachloroethene (PCE)                 | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| trans-1,2-DCE                           | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| trans-1,3-Dichloropropene               | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 1,1,1-Trichloroethane                   | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 1,1,2-Trichloroethane                   | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| Trichloroethene (TCE)                   | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| Trichlorofluoromethane                  | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| 1,2,3-Trichloropropane                  | ND     | 10       |      | µg/L       | 5  | 8/21/2006     |
| Vinyl chloride                          | ND     | 5.0      |      | µg/L       | 5  | 8/21/2006     |
| Xylenes, Total                          | ND     | 15       |      | µg/L       | 5  | 8/21/2006     |
| Surr: 1,2-Dichloroethane-d4             | 98.1   | 69.9-130 |      | %REC       | 5  | 8/21/2006     |
| Surr: 4-Bromofluorobenzene              | 113    | 75-139   |      | %REC       | 5  | 8/21/2006     |
| Surr: Dibromofluoromethane              | 105    | 57.3-135 |      | %REC       | 5  | 8/21/2006     |
| Surr: Toluene-d8                        | 102    | 81.9-122 |      | %REC       | 5  | 8/21/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 1000   | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Bicarbonate                             | 1000   | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 980    | 1.0      |      | mg CO2/L   | 1  | 8/24/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b>  |        |          |      |            |    | Analyst: CMC  |
| Specific Conductance                    | 2400   | 0.010    |      | µmhos/cm   | 1  | 8/23/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-05

Client Sample ID: MW #35  
Collection Date: 8/15/2006 11:15:00 AM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses               | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 160.1: TDS  |        |     |      |       |    | Analyst: KS   |
| Total Dissolved Solids | 1500   | 20  |      | mg/L  | 1  | 8/17/2006     |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0608191  
**Project:** Annual Sampling 2006  
**Lab ID:** 0608191-06

**Client Sample ID:** MW #36  
**Collection Date:** 8/15/2006 1:40:00 PM  
**Date Received:** 8/16/2006  
**Matrix:** AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.69   | 0.10    |      | mg/L  | 1  | 8/16/2006 9:26:42 PM  |
| Chloride                                  | 65     | 1.0     |      | mg/L  | 10 | 8/17/2006 2:22:39 AM  |
| Nitrogen, Nitrite (As N)                  | ND     | 1.0     |      | mg/L  | 10 | 8/17/2006 2:22:39 AM  |
| Bromide                                   | 0.76   | 0.50    |      | mg/L  | 1  | 8/16/2006 9:26:42 PM  |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 9:26:42 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 9:26:42 PM  |
| Sulfate                                   | 71     | 0.50    |      | mg/L  | 1  | 8/16/2006 9:26:42 PM  |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Barium                                    | 0.16   | 0.0020  |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Calcium                                   | 110    | 10      |      | mg/L  | 10 | 8/31/2006 1:20:57 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Iron                                      | 0.75   | 0.020   |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Lead                                      | 0.0053 | 0.0050  |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Magnesium                                 | 25     | 1.0     |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Manganese                                 | 3.6    | 0.020   |      | mg/L  | 10 | 8/31/2006 1:20:57 PM  |
| Potassium                                 | 2.7    | 1.0     |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Sodium                                    | 190    | 10      |      | mg/L  | 10 | 8/31/2006 1:20:57 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| Zinc                                      | 0.040  | 0.0050  |      | mg/L  | 1  | 8/31/2006 12:01:47 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:52:50 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:52:50 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: LMM          |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/21/2006             |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/21/2006             |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1  | 8/21/2006             |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1  | 8/21/2006             |

**Qualifiers:**  
\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-06

Client Sample ID: MW #36  
Collection Date: 8/15/2006 1:40:00 PM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                    | Result | PQL | Qual | Units | DF | Date Analyzed |
|-----------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8260B VOLATILES  |        |     |      |       |    | Analyst: LMM  |
| 1,2,4-Trimethylbenzene      | 15     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3,5-Trimethylbenzene      | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloroethane (EDC)    | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromoethane (EDB)     | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Naphthalene                 | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1-Methylnaphthalene         | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Methylnaphthalene         | ND     | 4.0 |      | µg/L  | 1  | 8/21/2006     |
| Acetone                     | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Bromobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromochloromethane          | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromodichloromethane        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromoform                   | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Bromomethane                | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Butanone                  | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon disulfide            | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Carbon Tetrachloride        | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chlorobenzene               | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroethane                | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloroform                  | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Chloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Chlorotoluene             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 4-Chlorotoluene             | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,2-DCE                 | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| cis-1,3-Dichloropropene     | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dibromo-3-chloropropane | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromochloromethane        | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dibromomethane              | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichlorobenzene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichlorobenzene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,4-Dichlorobenzene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Dichlorodifluoromethane     | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethane          | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloroethene          | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,2-Dichloropropane         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,3-Dichloropropane         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| 2,2-Dichloropropane         | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 1,1-Dichloropropene         | ND     | 1.0 |      | µg/L  | 1  | 8/21/2006     |
| Hexachlorobutadiene         | ND     | 2.0 |      | µg/L  | 1  | 8/21/2006     |
| 2-Hexanone                  | ND     | 10  |      | µg/L  | 1  | 8/21/2006     |
| Isopropylbenzene            | 4.5    | 1.0 |      | µg/L  | 1  | 8/21/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-06

Client Sample ID: MW #36  
Collection Date: 8/15/2006 1:40:00 PM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: LMM  |
| 4-Isopropyltoluene                      | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 4-Methyl-2-pentanone                    | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Methylene Chloride                      | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Butylbenzene                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| n-Propylbenzene                         | 2.7    | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| sec-Butylbenzene                        | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Styrene                                 | ND     | 1.5      |      | µg/L       | 1  | 8/21/2006     |
| tert-Butylbenzene                       | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Tetrachloroethene (PCE)                 | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,2-DCE                           | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| trans-1,3-Dichloropropene               | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,1-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,1,2-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichloroethene (TCE)                   | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Trichlorofluoromethane                  | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| 1,2,3-Trichloropropane                  | ND     | 2.0      |      | µg/L       | 1  | 8/21/2006     |
| Vinyl chloride                          | ND     | 1.0      |      | µg/L       | 1  | 8/21/2006     |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L       | 1  | 8/21/2006     |
| Surr: 1,2-Dichloroethane-d4             | 92.8   | 69.9-130 |      | %REC       | 1  | 8/21/2006     |
| Surr: 4-Bromofluorobenzene              | 109    | 75-139   |      | %REC       | 1  | 8/21/2006     |
| Surr: Dibromofluoromethane              | 88.0   | 57.3-135 |      | %REC       | 1  | 8/21/2006     |
| Surr: Toluene-d8                        | 138    | 81.9-122 | S    | %REC       | 1  | 8/21/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 600    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Bicarbonate                             | 600    | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 540    | 1.0      |      | mg CO2/L   | 1  | 8/24/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b>  |        |          |      |            |    | Analyst: CMC  |
| Specific Conductance                    | 1400   | 0.010    |      | µmhos/cm   | 1  | 8/23/2006     |

Qualifiers:  
\* Value exceeds Maximum Contaminant Level  
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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #36

Lab Order: 0608191

Collection Date: 8/15/2006 1:40:00 PM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-06

Matrix: AQUEOUS

| Analyses               | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 160.1: TDS  |        |     |      |       |    | Analyst: KS   |
| Total Dissolved Solids | 910    | 20  |      | mg/L  | 1  | 8/17/2006     |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-07

Client Sample ID: MW #11  
Collection Date: 8/15/2006 2:20:00 PM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |         |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | 20     | 1.0     |      | mg/L  | 1  | 8/17/2006 7:45:55 AM  |
| Motor Oil Range Organics (MRO)            | ND     | 5.0     |      | mg/L  | 1  | 8/17/2006 7:45:55 AM  |
| Surr: DNOP                                | 126    | 58-140  |      | %REC  | 1  | 8/17/2006 7:45:55 AM  |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.46   | 0.10    |      | mg/L  | 1  | 8/16/2006 9:44:07 PM  |
| Chloride                                  | 82     | 1.0     |      | mg/L  | 10 | 8/17/2006 2:40:03 AM  |
| Nitrogen, Nitrite (As N)                  | ND     | 1.0     |      | mg/L  | 10 | 8/17/2006 2:40:03 AM  |
| Bromide                                   | 1.0    | 0.50    |      | mg/L  | 1  | 8/16/2006 9:44:07 PM  |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10    |      | mg/L  | 1  | 8/16/2006 9:44:07 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 8/16/2006 9:44:07 PM  |
| Sulfate                                   | 19     | 0.50    |      | mg/L  | 1  | 8/16/2006 9:44:07 PM  |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/25/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Barium                                    | 0.69   | 0.0020  |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Calcium                                   | 100    | 10      |      | mg/L  | 10 | 8/31/2006 1:23:09 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Iron                                      | 9.3    | 0.20    |      | mg/L  | 10 | 8/31/2006 1:23:09 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Magnesium                                 | 22     | 1.0     |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Manganese                                 | 1.8    | 0.020   |      | mg/L  | 10 | 8/31/2006 1:23:09 PM  |
| Potassium                                 | 1.4    | 1.0     |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Sodium                                    | 390    | 10      |      | mg/L  | 10 | 8/31/2006 1:23:09 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| Zinc                                      | 0.051  | 0.0050  |      | mg/L  | 1  | 8/31/2006 12:04:46 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: ADM          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/18/2006 10:55:50 AM |
| Lead                                      | 0.0085 | 0.0050  |      | mg/L  | 1  | 8/18/2006 10:55:50 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608191  
Project: Annual Sampling 2006  
Lab ID: 0608191-07

Client Sample ID: MW #11  
Collection Date: 8/15/2006 2:20:00 PM  
Date Received: 8/16/2006  
Matrix: AQUEOUS

| Analyses                       | Result | PQL | Qual | Units | DF | Date Analyzed |
|--------------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8260B: VOLATILES    |        |     |      |       |    | Analyst: LMM  |
| Benzene                        | 240    | 10  |      | µg/L  | 10 | 8/22/2006     |
| Toluene                        | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Ethylbenzene                   | 12     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Methyl tert-butyl ether (MTBE) | 33     | 15  |      | µg/L  | 10 | 8/22/2006     |
| 1,2,4-Trimethylbenzene         | 640    | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,3,5-Trimethylbenzene         | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,2-Dichloroethane (EDC)       | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,2-Dibromoethane (EDB)        | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Naphthalene                    | 100    | 20  |      | µg/L  | 10 | 8/22/2006     |
| 1-Methylnaphthalene            | ND     | 40  |      | µg/L  | 10 | 8/22/2006     |
| 2-Methylnaphthalene            | ND     | 40  |      | µg/L  | 10 | 8/22/2006     |
| Acetone                        | ND     | 100 |      | µg/L  | 10 | 8/22/2006     |
| Bromobenzene                   | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Bromochloromethane             | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Bromodichloromethane           | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Bromoform                      | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Bromomethane                   | ND     | 20  |      | µg/L  | 10 | 8/22/2006     |
| 2-Butanone                     | ND     | 100 |      | µg/L  | 10 | 8/22/2006     |
| Carbon disulfide               | ND     | 100 |      | µg/L  | 10 | 8/22/2006     |
| Carbon Tetrachloride           | ND     | 20  |      | µg/L  | 10 | 8/22/2006     |
| Chlorobenzene                  | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Chloroethane                   | ND     | 20  |      | µg/L  | 10 | 8/22/2006     |
| Chloroform                     | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Chloromethane                  | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 2-Chlorotoluene                | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 4-Chlorotoluene                | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| cis-1,2-DCE                    | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| cis-1,3-Dichloropropene        | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,2-Dibromo-3-chloropropane    | ND     | 20  |      | µg/L  | 10 | 8/22/2006     |
| Dibromochloromethane           | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Dibromomethane                 | ND     | 20  |      | µg/L  | 10 | 8/22/2006     |
| 1,2-Dichlorobenzene            | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,3-Dichlorobenzene            | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,4-Dichlorobenzene            | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| Dichlorodifluoromethane        | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,1-Dichloroethane             | ND     | 20  |      | µg/L  | 10 | 8/22/2006     |
| 1,1-Dichloroethene             | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,2-Dichloropropane            | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 1,3-Dichloropropane            | ND     | 10  |      | µg/L  | 10 | 8/22/2006     |
| 2,2-Dichloropropane            | ND     | 20  |      | µg/L  | 10 | 8/22/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #1-1

Lab Order: 0608191

Collection Date: 8/15/2006 2:20:00 PM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-07

Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: LMM  |
| 1,1-Dichloropropene                     | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| Hexachlorobutadiene                     | ND     | 20       |      | µg/L       | 10 | 8/22/2006     |
| 2-Hexanone                              | ND     | 100      |      | µg/L       | 10 | 8/22/2006     |
| Isopropylbenzene                        | 64     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 4-Isopropyltoluene                      | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 4-Methyl-2-pentanone                    | ND     | 100      |      | µg/L       | 10 | 8/22/2006     |
| Methylene Chloride                      | ND     | 30       |      | µg/L       | 10 | 8/22/2006     |
| n-Butylbenzene                          | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| n-Propylbenzene                         | 77     | 10       |      | µg/L       | 10 | 8/22/2006     |
| sec-Butylbenzene                        | ND     | 20       |      | µg/L       | 10 | 8/22/2006     |
| Styrene                                 | ND     | 15       |      | µg/L       | 10 | 8/22/2006     |
| tert-Butylbenzene                       | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| Tetrachloroethene (PCE)                 | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| trans-1,2-DCE                           | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| trans-1,3-Dichloropropene               | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 1,1,1-Trichloroethane                   | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 1,1,2-Trichloroethane                   | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| Trichloroethene (TCE)                   | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| Trichlorofluoromethane                  | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| 1,2,3-Trichloropropane                  | ND     | 20       |      | µg/L       | 10 | 8/22/2006     |
| Vinyl chloride                          | ND     | 10       |      | µg/L       | 10 | 8/22/2006     |
| Xylenes, Total                          | 45     | 30       |      | µg/L       | 10 | 8/22/2006     |
| Surr: 1,2-Dichloroethane-d4             | 92.2   | 69.9-130 |      | %REC       | 10 | 8/22/2006     |
| Surr: 4-Bromofluorobenzene              | 105    | 75-139   |      | %REC       | 10 | 8/22/2006     |
| Surr: Dibromofluoromethane              | 91.3   | 57.3-135 |      | %REC       | 10 | 8/22/2006     |
| Surr: Toluene-d8                        | 111    | 81.9-122 |      | %REC       | 10 | 8/22/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 1100   | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| Bicarbonate                             | 1100   | 2.0      |      | mg/L CaCO3 | 1  | 8/24/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 1100   | 11.0     |      | mg CO2/L   | 1  | 8/24/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level

E Value above quantitation range

J Analyte detected below quantitation limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Sep-06

CLIENT: San Juan Refining

Client Sample ID: MW #11

Lab Order: 0608191

Collection Date: 8/15/2006 2:20:00 PM

Project: Annual Sampling 2006

Date Received: 8/16/2006

Lab ID: 0608191-07

Matrix: AQUEOUS

| Analyses                        | Result | PQL   | Qual | Units    | DF | Date Analyzed             |
|---------------------------------|--------|-------|------|----------|----|---------------------------|
| EPA 120.1: SPECIFIC CONDUCTANCE |        |       |      |          |    |                           |
| Specific Conductance            | 2200   | 0.010 |      | µmhos/cm | 1  | Analyst: CMC<br>8/23/2006 |
| EPA METHOD 160.1: TDS           |        |       |      |          |    |                           |
| Total Dissolved Solids          | 1400   | 20    |      | mg/L     | 1  | Analyst: KS<br>8/18/2006  |

\* Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608191

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E300

Sample ID: MB

MBLK

Batch ID: R20319

Analysis Date: 8/16/2006 4:30:46 PM

|                                   |    |      |      |  |  |  |  |  |  |
|-----------------------------------|----|------|------|--|--|--|--|--|--|
| Fluoride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Chloride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrite (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Bromide                           | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrate (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |  |  |  |  |  |  |
| Sulfate                           | ND | mg/L | 0.50 |  |  |  |  |  |  |

Sample ID: LCS-ST300-06017

LCS

Batch ID: R20319

Analysis Date: 8/16/2006 4:48:10 PM

|                                   |        |      |      |      |    |     |  |  |  |
|-----------------------------------|--------|------|------|------|----|-----|--|--|--|
| Fluoride                          | 0.4529 | mg/L | 0.10 | 90.6 | 90 | 110 |  |  |  |
| Chloride                          | 4.884  | mg/L | 0.10 | 97.7 | 90 | 110 |  |  |  |
| Nitrogen, Nitrite (As N)          | 1.018  | mg/L | 0.10 | 102  | 90 | 110 |  |  |  |
| Bromide                           | 2.519  | mg/L | 0.10 | 101  | 90 | 110 |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.487  | mg/L | 0.10 | 99.5 | 90 | 110 |  |  |  |
| Phosphorus, Orthophosphate (As P) | 5.055  | mg/L | 0.50 | 101  | 90 | 110 |  |  |  |
| Sulfate                           | 10.40  | mg/L | 0.50 | 99.8 | 90 | 110 |  |  |  |

Method: E310.1

Sample ID: MB

MBLK

Batch ID: R20422

Analysis Date: 8/24/2006

|                              |    |          |     |  |  |  |  |  |  |
|------------------------------|----|----------|-----|--|--|--|--|--|--|
| Alkalinity, Total (As CaCO3) | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Carbonate                    | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Bicarbonate                  | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |

Method: SW8015

Sample ID: MB-11047

MBLK

Batch ID: 11047

Analysis Date: 8/16/2006 9:25:59 PM

|                                |    |      |     |  |  |  |  |  |  |
|--------------------------------|----|------|-----|--|--|--|--|--|--|
| Diesel Range Organics (DRO)    | ND | mg/L | 1.0 |  |  |  |  |  |  |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 |  |  |  |  |  |  |

Sample ID: MB-11048

MBLK

Batch ID: 11048

Analysis Date: 8/17/2006 5:04:06 AM

|                                |    |      |     |  |  |  |  |  |  |
|--------------------------------|----|------|-----|--|--|--|--|--|--|
| Diesel Range Organics (DRO)    | ND | mg/L | 1.0 |  |  |  |  |  |  |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 |  |  |  |  |  |  |

Sample ID: LCS-11047

LCS

Batch ID: 11047

Analysis Date: 8/16/2006 9:58:49 PM

|                             |       |      |     |     |    |     |  |  |  |
|-----------------------------|-------|------|-----|-----|----|-----|--|--|--|
| Diesel Range Organics (DRO) | 6.177 | mg/L | 1.0 | 124 | 74 | 157 |  |  |  |
|-----------------------------|-------|------|-----|-----|----|-----|--|--|--|

Sample ID: LCS-11048

LCS

Batch ID: 11048

Analysis Date: 8/17/2006 5:36:51 AM

|                             |       |      |     |     |    |     |  |  |  |
|-----------------------------|-------|------|-----|-----|----|-----|--|--|--|
| Diesel Range Organics (DRO) | 5.167 | mg/L | 1.0 | 103 | 74 | 157 |  |  |  |
|-----------------------------|-------|------|-----|-----|----|-----|--|--|--|

Sample ID: LCSD-11047

LCSD

Batch ID: 11047

Analysis Date: 8/16/2006 10:31:32 PM

|                             |       |      |     |     |    |     |      |    |  |
|-----------------------------|-------|------|-----|-----|----|-----|------|----|--|
| Diesel Range Organics (DRO) | 5.626 | mg/L | 1.0 | 113 | 74 | 157 | 9.34 | 23 |  |
|-----------------------------|-------|------|-----|-----|----|-----|------|----|--|

Sample ID: LCSD-11048

LCSD

Batch ID: 11048

Analysis Date: 8/17/2006 6:40:29 AM

|                             |       |      |     |     |    |     |      |    |  |
|-----------------------------|-------|------|-----|-----|----|-----|------|----|--|
| Diesel Range Organics (DRO) | 6.075 | mg/L | 1.0 | 121 | 74 | 157 | 16.1 | 23 |  |
|-----------------------------|-------|------|-----|-----|----|-----|------|----|--|

Method: SW7470

Sample ID: MB-11120

MBLK

Batch ID: 11120

Analysis Date: 8/25/2006

|         |    |      |         |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|
| Mercury | ND | mg/L | 0.00020 |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|

Sample ID: LCS-11120

LCS

Batch ID: 11120

Analysis Date: 8/25/2006

|         |          |      |         |      |    |     |  |  |  |
|---------|----------|------|---------|------|----|-----|--|--|--|
| Mercury | 0.004950 | mg/L | 0.00020 | 99.0 | 80 | 120 |  |  |  |
|---------|----------|------|---------|------|----|-----|--|--|--|

## Qualifiers:

- E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608191

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: 0608191-07BMSD

MSD

Batch ID: R20512

Analysis Date: 8/31/2006 12:10:53 PM

|           |        |      |        |      |    |     |        |    |   |
|-----------|--------|------|--------|------|----|-----|--------|----|---|
| Arsenic   | 0.5120 | mg/L | 0.020  | 99.7 | 75 | 125 | 4.98   | 20 |   |
| Barium    | 1.123  | mg/L | 0.020  | 87.5 | 75 | 125 | 0.498  | 20 |   |
| Cadmium   | 0.4587 | mg/L | 0.0020 | 91.7 | 75 | 125 | 0.0749 | 20 |   |
| Chromium  | 0.4511 | mg/L | 0.0060 | 90.2 | 75 | 125 | 0.326  | 20 |   |
| Copper    | 0.4948 | mg/L | 0.0060 | 97.9 | 75 | 125 | 0.836  | 20 |   |
| Lead      | 0.4529 | mg/L | 0.0050 | 89.8 | 75 | 125 | 0.162  | 20 |   |
| Magnesium | 69.28  | mg/L | 1.0    | 93.0 | 75 | 125 | 2.63   | 20 |   |
| Potassium | 53.12  | mg/L | 1.0    | 94.0 | 75 | 125 | 3.37   | 20 |   |
| Selenium  | 0.4882 | mg/L | 0.050  | 97.6 | 75 | 125 | 4.27   | 20 |   |
| Silver    | 0.4133 | mg/L | 0.0050 | 82.7 | 75 | 125 | 1.14   | 20 |   |
| Uranium   | 0.6959 | mg/L | 0.10   | 139  | 75 | 125 | 0.884  | 20 | S |
| Zinc      | 0.4966 | mg/L | 0.050  | 89.2 | 75 | 125 | 0.0418 | 20 |   |

Sample ID: LCS

LCS

Batch ID: R20512

Analysis Date: 8/31/2006 11:40:15 AM

|           |        |      |        |      |    |     |  |  |   |
|-----------|--------|------|--------|------|----|-----|--|--|---|
| Arsenic   | 0.5044 | mg/L | 0.020  | 97.9 | 80 | 120 |  |  |   |
| Barium    | 0.4888 | mg/L | 0.020  | 97.6 | 80 | 120 |  |  |   |
| Cadmium   | 0.4924 | mg/L | 0.0020 | 98.5 | 80 | 120 |  |  |   |
| Calcium   | 52.08  | mg/L | 1.0    | 103  | 80 | 120 |  |  |   |
| Chromium  | 0.4922 | mg/L | 0.0060 | 98.4 | 80 | 120 |  |  |   |
| Copper    | 0.4927 | mg/L | 0.0060 | 98.5 | 80 | 120 |  |  |   |
| Iron      | 0.4913 | mg/L | 0.020  | 93.3 | 80 | 120 |  |  |   |
| Lead      | 0.4961 | mg/L | 0.0050 | 99.2 | 80 | 120 |  |  |   |
| Magnesium | 51.41  | mg/L | 1.0    | 101  | 80 | 120 |  |  |   |
| Manganese | 0.4850 | mg/L | 0.0020 | 97.0 | 80 | 120 |  |  |   |
| Potassium | 55.96  | mg/L | 1.0    | 101  | 80 | 120 |  |  |   |
| Selenium  | 0.4611 | mg/L | 0.050  | 88.3 | 80 | 120 |  |  |   |
| Silver    | 0.4904 | mg/L | 0.0050 | 98.1 | 80 | 120 |  |  |   |
| Sodium    | 56.12  | mg/L | 1.0    | 111  | 80 | 120 |  |  |   |
| Uranium   | 0.5793 | mg/L | 0.10   | 23.2 | 80 | 120 |  |  | S |
| Zinc      | 0.4911 | mg/L | 0.050  | 98.2 | 80 | 120 |  |  |   |

Sample ID: 0608191-07BMS

MS

Batch ID: R20512

Analysis Date: 8/31/2006 12:08:22 PM

|           |        |      |        |      |    |     |  |  |   |
|-----------|--------|------|--------|------|----|-----|--|--|---|
| Arsenic   | 0.4871 | mg/L | 0.020  | 94.8 | 75 | 125 |  |  |   |
| Barium    | 1.117  | mg/L | 0.020  | 86.4 | 75 | 125 |  |  |   |
| Cadmium   | 0.4590 | mg/L | 0.0020 | 91.8 | 75 | 125 |  |  |   |
| Chromium  | 0.4526 | mg/L | 0.0060 | 90.5 | 75 | 125 |  |  |   |
| Copper    | 0.4990 | mg/L | 0.0060 | 98.8 | 75 | 125 |  |  |   |
| Lead      | 0.4537 | mg/L | 0.0050 | 89.9 | 75 | 125 |  |  |   |
| Magnesium | 71.13  | mg/L | 1.0    | 96.6 | 75 | 125 |  |  |   |
| Potassium | 54.94  | mg/L | 1.0    | 97.3 | 75 | 125 |  |  |   |
| Selenium  | 0.4678 | mg/L | 0.050  | 93.6 | 75 | 125 |  |  |   |
| Silver    | 0.4181 | mg/L | 0.0050 | 83.6 | 75 | 125 |  |  |   |
| Uranium   | 0.7021 | mg/L | 0.10   | 140  | 75 | 125 |  |  | S |
| Zinc      | 0.4968 | mg/L | 0.050  | 89.3 | 75 | 125 |  |  |   |

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S 34/40 recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608191

| Analyte                   | Result | Units | PQL    | %Rec. | LowLimit        | HighLimit | %RPD                                | RPDLimit | Qual |
|---------------------------|--------|-------|--------|-------|-----------------|-----------|-------------------------------------|----------|------|
| <b>Method: SW6010A</b>    |        |       |        |       |                 |           |                                     |          |      |
| Sample ID: MB-11054       |        | MBLK  |        |       | Batch ID: 11054 |           | Analysis Date: 8/18/2006 9:34:21 AM |          |      |
| Chromium                  | ND     | mg/L  | 0.0060 |       |                 |           |                                     |          |      |
| Lead                      | ND     | mg/L  | 0.0050 |       |                 |           |                                     |          |      |
| Sample ID: LCS-11054      |        | LCS   |        |       | Batch ID: 11054 |           | Analysis Date: 8/18/2006 9:37:25 AM |          |      |
| Chromium                  | 0.5193 | mg/L  | 0.0060 | 104   | 80              | 120       |                                     |          |      |
| Lead                      | 0.5081 | mg/L  | 0.0050 | 102   | 80              | 120       |                                     |          |      |
| <b>Method: E160.1</b>     |        |       |        |       |                 |           |                                     |          |      |
| Sample ID: MB-11056       |        | MBLK  |        |       | Batch ID: 11056 |           | Analysis Date: 8/17/2006            |          |      |
| Total Dissolved Solids    | ND     | mg/L  | 20     |       |                 |           |                                     |          |      |
| Sample ID: MB-11066       |        | MBLK  |        |       | Batch ID: 11066 |           | Analysis Date: 8/18/2006            |          |      |
| Total Dissolved Solids    | ND     | mg/L  | 20     |       |                 |           |                                     |          |      |
| Sample ID: LCS-11056      |        | LCS   |        |       | Batch ID: 11056 |           | Analysis Date: 8/17/2006            |          |      |
| Total Dissolved Solids    | 1005   | mg/L  | 20     | 99.6  | 80              | 120       |                                     |          |      |
| Sample ID: LCS-11066      |        | LCS   |        |       | Batch ID: 11066 |           | Analysis Date: 8/18/2006            |          |      |
| Total Dissolved Solids    | 982.0  | mg/L  | 20     | 98.2  | 80              | 120       |                                     |          |      |
| Sample ID: 0608191-06B MS |        | MS    |        |       | Batch ID: 11056 |           | Analysis Date: 8/17/2006            |          |      |
| Total Dissolved Solids    | 1929   | mg/L  | 20     | 102   | 80              | 120       |                                     |          |      |

## Qualifiers:

- E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S 35/40 recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608191

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5mLrb

MBLK

Batch ID: R20370

Analysis Date:

8/21/2006

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |
| Chloroethane                   | ND | µg/L | 2.0 |
| Chloroform                     | ND | µg/L | 1.0 |
| Chloromethane                  | ND | µg/L | 1.0 |
| 2-Chlorotoluene                | ND | µg/L | 1.0 |
| 4-Chlorotoluene                | ND | µg/L | 1.0 |
| cis-1,2-DCE                    | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene        | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane    | ND | µg/L | 2.0 |
| Dibromochloromethane           | ND | µg/L | 1.0 |
| Dibromomethane                 | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene            | ND | µg/L | 1.0 |
| Dichlorodifluoromethane        | ND | µg/L | 1.0 |
| 1,1-Dichloroethane             | ND | µg/L | 2.0 |
| 1,1-Dichloroethene             | ND | µg/L | 1.0 |
| 1,2-Dichloropropane            | ND | µg/L | 1.0 |
| 1,3-Dichloropropane            | ND | µg/L | 1.0 |
| 2,2-Dichloropropane            | ND | µg/L | 2.0 |
| 1,1-Dichloropropene            | ND | µg/L | 1.0 |
| Hexachlorobutadiene            | ND | µg/L | 2.0 |
| 2-Hexanone                     | ND | µg/L | 10  |
| Isopropylbenzene               | ND | µg/L | 1.0 |

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Recovery outside accepted recovery limits

36/40

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 060819

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5mL rb

MBLK

Batch ID: R20370

Analysis Date:

8/21/2006

|                             |    |      |     |
|-----------------------------|----|------|-----|
| 4-Isopropyltoluene          | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone        | ND | µg/L | 1.0 |
| Methylene Chloride          | ND | µg/L | 3.0 |
| n-Butylbenzene              | ND | µg/L | 1.0 |
| n-Propylbenzene             | ND | µg/L | 1.0 |
| sec-Butylbenzene            | ND | µg/L | 2.0 |
| Styrene                     | ND | µg/L | 1.5 |
| tert-Butylbenzene           | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| 1,1,1,2,2-Tetrachloroethane | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)     | ND | µg/L | 1.0 |
| trans-1,2-DCE               | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene   | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane       | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane       | ND | µg/L | 1.0 |
| Trichloroethene (TCE)       | ND | µg/L | 1.0 |
| Trichlorofluoromethane      | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane      | ND | µg/L | 2.0 |
| Vinyl chloride              | ND | µg/L | 1.0 |
| Xylenes, Total              | ND | µg/L | 3.0 |

Sample ID: 5mL rb

MBLK

Batch ID: R20388

Analysis Date:

8/22/2006

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Napthalene                     | ND | µg/L | 2.0 |
| 1-Methylnapthalene             | ND | µg/L | 4.0 |
| 2-Methylnapthalene             | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 1.0 |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 1.0 |
| Carbon disulfide               | ND | µg/L | 1.0 |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |

## Qualifiers:

|   |                                            |    |                                                     |
|---|--------------------------------------------|----|-----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded  |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                 |
| R | RPD outside accepted recovery limits       | S  | 37% / 40% recovery outside accepted recovery limits |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608191

| Analyte                     | Result | Units | PQL | %Rec | LowLimit         | HighLimit | %RPD           | RPDLimit | Qual      |
|-----------------------------|--------|-------|-----|------|------------------|-----------|----------------|----------|-----------|
| Method: SW8260B             |        |       |     |      |                  |           |                |          |           |
| Sample ID: 5mL rb           |        | MBLK  |     |      | Batch ID: R20388 |           | Analysis Date: |          | 8/22/2006 |
| Chloroethane                | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Chloroform                  | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Chloromethane               | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 2-Chlorotoluene             | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 4-Chlorotoluene             | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| cis-1,2-DCE                 | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| cis-1,3-Dichloropropene     | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dibromo-3-chloropropane | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Dibromochloromethane        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Dibromomethane              | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1,2-Dichlorobenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,3-Dichlorobenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,4-Dichlorobenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Dichlorodifluoromethane     | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1-Dichloroethane          | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1,1-Dichloroethene          | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dichloropropane         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,3-Dichloropropane         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dichloropropane         | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1,1-Dichloropropene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Hexachlorobutadiene         | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 2-Hexanone                  | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Isopropylbenzene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 4-Isopropyltoluene          | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 4-Methyl-2-pentanone        | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Methylene Chloride          | ND     | µg/L  | 3.0 |      |                  |           |                |          |           |
| n-Butylbenzene              | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| n-Propylbenzene             | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| sec-Butylbenzene            | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Styrene                     | ND     | µg/L  | 1.5 |      |                  |           |                |          |           |
| tert-Butylbenzene           | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,1,2-Tetrachloroethane   | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,1,2,2-Tetrachloroethane | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Tetrachloroethene (PCE)     | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| trans-1,2-DCE               | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| trans-1,3-Dichloropropene   | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2,3-Trichlorobenzene      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2,4-Trichlorobenzene      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,1-Trichloroethane       | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,2-Trichloroethane       | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Trichloroethene (TCE)       | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Trichlorofluoromethane      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2,3-Trichloropropane      | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Vinyl chloride              | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |

## Qualifiers:

- E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S 38 / 40 recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608191

| Analyte                | Result | Units | PQL | %Rec | LowLimit         | HighLimit | %RPD                     | RPDLimit | Qual |
|------------------------|--------|-------|-----|------|------------------|-----------|--------------------------|----------|------|
| <b>Method: SW8260B</b> |        |       |     |      |                  |           |                          |          |      |
| Sample ID: 5mL rb      |        | MBLK  |     |      | Batch ID: R20388 |           | Analysis Date: 8/22/2006 |          |      |
| Xylenes, Total         | ND     | µg/L  | 3.0 |      |                  |           |                          |          |      |
| Sample ID: 100ng lcs   |        | LCS   |     |      | Batch ID: R20370 |           | Analysis Date: 8/21/2006 |          |      |
| Benzene                | 19.46  | µg/L  | 1.0 | 97.3 | 71               | 124       |                          |          |      |
| Toluene                | 17.62  | µg/L  | 1.0 | 88.1 | 81.5             | 118       |                          |          |      |
| Chlorobenzene          | 19.15  | µg/L  | 1.0 | 95.7 | 81.2             | 132       |                          |          |      |
| 1,1-Dichloroethene     | 21.65  | µg/L  | 1.0 | 108  | 65.5             | 134       |                          |          |      |
| Trichloroethene (TCE)  | 19.58  | µg/L  | 1.0 | 97.9 | 69.5             | 119       |                          |          |      |
| Sample ID: 100ng lcs-b |        | LCS   |     |      | Batch ID: R20388 |           | Analysis Date: 8/22/2006 |          |      |
| Benzene                | 20.63  | µg/L  | 1.0 | 103  | 66.2             | 115       |                          |          |      |
| Toluene                | 19.22  | µg/L  | 1.0 | 96.1 | 72               | 109       |                          |          |      |
| Chlorobenzene          | 20.44  | µg/L  | 1.0 | 102  | 78.5             | 109       |                          |          |      |
| 1,1-Dichloroethene     | 23.76  | µg/L  | 1.0 | 119  | 62.3             | 124       |                          |          |      |
| Trichloroethene (TCE)  | 20.17  | µg/L  | 1.0 | 101  | 74.3             | 109       |                          |          |      |
| Sample ID: 100ng lcs-b |        | LCSD  |     |      | Batch ID: R20370 |           | Analysis Date: 8/21/2006 |          |      |
| Benzene                | 19.20  | µg/L  | 1.0 | 96.0 | 71               | 124       | 1.39                     | 11       |      |
| Toluene                | 19.47  | µg/L  | 1.0 | 97.4 | 65.5             | 123       | 10.0                     | 12.2     |      |
| Chlorobenzene          | 21.05  | µg/L  | 1.0 | 105  | 80.3             | 134       | 9.48                     | 12       |      |
| 1,1-Dichloroethene     | 23.49  | µg/L  | 1.0 | 117  | 65.5             | 134       | 8.18                     | 19.3     |      |
| Trichloroethene (TCE)  | 19.04  | µg/L  | 1.0 | 95.2 | 69.5             | 119       | 2.77                     | 15.5     |      |

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S 3.9 / 4.0 recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name: SJR

Date and Time Received:

8/16/2006

Work Order Number: 0608191

Received by: AT

Checklist completed by:

Signature

Date

8/16/06

Matrix

Carrier name: UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp: Blank temperature?

4°

4° C ± 2° Acceptable

If given sufficient time to cool

COMMENTS:

Client contacted

Date contacted

Person contacted

Contacted by

Regarding

Comments:

Corrective Action



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

**Tel. 505 345 3975 • Fax 505 345 4107**  
**www.hallenvironmental.com**

# Annual Sampling 2006

Project #

Project Manager:

Sample: Cindy Hurtado/Shelly London

Fax # 575-632-3911

[illegible]

Received By: (Signature) 8/16/00  
Received By: (Signature) 8/16/00

Relinquished By: (Signature)

Received By: (Signature)







## COVER LETTER

Friday, September 15, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Annual Sampling 2006

Order No.: 0608236

Dear Cindy Hurtado:

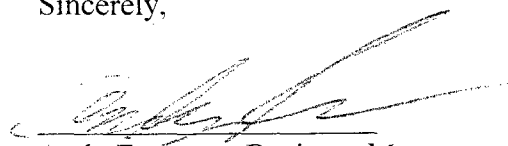
Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 8/18/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001





**Hall Environmental Analysis Laboratory, Inc.**

Date: 15-Sep-06

**CLIENT:** San Juan Refining  
**Project:** Annual Sampling 2006**Lab Order:** 0608236**Lab ID:** 0608236-01**Collection Date:** 8/17/2006 9:30:00 AM**Client Sample ID:** MW #26**Matrix:** AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.36   | 0.10    |      | mg/L  | 1  | 9/11/2006 11:52:50 PM |
| Chloride                                  | 410    | 2.0     |      | mg/L  | 20 | 9/12/2006 4:31:24 AM  |
| Bromide                                   | 5.2    | 0.10    |      | mg/L  | 1  | 9/11/2006 11:52:50 PM |
| Nitrate (As N)+Nitrite (As N)             | ND     | 0.50    |      | mg/L  | 5  | 9/12/2006 4:48:49 AM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    |      | mg/L  | 1  | 9/11/2006 11:52:50 PM |
| Sulfate                                   | 0.68   | 0.50    |      | mg/L  | 1  | 9/11/2006 11:52:50 PM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/29/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Barium                                    | 2.2    | 0.020   |      | mg/L  | 10 | 9/6/2006 7:55:50 PM   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Calcium                                   | 110    | 10      |      | mg/L  | 10 | 9/6/2006 7:55:50 PM   |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Iron                                      | 6.8    | 0.20    |      | mg/L  | 10 | 9/6/2006 7:55:50 PM   |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Magnesium                                 | 38     | 1.0     |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Manganese                                 | 3.1    | 0.020   |      | mg/L  | 10 | 9/6/2006 7:55:50 PM   |
| Potassium                                 | 3.0    | 1.0     |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Sodium                                    | 450    | 10      |      | mg/L  | 10 | 9/6/2006 7:55:50 PM   |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 9/6/2006 8:26:31 PM   |
| Zinc                                      | 0.048  | 0.0050  |      | mg/L  | 1  | 9/7/2006 9:40:41 AM   |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: NMO          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/24/2006 9:07:52 AM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/24/2006 9:07:52 AM  |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: SMP          |
| Benzene                                   | 330    | 20      |      | µg/L  | 20 | 8/23/2006             |
| Toluene                                   | ND     | 20      |      | µg/L  | 20 | 8/23/2006             |
| Ethylbenzene                              | 480    | 20      |      | µg/L  | 20 | 8/23/2006             |
| Methyl tert-butyl ether (MTBE)            | 38     | 30      |      | µg/L  | 20 | 8/23/2006             |

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |     |      |     |           |
|-----------------------------|------|-----|------|-----|-----------|
| 1,2,4-Trimethylbenzene      | 1800 | 100 | µg/L | 100 | 8/22/2006 |
| 1,3,5-Trimethylbenzene      | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,2-Dichloroethane (EDC)    | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,2-Dibromoethane (EDB)     | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Naphthalene                 | 260  | 40  | µg/L | 20  | 8/23/2006 |
| 1-Methylnaphthalene         | ND   | 80  | µg/L | 20  | 8/23/2006 |
| 2-Methylnaphthalene         | ND   | 80  | µg/L | 20  | 8/23/2006 |
| Acetone                     | ND   | 200 | µg/L | 20  | 8/23/2006 |
| Bromobenzene                | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Bromochloromethane          | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Bromodichloromethane        | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Bromoform                   | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Bromomethane                | ND   | 40  | µg/L | 20  | 8/23/2006 |
| 2-Butanone                  | ND   | 200 | µg/L | 20  | 8/23/2006 |
| Carbon disulfide            | ND   | 200 | µg/L | 20  | 8/23/2006 |
| Carbon Tetrachloride        | ND   | 40  | µg/L | 20  | 8/23/2006 |
| Chlorobenzene               | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Chloroethane                | ND   | 40  | µg/L | 20  | 8/23/2006 |
| Chloroform                  | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Chloromethane               | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 2-Chlorotoluene             | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 4-Chlorotoluene             | ND   | 20  | µg/L | 20  | 8/23/2006 |
| cis-1,2-DCE                 | ND   | 20  | µg/L | 20  | 8/23/2006 |
| cis-1,3-Dichloropropene     | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,2-Dibromo-3-chloropropane | ND   | 40  | µg/L | 20  | 8/23/2006 |
| Dibromochloromethane        | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Dibromomethane              | ND   | 40  | µg/L | 20  | 8/23/2006 |
| 1,2-Dichlorobenzene         | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,3-Dichlorobenzene         | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,4-Dichlorobenzene         | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Dichlorodifluoromethane     | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,1-Dichloroethane          | ND   | 40  | µg/L | 20  | 8/23/2006 |
| 1,1-Dichloroethene          | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,2-Dichloropropane         | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 1,3-Dichloropropane         | ND   | 20  | µg/L | 20  | 8/23/2006 |
| 2,2-Dichloropropane         | ND   | 40  | µg/L | 20  | 8/23/2006 |
| 1,1-Dichloropropene         | ND   | 20  | µg/L | 20  | 8/23/2006 |
| Hexachlorobutadiene         | ND   | 40  | µg/L | 20  | 8/23/2006 |
| 2-Hexanone                  | ND   | 200 | µg/L | 20  | 8/23/2006 |
| Isopropylbenzene            | 180  | 20  | µg/L | 20  | 8/23/2006 |
| 4-Isopropyltoluene          | 20   | 20  | µg/L | 20  | 8/23/2006 |
| 4-Methyl-2-pentanone        | ND   | 200 | µg/L | 20  | 8/23/2006 |
| Methylene Chloride          | ND   | 60  | µg/L | 20  | 8/23/2006 |
| n-Butylbenzene              | 49   | 20  | µg/L | 20  | 8/23/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |          |      |    |           |
|-----------------------------|------|----------|------|----|-----------|
| n-Propylbenzene             | 180  | 20       | µg/L | 20 | 8/23/2006 |
| sec-Butylbenzene            | ND   | 40       | µg/L | 20 | 8/23/2006 |
| Styrene                     | ND   | 30       | µg/L | 20 | 8/23/2006 |
| tert-Butylbenzene           | ND   | 20       | µg/L | 20 | 8/23/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 20       | µg/L | 20 | 8/23/2006 |
| 1,1,2,2-Tetrachloroethane   | ND   | 20       | µg/L | 20 | 8/23/2006 |
| Tetrachloroethene (PCE)     | ND   | 20       | µg/L | 20 | 8/23/2006 |
| trans-1,2-DCE               | ND   | 20       | µg/L | 20 | 8/23/2006 |
| trans-1,3-Dichloropropene   | ND   | 20       | µg/L | 20 | 8/23/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 20       | µg/L | 20 | 8/23/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 20       | µg/L | 20 | 8/23/2006 |
| 1,1,1-Trichloroethane       | ND   | 20       | µg/L | 20 | 8/23/2006 |
| 1,1,2-Trichloroethane       | ND   | 20       | µg/L | 20 | 8/23/2006 |
| Trichloroethene (TCE)       | ND   | 20       | µg/L | 20 | 8/23/2006 |
| Trichlorofluoromethane      | ND   | 20       | µg/L | 20 | 8/23/2006 |
| 1,2,3-Trichloropropane      | ND   | 40       | µg/L | 20 | 8/23/2006 |
| Vinyl chloride              | ND   | 20       | µg/L | 20 | 8/23/2006 |
| Xylenes, Total              | ND   | 60       | µg/L | 20 | 8/23/2006 |
| Surr: 1,2-Dichloroethane-d4 | 73.8 | 69.9-130 | %REC | 20 | 8/23/2006 |
| Surr: 4-Bromofluorobenzene  | 97.8 | 75-139   | %REC | 20 | 8/23/2006 |
| Surr: Dibromofluoromethane  | 84.9 | 57.3-135 | %REC | 20 | 8/23/2006 |
| Surr: Toluene-d8            | 94.2 | 81.9-122 | %REC | 20 | 8/23/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                                           |     |     |                        |   |           |
|-------------------------------------------|-----|-----|------------------------|---|-----------|
| Alkalinity, Total (As CaCO <sub>3</sub> ) | 960 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Carbonate                                 | ND  | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Bicarbonate                               | 960 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |

## TOTAL CARBON DIOXIDE CALCULATION

Analyst: CMC

|                      |     |     |                       |   |           |
|----------------------|-----|-----|-----------------------|---|-----------|
| Total Carbon Dioxide | 990 | 1.0 | mg CO <sub>2</sub> /L | 1 | 8/29/2006 |
|----------------------|-----|-----|-----------------------|---|-----------|

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |      |       |          |   |           |
|----------------------|------|-------|----------|---|-----------|
| Specific Conductance | 2900 | 0.010 | µmhos/cm | 1 | 8/23/2006 |
|----------------------|------|-------|----------|---|-----------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |      |    |      |   |           |
|------------------------|------|----|------|---|-----------|
| Total Dissolved Solids | 1700 | 20 | mg/L | 1 | 8/22/2006 |
|------------------------|------|----|------|---|-----------|

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

Lab ID: 0608236-02

Collection Date: 8/17/2006 11:15:00 AM

Client Sample ID: MW#13

Matrix: AQUEOUS

| Analyses                          | Result | PQL  | Qual | Units | DF | Date Analyzed        |
|-----------------------------------|--------|------|------|-------|----|----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>   |        |      |      |       |    | Analyst: TES         |
| Fluoride                          | 0.12   | 0.10 |      | mg/L  | 1  | 9/14/2006 6:51:11 AM |
| Chloride                          | 310    | 2.0  |      | mg/L  | 20 | 9/12/2006 5:23:38 AM |
| Bromide                           | 3.7    | 0.50 |      | mg/L  | 1  | 9/7/2006 6:30:26 AM  |
| Nitrate (As N)+Nitrite (As N)     | 8.3    | 0.50 |      | mg/L  | 5  | 9/12/2006 8:46:26 PM |
| Phosphorus, Orthophosphate (As P) | ND     | 0.50 | H    | mg/L  | 1  | 9/7/2006 6:30:26 AM  |
| Sulfate                           | 1100   | 10   |      | mg/L  | 20 | 9/12/2006 5:23:38 AM |

**EPA METHOD 7470: MERCURY**

Analyst: MAP

|         |    |         |  |      |   |           |
|---------|----|---------|--|------|---|-----------|
| Mercury | ND | 0.00020 |  | mg/L | 1 | 8/29/2006 |
|---------|----|---------|--|------|---|-----------|

**EPA METHOD 6010: DISSOLVED METALS**

Analyst: NMO

|           |        |        |  |      |    |                     |
|-----------|--------|--------|--|------|----|---------------------|
| Arsenic   | ND     | 0.020  |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Barium    | 0.025  | 0.020  |  | mg/L | 10 | 9/6/2006 7:58:47 PM |
| Cadmium   | ND     | 0.0020 |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Calcium   | 250    | 10     |  | mg/L | 10 | 9/6/2006 7:58:47 PM |
| Chromium  | ND     | 0.0060 |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Copper    | 0.0063 | 0.0060 |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Iron      | ND     | 0.020  |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Lead      | 0.0078 | 0.0050 |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Magnesium | 82     | 1.0    |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Manganese | 1.1    | 0.020  |  | mg/L | 10 | 9/6/2006 7:58:47 PM |
| Potassium | 3.6    | 1.0    |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Selenium  | ND     | 0.050  |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Silver    | ND     | 0.0050 |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Sodium    | 620    | 10     |  | mg/L | 10 | 9/6/2006 7:58:47 PM |
| Uranium   | ND     | 0.10   |  | mg/L | 1  | 9/6/2006 8:30:26 PM |
| Zinc      | 0.061  | 0.0050 |  | mg/L | 1  | 9/7/2006 9:43:12 AM |

**EPA 6010: TOTAL RECOVERABLE METALS**

Analyst: NMO

|          |       |        |  |      |   |                      |
|----------|-------|--------|--|------|---|----------------------|
| Chromium | 0.016 | 0.0060 |  | mg/L | 1 | 8/24/2006 9:11:53 AM |
| Lead     | ND    | 0.0050 |  | mg/L | 1 | 8/24/2006 9:11:53 AM |

**EPA METHOD 8260B: VOLATILES**

Analyst: SMP

|                                |     |     |  |      |   |           |
|--------------------------------|-----|-----|--|------|---|-----------|
| Benzene                        | ND  | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Toluene                        | ND  | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Ethylbenzene                   | ND  | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Methyl tert-butyl ether (MTBE) | 7.0 | 1.5 |  | µg/L | 1 | 8/22/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |    |     |      |   |           |
|-----------------------------|----|-----|------|---|-----------|
| 1,2,4-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3,5-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloroethane (EDC)    | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromoethane (EDB)     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Naphthalene                 | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| 2-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| Acetone                     | ND | 10  | µg/L | 1 | 8/22/2006 |
| Bromobenzene                | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromochloromethane          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromodichloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromoform                   | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromomethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Butanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon disulfide            | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon Tetrachloride        | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chlorobenzene               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloroethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chloroform                  | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloromethane               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,2-DCE                 | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,3-Dichloropropene     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Dibromochloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dibromomethane              | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,4-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dichlorodifluoromethane     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethane          | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2,2-Dichloropropane         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloropropene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Hexachlorobutadiene         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Hexanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Isopropylbenzene            | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Isopropyltoluene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Methyl-2-pentanone        | ND | 10  | µg/L | 1 | 8/22/2006 |
| Methylene Chloride          | ND | 3.0 | µg/L | 1 | 8/22/2006 |
| n-Butylbenzene              | ND | 1.0 | µg/L | 1 | 8/22/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |          |      |   |           |
|-----------------------------|------|----------|------|---|-----------|
| n-Propylbenzene             | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| sec-Butylbenzene            | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Styrene                     | ND   | 1.5      | µg/L | 1 | 8/22/2006 |
| tert-Butylbenzene           | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Tetrachloroethene (PCE)     | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,2-DCE               | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,3-Dichloropropene   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichloroethene (TCE)       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichlorofluoromethane      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichloropropane      | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Vinyl chloride              | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Xylenes, Total              | ND   | 3.0      | µg/L | 1 | 8/22/2006 |
| Surr: 1,2-Dichloroethane-d4 | 98.2 | 69.9-130 | %REC | 1 | 8/22/2006 |
| Surr: 4-Bromofluorobenzene  | 89.2 | 75-139   | %REC | 1 | 8/22/2006 |
| Surr: Dibromofluoromethane  | 87.3 | 57.3-135 | %REC | 1 | 8/22/2006 |
| Surr: Toluene-d8            | 86.3 | 81.9-122 | %REC | 1 | 8/22/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                                           |     |     |                        |   |           |
|-------------------------------------------|-----|-----|------------------------|---|-----------|
| Alkalinity, Total (As CaCO <sub>3</sub> ) | 960 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Carbonate                                 | ND  | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Bicarbonate                               | 960 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |

## TOTAL CARBON DIOXIDE CALCULATION

Analyst: CMC

|                      |     |     |                       |   |           |
|----------------------|-----|-----|-----------------------|---|-----------|
| Total Carbon Dioxide | 910 | 1.0 | mg CO <sub>2</sub> /L | 1 | 8/29/2006 |
|----------------------|-----|-----|-----------------------|---|-----------|

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |      |       |          |   |           |
|----------------------|------|-------|----------|---|-----------|
| Specific Conductance | 4300 | 0.010 | µmhos/cm | 1 | 8/23/2006 |
|----------------------|------|-------|----------|---|-----------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |      |    |      |   |           |
|------------------------|------|----|------|---|-----------|
| Total Dissolved Solids | 3000 | 20 | mg/L | 1 | 8/22/2006 |
|------------------------|------|----|------|---|-----------|

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

Lab ID: 0608236-03

Collection Date: 8/17/2006 1:20:00 PM

Client Sample ID: MW#32

Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF  | Date Analyzed        |
|-------------------------------------------|--------|---------|------|-------|-----|----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |     | Analyst: TES         |
| Fluoride                                  | 0.19   | 0.10    |      | mg/L  | 1   | 9/14/2006 7:08:36 AM |
| Chloride                                  | 940    | 10      |      | mg/L  | 100 | 9/12/2006 6:33:18 AM |
| Bromide                                   | 3.4    | 0.50    |      | mg/L  | 1   | 9/7/2006 6:47:50 AM  |
| Nitrate (As N)+Nitrite (As N)             | 5.6    | 0.50    |      | mg/L  | 5   | 9/12/2006 6:50:42 AM |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    | H    | mg/L  | 1   | 9/7/2006 6:47:50 AM  |
| Sulfate                                   | 940    | 10      |      | mg/L  | 20  | 9/12/2006 5:41:03 AM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |     | Analyst: MAP         |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1   | 8/29/2006            |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |     | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Barium                                    | 0.032  | 0.0020  |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Calcium                                   | 260    | 10      |      | mg/L  | 10  | 9/6/2006 8:01:49 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Iron                                      | ND     | 0.020   |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Magnesium                                 | 38     | 1.0     |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Manganese                                 | ND     | 0.0020  |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Potassium                                 | 3.1    | 1.0     |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Sodium                                    | 700    | 10      |      | mg/L  | 10  | 9/6/2006 8:01:49 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1   | 9/6/2006 8:34:39 PM  |
| Zinc                                      | 0.046  | 0.0050  |      | mg/L  | 1   | 9/7/2006 9:45:46 AM  |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |     | Analyst: NMO         |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1   | 8/24/2006 9:15:38 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1   | 8/24/2006 9:15:38 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |     | Analyst: SMP         |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1   | 8/22/2006            |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1   | 8/22/2006            |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1   | 8/22/2006            |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1   | 8/22/2006            |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |    |     |      |   |           |
|-----------------------------|----|-----|------|---|-----------|
| 1,2,4-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3,5-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloroethane (EDC)    | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromoethane (EDB)     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Naphthalene                 | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| 2-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| Acetone                     | ND | 10  | µg/L | 1 | 8/22/2006 |
| Bromobenzene                | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromochloromethane          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromodichloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromoform                   | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromomethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Butanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon disulfide            | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon Tetrachloride        | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chlorobenzene               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloroethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chloroform                  | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloromethane               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,2-DCE                 | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,3-Dichloropropene     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Dibromochloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dibromomethane              | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,4-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dichlorodifluoromethane     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethane          | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2,2-Dichloropropane         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloropropene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Hexachlorobutadiene         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Hexanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Isopropylbenzene            | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Isopropyltoluene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Methyl-2-pentanone        | ND | 10  | µg/L | 1 | 8/22/2006 |
| Methylene Chloride          | ND | 3.0 | µg/L | 1 | 8/22/2006 |
| n-Butylbenzene              | ND | 1.0 | µg/L | 1 | 8/22/2006 |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |          |      |   |           |
|-----------------------------|------|----------|------|---|-----------|
| n-Propylbenzene             | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| sec-Butylbenzene            | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Styrene                     | ND   | 1.5      | µg/L | 1 | 8/22/2006 |
| tert-Butylbenzene           | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Tetrachloroethene (PCE)     | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,2-DCE               | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,3-Dichloropropene   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichloroethene (TCE)       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichlorofluoromethane      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichloropropane      | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Vinyl chloride              | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Xylenes, Total              | ND   | 3.0      | µg/L | 1 | 8/22/2006 |
| Surr: 1,2-Dichloroethane-d4 | 97.0 | 69.9-130 | %REC | 1 | 8/22/2006 |
| Surr: 4-Bromofluorobenzene  | 89.7 | 75-139   | %REC | 1 | 8/22/2006 |
| Surr: Dibromofluoromethane  | 85.1 | 57.3-135 | %REC | 1 | 8/22/2006 |
| Surr: Toluene-d8            | 87.7 | 81.9-122 | %REC | 1 | 8/22/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                                           |     |     |                        |   |           |
|-------------------------------------------|-----|-----|------------------------|---|-----------|
| Alkalinity, Total (As CaCO <sub>3</sub> ) | 200 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Carbonate                                 | ND  | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Bicarbonate                               | 200 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |

## TOTAL CARBON DIOXIDE CALCULATION

Analyst: CMC

|                      |     |     |                       |   |           |
|----------------------|-----|-----|-----------------------|---|-----------|
| Total Carbon Dioxide | 180 | 1.0 | mg CO <sub>2</sub> /L | 1 | 8/29/2006 |
|----------------------|-----|-----|-----------------------|---|-----------|

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |      |       |          |   |           |
|----------------------|------|-------|----------|---|-----------|
| Specific Conductance | 4900 | 0.010 | µmhos/cm | 1 | 8/23/2006 |
|----------------------|------|-------|----------|---|-----------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |      |    |      |   |           |
|------------------------|------|----|------|---|-----------|
| Total Dissolved Solids | 3100 | 20 | mg/L | 1 | 8/24/2006 |
|------------------------|------|----|------|---|-----------|

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

Lab ID: 0608236-04

Collection Date: 8/17/2006 2:05:00 PM

Client Sample ID: MW#27

Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF  | Date Analyzed        |
|-------------------------------------------|--------|---------|------|-------|-----|----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |     |                      |
|                                           |        |         |      |       |     | Analyst: TES         |
| Fluoride                                  | 0.38   | 0.10    |      | mg/L  | 1   | 9/14/2006 7:26:01 AM |
| Chloride                                  | 150    | 1.0     |      | mg/L  | 10  | 9/12/2006 7:08:07 AM |
| Bromide                                   | 1.1    | 0.50    |      | mg/L  | 1   | 9/7/2006 7:05:15 AM  |
| Nitrate (As N)+Nitrite (As N)             | ND     | 0.50    |      | mg/L  | 5   | 9/12/2006 7:42:56 AM |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    | H    | mg/L  | 1   | 9/7/2006 7:05:15 AM  |
| Sulfate                                   | 1700   | 100     |      | mg/L  | 200 | 9/12/2006 7:25:32 AM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |     |                      |
|                                           |        |         |      |       |     | Analyst: MAP         |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1   | 8/29/2006            |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |     |                      |
|                                           |        |         |      |       |     | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Barium                                    | 0.038  | 0.0020  |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Calcium                                   | 360    | 10      |      | mg/L  | 10  | 9/6/2006 8:04:53 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Iron                                      | 7.4    | 0.20    |      | mg/L  | 10  | 9/6/2006 8:04:53 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Magnesium                                 | 52     | 1.0     |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Manganese                                 | 8.0    | 0.020   |      | mg/L  | 10  | 9/6/2006 8:04:53 PM  |
| Potassium                                 | 3.7    | 1.0     |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Sodium                                    | 440    | 10      |      | mg/L  | 10  | 9/6/2006 8:04:53 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1   | 9/6/2006 8:38:50 PM  |
| Zinc                                      | 0.050  | 0.0050  |      | mg/L  | 1   | 9/7/2006 9:48:17 AM  |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |     |                      |
|                                           |        |         |      |       |     | Analyst: NMO         |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1   | 8/24/2006 9:19:20 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1   | 8/24/2006 9:19:20 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |     |                      |
|                                           |        |         |      |       |     | Analyst: SMP         |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1   | 8/22/2006            |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1   | 8/22/2006            |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1   | 8/22/2006            |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1   | 8/22/2006            |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |    |     |      |   |           |
|-----------------------------|----|-----|------|---|-----------|
| 1,2,4-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3,5-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloroethane (EDC)    | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromoethane (EDB)     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Naphthalene                 | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| 2-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| Acetone                     | ND | 10  | µg/L | 1 | 8/22/2006 |
| Bromobenzene                | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromochloromethane          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromodichloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromoform                   | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromomethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Butanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon disulfide            | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon Tetrachloride        | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chlorobenzene               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloroethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chloroform                  | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloromethane               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,2-DCE                 | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,3-Dichloropropene     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Dibromochloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dibromomethane              | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,4-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dichlorodifluoromethane     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethane          | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2,2-Dichloropropane         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloropropene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Hexachlorobutadiene         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Hexanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Isopropylbenzene            | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Isopropyltoluene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Methyl-2-pentanone        | ND | 10  | µg/L | 1 | 8/22/2006 |
| Methylene Chloride          | ND | 3.0 | µg/L | 1 | 8/22/2006 |
| n-Butylbenzene              | ND | 1.0 | µg/L | 1 | 8/22/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |          |      |   |           |
|-----------------------------|------|----------|------|---|-----------|
| n-Propylbenzene             | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| sec-Butylbenzene            | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Styrene                     | ND   | 1.5      | µg/L | 1 | 8/22/2006 |
| tert-Butylbenzene           | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Tetrachloroethene (PCE)     | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,2-DCE               | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,3-Dichloropropene   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichloroethene (TCE)       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichlorofluoromethane      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichloropropane      | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Vinyl chloride              | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Xylenes, Total              | ND   | 3.0      | µg/L | 1 | 8/22/2006 |
| Surr: 1,2-Dichloroethane-d4 | 95.9 | 69.9-130 | %REC | 1 | 8/22/2006 |
| Surr: 4-Bromofluorobenzene  | 86.3 | 75-139   | %REC | 1 | 8/22/2006 |
| Surr: Dibromofluoromethane  | 83.5 | 57.3-135 | %REC | 1 | 8/22/2006 |
| Surr: Toluene-d8            | 84.6 | 81.9-122 | %REC | 1 | 8/22/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                              |     |     |            |   |           |
|------------------------------|-----|-----|------------|---|-----------|
| Alkalinity, Total (As CaCO3) | 370 | 2.0 | mg/L CaCO3 | 1 | 8/29/2006 |
| Carbonate                    | ND  | 2.0 | mg/L CaCO3 | 1 | 8/29/2006 |
| Bicarbonate                  | 370 | 2.0 | mg/L CaCO3 | 1 | 8/29/2006 |

## TOTAL CARBON DIOXIDE CALCULATION

Analyst: CMC

|                      |     |     |          |   |           |
|----------------------|-----|-----|----------|---|-----------|
| Total Carbon Dioxide | 380 | 1.0 | mg CO2/L | 1 | 8/29/2006 |
|----------------------|-----|-----|----------|---|-----------|

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |      |       |          |   |           |
|----------------------|------|-------|----------|---|-----------|
| Specific Conductance | 3700 | 0.010 | µmhos/cm | 1 | 8/23/2006 |
|----------------------|------|-------|----------|---|-----------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |      |    |      |   |           |
|------------------------|------|----|------|---|-----------|
| Total Dissolved Solids | 3000 | 20 | mg/L | 1 | 8/24/2006 |
|------------------------|------|----|------|---|-----------|

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

Lab ID: 0608236-05

Collection Date: 8/17/2006 4:15:00 PM

Client Sample ID: MW#33

Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.23   | 0.10    |      | mg/L  | 1  | 9/14/2006 7:43:26 AM  |
| Chloride                                  | 560    | 2.0     |      | mg/L  | 20 | 9/12/2006 8:00:21 AM  |
| Bromide                                   | 3.0    | 0.50    |      | mg/L  | 1  | 9/7/2006 7:22:39 AM   |
| Nitrate (As N)+Nitrite (As N)             | 33     | 0.50    |      | mg/L  | 5  | 9/12/2006 8:35:10 AM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    | H    | mg/L  | 1  | 9/7/2006 7:22:39 AM   |
| Sulfate                                   | 1600   | 10      |      | mg/L  | 20 | 9/12/2006 8:00:21 AM  |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/29/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Barium                                    | 0.017  | 0.0020  |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Calcium                                   | 320    | 10      |      | mg/L  | 10 | 9/6/2006 8:07:49 PM   |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Iron                                      | ND     | 0.020   |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Magnesium                                 | 47     | 1.0     |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Manganese                                 | 0.0077 | 0.0020  |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Potassium                                 | 4.6    | 1.0     |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Sodium                                    | 660    | 10      |      | mg/L  | 10 | 9/6/2006 8:07:49 PM   |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 9/6/2006 8:42:50 PM   |
| Zinc                                      | 0.12   | 0.0050  |      | mg/L  | 1  | 9/7/2006 9:50:51 AM   |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: NMO          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 8/31/2006 10:04:51 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 8/31/2006 10:04:51 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: SMP          |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/22/2006             |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/22/2006             |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1  | 8/22/2006             |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1  | 8/22/2006             |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |    |     |      |   |           |
|-----------------------------|----|-----|------|---|-----------|
| 1,2,4-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3,5-Trimethylbenzene      | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloroethane (EDC)    | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromoethane (EDB)     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Naphthalene                 | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| 2-Methylnaphthalene         | ND | 4.0 | µg/L | 1 | 8/22/2006 |
| Acetone                     | ND | 10  | µg/L | 1 | 8/22/2006 |
| Bromobenzene                | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromochloromethane          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromodichloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromoform                   | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Bromomethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Butanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon disulfide            | ND | 10  | µg/L | 1 | 8/22/2006 |
| Carbon Tetrachloride        | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chlorobenzene               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloroethane                | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Chloroform                  | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Chloromethane               | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Chlorotoluene             | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,2-DCE                 | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| cis-1,3-Dichloropropene     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| Dibromochloromethane        | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dibromomethane              | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,4-Dichlorobenzene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Dichlorodifluoromethane     | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethane          | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 1,3-Dichloropropane         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 2,2-Dichloropropane         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloropropene         | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| Hexachlorobutadiene         | ND | 2.0 | µg/L | 1 | 8/22/2006 |
| 2-Hexanone                  | ND | 10  | µg/L | 1 | 8/22/2006 |
| Isopropylbenzene            | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Isopropyltoluene          | ND | 1.0 | µg/L | 1 | 8/22/2006 |
| 4-Methyl-2-pentanone        | ND | 10  | µg/L | 1 | 8/22/2006 |
| Methylene Chloride          | ND | 3.0 | µg/L | 1 | 8/22/2006 |
| n-Butylbenzene              | ND | 1.0 | µg/L | 1 | 8/22/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |          |      |   |           |
|-----------------------------|------|----------|------|---|-----------|
| n-Propylbenzene             | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| sec-Butylbenzene            | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Styrene                     | ND   | 1.5      | µg/L | 1 | 8/22/2006 |
| tert-Butylbenzene           | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Tetrachloroethene (PCE)     | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,2-DCE               | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,3-Dichloropropene   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichloroethene (TCE)       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichlorofluoromethane      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichloropropane      | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Vinyl chloride              | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Xylenes, Total              | ND   | 3.0      | µg/L | 1 | 8/22/2006 |
| Surr: 1,2-Dichloroethane-d4 | 98.9 | 69.9-130 | %REC | 1 | 8/22/2006 |
| Surr: 4-Bromofluorobenzene  | 91.9 | 75-139   | %REC | 1 | 8/22/2006 |
| Surr: Dibromofluoromethane  | 86.6 | 57.3-135 | %REC | 1 | 8/22/2006 |
| Surr: Toluene-d8            | 87.4 | 81.9-122 | %REC | 1 | 8/22/2006 |

## EPA METHOD 310.1: ALKALINITY

Analyst: CMC

|                                           |     |     |                        |   |           |
|-------------------------------------------|-----|-----|------------------------|---|-----------|
| Alkalinity, Total (As CaCO <sub>3</sub> ) | 140 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Carbonate                                 | ND  | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |
| Bicarbonate                               | 140 | 2.0 | mg/L CaCO <sub>3</sub> | 1 | 8/29/2006 |

## TOTAL CARBON DIOXIDE CALCULATION

Analyst: CMC

|                      |     |     |                       |   |           |
|----------------------|-----|-----|-----------------------|---|-----------|
| Total Carbon Dioxide | 130 | 1.0 | mg CO <sub>2</sub> /L | 1 | 8/29/2006 |
|----------------------|-----|-----|-----------------------|---|-----------|

## EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: CMC

|                      |      |       |          |   |           |
|----------------------|------|-------|----------|---|-----------|
| Specific Conductance | 4800 | 0.010 | µmhos/cm | 1 | 8/23/2006 |
|----------------------|------|-------|----------|---|-----------|

## EPA METHOD 160.1: TDS

Analyst: KS

|                        |      |    |      |   |           |
|------------------------|------|----|------|---|-----------|
| Total Dissolved Solids | 3400 | 20 | mg/L | 1 | 8/24/2006 |
|------------------------|------|----|------|---|-----------|

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

Lab ID: 0608236-06

Collection Date:

Client Sample ID: Trip Blank

Matrix: TRIP BLANK

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                                |    |     |  |      |   |           |
|--------------------------------|----|-----|--|------|---|-----------|
| Benzene                        | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Toluene                        | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Ethylbenzene                   | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Methyl tert-butyl ether (MTBE) | ND | 1.5 |  | µg/L | 1 | 8/22/2006 |
| 1,2,4-Trimethylbenzene         | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,3,5-Trimethylbenzene         | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloroethane (EDC)       | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromoethane (EDB)        | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Naphthalene                    | ND | 2.0 |  | µg/L | 1 | 8/22/2006 |
| 1-Methylnaphthalene            | ND | 4.0 |  | µg/L | 1 | 8/22/2006 |
| 2-Methylnaphthalene            | ND | 4.0 |  | µg/L | 1 | 8/22/2006 |
| Acetone                        | ND | 10  |  | µg/L | 1 | 8/22/2006 |
| Bromobenzene                   | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Bromochloromethane             | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Bromodichloromethane           | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Bromoform                      | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Bromomethane                   | ND | 2.0 |  | µg/L | 1 | 8/22/2006 |
| 2-Butanone                     | ND | 10  |  | µg/L | 1 | 8/22/2006 |
| Carbon disulfide               | ND | 10  |  | µg/L | 1 | 8/22/2006 |
| Carbon Tetrachloride           | ND | 2.0 |  | µg/L | 1 | 8/22/2006 |
| Chlorobenzene                  | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Chloroethane                   | ND | 2.0 |  | µg/L | 1 | 8/22/2006 |
| Chloroform                     | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Chloromethane                  | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 2-Chlorotoluene                | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 4-Chlorotoluene                | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| cis-1,2-DCE                    | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| cis-1,3-Dichloropropene        | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,2-Dibromo-3-chloropropane    | ND | 2.0 |  | µg/L | 1 | 8/22/2006 |
| Dibromochloromethane           | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Dibromomethane                 | ND | 2.0 |  | µg/L | 1 | 8/22/2006 |
| 1,2-Dichlorobenzene            | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,3-Dichlorobenzene            | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,4-Dichlorobenzene            | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| Dichlorodifluoromethane        | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethane             | ND | 2.0 |  | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloroethene             | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,2-Dichloropropane            | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |
| 1,3-Dichloropropane            | ND | 1.0 |  | µg/L | 1 | 8/22/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 15-Sep-06

CLIENT: San Juan Refining  
Project: Annual Sampling 2006

Lab Order: 0608236

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |          |      |   |           |
|-----------------------------|------|----------|------|---|-----------|
| 2,2-Dichloropropane         | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| 1,1-Dichloropropene         | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Hexachlorobutadiene         | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| 2-Hexanone                  | ND   | 10       | µg/L | 1 | 8/22/2006 |
| Isopropylbenzene            | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 4-Isopropyltoluene          | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 4-Methyl-2-pentanone        | ND   | 10       | µg/L | 1 | 8/22/2006 |
| Methylene Chloride          | ND   | 3.0      | µg/L | 1 | 8/22/2006 |
| n-Butylbenzene              | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| n-Propylbenzene             | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| sec-Butylbenzene            | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Styrene                     | ND   | 1.5      | µg/L | 1 | 8/22/2006 |
| tert-Butylbenzene           | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2,2-Tetrachloroethane   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Tetrachloroethene (PCE)     | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,2-DCE               | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| trans-1,3-Dichloropropene   | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,1-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,1,2-Trichloroethane       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichloroethene (TCE)       | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Trichlorofluoromethane      | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| 1,2,3-Trichloropropane      | ND   | 2.0      | µg/L | 1 | 8/22/2006 |
| Vinyl chloride              | ND   | 1.0      | µg/L | 1 | 8/22/2006 |
| Xylenes, Total              | ND   | 3.0      | µg/L | 1 | 8/22/2006 |
| Surr: 1,2-Dichloroethane-d4 | 99.2 | 69.9-130 | %REC | 1 | 8/22/2006 |
| Surr: 4-Bromofluorobenzene  | 90.9 | 75-139   | %REC | 1 | 8/22/2006 |
| Surr: Dibromofluoromethane  | 84.2 | 57.3-135 | %REC | 1 | 8/22/2006 |
| Surr: Toluene-d8            | 85.8 | 81.9-122 | %REC | 1 | 8/22/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608236

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E300

Sample ID: MBLK MBLK Batch ID: R20590 Analysis Date: 9/6/2006

Fluoride ND mg/L 0.10  
 Chloride ND mg/L 0.10  
 Bromide ND mg/L 0.10  
 Nitrate (As N)+Nitrite (As N) ND mg/L 0.10  
 Phosphorus, Orthophosphate (As P) ND mg/L 0.50  
 Sulfate ND mg/L 0.50

Sample ID: MBLK MBLK Batch ID: R20645 Analysis Date: 9/11/2006 9:50:58 PM

Fluoride ND mg/L 0.10  
 Chloride ND mg/L 0.10  
 Bromide ND mg/L 0.10  
 Nitrate (As N)+Nitrite (As N) ND mg/L 0.10  
 Phosphorus, Orthophosphate (As P) ND mg/L 0.50  
 Sulfate ND mg/L 0.50

Sample ID: MBLK MBLK Batch ID: R20659 Analysis Date: 9/12/2006 12:21:33 PM

Fluoride ND mg/L 0.10  
 Chloride ND mg/L 0.10  
 Bromide ND mg/L 0.10  
 Nitrate (As N)+Nitrite (As N) ND mg/L 0.10  
 Phosphorus, Orthophosphate (As P) ND mg/L 0.50  
 Sulfate ND mg/L 0.50

Sample ID: MBLK MBLK Batch ID: R20686 Analysis Date: 9/13/2006 1:09:20 PM

Fluoride ND mg/L 0.10  
 Chloride ND mg/L 0.10  
 Bromide ND mg/L 0.10  
 Nitrate (As N)+Nitrite (As N) ND mg/L 0.10  
 Phosphorus, Orthophosphate (As P) ND mg/L 0.50  
 Sulfate ND mg/L 0.50

Sample ID: LCS ST300-06008 LCS Batch ID: R20590 Analysis Date: 9/6/2006

Fluoride 0.5045 mg/L 0.10 101 90 110  
 Chloride 4.744 mg/L 0.10 94.9 90 110  
 Bromide 2.483 mg/L 0.10 99.3 90 110  
 Nitrate (As N)+Nitrite (As N) 3.311 mg/L 0.10 94.6 90 110  
 Phosphorus, Orthophosphate (As P) 4.931 mg/L 0.50 98.6 90 110  
 Sulfate 9.681 mg/L 0.50 96.8 90 110

Sample ID: LCS ST300-06008 LCS Batch ID: R20645 Analysis Date: 9/11/2006 10:08:22 PM

Fluoride 0.4713 mg/L 0.10 94.3 90 110  
 Chloride 4.813 mg/L 0.10 96.3 90 110  
 Bromide 2.492 mg/L 0.10 99.7 90 110  
 Nitrate (As N)+Nitrite (As N) 3.399 mg/L 0.10 97.1 90 110  
 Phosphorus, Orthophosphate (As P) 4.997 mg/L 0.50 99.9 90 110  
 Sulfate 9.827 mg/L 0.50 98.3 90 110

Sample ID: LCS ST300-06008 LCS Batch ID: R20659 Analysis Date: 9/12/2006 12:38:58 PM

Fluoride 0.5219 mg/L 0.10 104 90 110

## Qualifiers:

E Value above quantitation range H Holding times for preparation or analysis exceeded  
 J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit  
 R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 060823

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

## Method: E300

Sample ID: LCS ST300-06008

LCS

Batch ID: R20659

Analysis Date: 9/12/2006 12:38:58 PM

|                                   |       |      |      |     |    |     |  |  |  |
|-----------------------------------|-------|------|------|-----|----|-----|--|--|--|
| Chloride                          | 5.028 | mg/L | 0.10 | 101 | 90 | 110 |  |  |  |
| Bromide                           | 2.601 | mg/L | 0.10 | 104 | 90 | 110 |  |  |  |
| Nitrate (As N)+Nitrite (As N)     | 3.559 | mg/L | 0.10 | 102 | 90 | 110 |  |  |  |
| Phosphorus, Orthophosphate (As P) | 5.255 | mg/L | 0.50 | 105 | 90 | 110 |  |  |  |
| Sulfate                           | 10.20 | mg/L | 0.50 | 102 | 90 | 110 |  |  |  |

Sample ID: LCS ST300-06008

LCS

Batch ID: R20686

Analysis Date: 9/13/2006 1:26:44 PM

|                                   |        |      |      |      |    |     |  |  |  |
|-----------------------------------|--------|------|------|------|----|-----|--|--|--|
| Fluoride                          | 0.4798 | mg/L | 0.10 | 96.0 | 90 | 110 |  |  |  |
| Chloride                          | 4.836  | mg/L | 0.10 | 96.7 | 90 | 110 |  |  |  |
| Bromide                           | 2.525  | mg/L | 0.10 | 101  | 90 | 110 |  |  |  |
| Nitrate (As N)+Nitrite (As N)     | 3.386  | mg/L | 0.10 | 96.7 | 90 | 110 |  |  |  |
| Phosphorus, Orthophosphate (As P) | 5.174  | mg/L | 0.50 | 103  | 90 | 110 |  |  |  |
| Sulfate                           | 9.900  | mg/L | 0.50 | 99.0 | 90 | 110 |  |  |  |

## Method: E310.1

Sample ID: MB

MBLK

Batch ID: R20479

Analysis Date:

8/29/2006

|                              |    |          |     |  |  |  |  |  |  |
|------------------------------|----|----------|-----|--|--|--|--|--|--|
| Alkalinity, Total (As CaCO3) | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Carbonate                    | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Bicarbonate                  | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |

## Method: SW7470

Sample ID: MB-11143

MBLK

Batch ID: 11143

Analysis Date:

8/29/2006

|         |    |      |         |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|
| Mercury | ND | mg/L | 0.00020 |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|

Sample ID: LCS-11143

LCS

Batch ID: 11143

Analysis Date:

8/29/2006

|         |          |      |         |     |    |     |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|
| Mercury | 0.005010 | mg/L | 0.00020 | 100 | 80 | 120 |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|

## Qualifiers:

E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608236

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: MB MBLK Batch ID: R20582 Analysis Date: 9/6/2006 4:09:58 PM

|           |    |      |        |
|-----------|----|------|--------|
| Arsenic   | ND | mg/L | 0.020  |
| Barium    | ND | mg/L | 0.020  |
| Cadmium   | ND | mg/L | 0.0020 |
| Calcium   | ND | mg/L | 1.0    |
| Chromium  | ND | mg/L | 0.0060 |
| Copper    | ND | mg/L | 0.0060 |
| Iron      | ND | mg/L | 0.020  |
| Lead      | ND | mg/L | 0.0050 |
| Magnesium | ND | mg/L | 1.0    |
| Manganese | ND | mg/L | 0.0020 |
| Potassium | ND | mg/L | 1.0    |
| Selenium  | ND | mg/L | 0.050  |
| Silver    | ND | mg/L | 0.0050 |
| Sodium    | ND | mg/L | 1.0    |
| Uranium   | ND | mg/L | 0.10   |

Sample ID: MB MBLK Batch ID: R20582 Analysis Date: 9/7/2006 9:35:09 AM

Zinc ND mg/L 0.050

Sample ID: LCS LCS Batch ID: R20582 Analysis Date: 9/6/2006 4:12:59 PM

|           |        |      |        |      |    |     |
|-----------|--------|------|--------|------|----|-----|
| Arsenic   | 0.4786 | mg/L | 0.020  | 95.7 | 80 | 120 |
| Barium    | 0.4748 | mg/L | 0.020  | 95.0 | 80 | 120 |
| Cadmium   | 0.4787 | mg/L | 0.0020 | 95.7 | 80 | 120 |
| Calcium   | 49.83  | mg/L | 1.0    | 98.7 | 80 | 120 |
| Chromium  | 0.4767 | mg/L | 0.0060 | 95.3 | 80 | 120 |
| Copper    | 0.4692 | mg/L | 0.0060 | 93.8 | 80 | 120 |
| Iron      | 0.4700 | mg/L | 0.020  | 94.0 | 80 | 120 |
| Lead      | 0.4705 | mg/L | 0.0050 | 94.1 | 80 | 120 |
| Magnesium | 50.00  | mg/L | 1.0    | 99.0 | 80 | 120 |
| Manganese | 0.4699 | mg/L | 0.0020 | 94.0 | 80 | 120 |
| Potassium | 53.50  | mg/L | 1.0    | 97.3 | 80 | 120 |
| Selenium  | 0.4325 | mg/L | 0.050  | 86.5 | 80 | 120 |
| Silver    | 0.4800 | mg/L | 0.0050 | 96.0 | 80 | 120 |
| Sodium    | 54.45  | mg/L | 1.0    | 108  | 80 | 120 |
| Uranium   | 0.5575 | mg/L | 0.10   | 111  | 80 | 120 |

Sample ID: LCS LCS Batch ID: R20582 Analysis Date: 9/7/2006 9:37:38 AM

Zinc 0.4846 mg/L 0.050 96.9 80 120

Method: SW6010A

Sample ID: MB-11077 MBLK Batch ID: 11077 Analysis Date: 8/24/2006 8:51:17 AM

|          |    |      |        |
|----------|----|------|--------|
| Chromium | ND | mg/L | 0.0060 |
| Lead     | ND | mg/L | 0.0050 |

Sample ID: LCS-11077 LCS Batch ID: 11077 Analysis Date: 8/24/2006 8:54:21 AM

|          |        |      |        |      |    |     |
|----------|--------|------|--------|------|----|-----|
| Chromium | 0.4962 | mg/L | 0.0060 | 99.2 | 80 | 120 |
| Lead     | 0.4931 | mg/L | 0.0050 | 98.6 | 80 | 120 |

## Qualifiers:

- |   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 060823

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E160.1

Sample ID: MB-11086

MBLK

Batch ID: 11086 Analysis Date: 8/22/2006

Total Dissolved Solids ND mg/L 20

Sample ID: MB-11114

MBLK

Batch ID: 11114 Analysis Date: 8/24/2006

Total Dissolved Solids ND mg/L 20

Sample ID: LCS-11086

LCS

Batch ID: 11086 Analysis Date: 8/22/2006

Total Dissolved Solids 984.0 mg/L 20 98.4 80 120

Sample ID: LCS-11114

LCS

Batch ID: 11114 Analysis Date: 8/24/2006

Total Dissolved Solids 975.0 mg/L 20 97.5 80 120

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608236

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: bk

MBLK

Batch ID: R20357 Analysis Date: 8/21/2006

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |
| Chloroethane                   | ND | µg/L | 2.0 |
| Chloroform                     | ND | µg/L | 1.0 |
| Chloromethane                  | ND | µg/L | 1.0 |
| 2-Chlorotoluene                | ND | µg/L | 1.0 |
| 4-Chlorotoluene                | ND | µg/L | 1.0 |
| cis-1,2-DCE                    | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene        | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane    | ND | µg/L | 2.0 |
| Dibromochloromethane           | ND | µg/L | 1.0 |
| Dibromomethane                 | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene            | ND | µg/L | 1.0 |
| Dichlorodifluoromethane        | ND | µg/L | 1.0 |
| 1,1-Dichloroethane             | ND | µg/L | 2.0 |
| 1,1-Dichloroethene             | ND | µg/L | 1.0 |
| 1,2-Dichloropropane            | ND | µg/L | 1.0 |
| 1,3-Dichloropropane            | ND | µg/L | 1.0 |
| 2,2-Dichloropropane            | ND | µg/L | 2.0 |
| 1,1-Dichloropropene            | ND | µg/L | 1.0 |
| Hexachlorobutadiene            | ND | µg/L | 2.0 |
| 2-Hexanone                     | ND | µg/L | 10  |
| Isopropylbenzene               | ND | µg/L | 1.0 |

## Qualifiers:

- |   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608236

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: bk

MBLK

Batch ID: R20357

Analysis Date:

8/21/2006

|                           |    |      |     |
|---------------------------|----|------|-----|
| 4-Isopropyltoluene        | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone      | ND | µg/L | 10  |
| Methylene Chloride        | ND | µg/L | 3.0 |
| n-Butylbenzene            | ND | µg/L | 1.0 |
| n-Propylbenzene           | ND | µg/L | 1.0 |
| sec-Butylbenzene          | ND | µg/L | 2.0 |
| Styrene                   | ND | µg/L | 1.5 |
| tert-Butylbenzene         | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)   | ND | µg/L | 1.0 |
| trans-1,2-DCE             | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane     | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane     | ND | µg/L | 1.0 |
| Trichloroethene (TCE)     | ND | µg/L | 1.0 |
| Trichlorofluoromethane    | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane    | ND | µg/L | 2.0 |
| Vinyl chloride            | ND | µg/L | 1.0 |
| Xylenes, Total            | ND | µg/L | 3.0 |

Sample ID: bk

MBLK

Batch ID: R20357

Analysis Date:

8/21/2006

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608236

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: bk

MBLK

Batch ID: R20357 Analysis Date: 8/21/2006

|                             |    |      |     |
|-----------------------------|----|------|-----|
| Chloroethane                | ND | µg/L | 2.0 |
| Chloroform                  | ND | µg/L | 1.0 |
| Chloromethane               | ND | µg/L | 1.0 |
| 2-Chlorotoluene             | ND | µg/L | 1.0 |
| 4-Chlorotoluene             | ND | µg/L | 1.0 |
| cis-1,2-DCE                 | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene     | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 |
| Dibromochloromethane        | ND | µg/L | 1.0 |
| Dibromomethane              | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene         | ND | µg/L | 1.0 |
| Dichlorodifluoromethane     | ND | µg/L | 1.0 |
| 1,1-Dichloroethane          | ND | µg/L | 2.0 |
| 1,1-Dichloroethene          | ND | µg/L | 1.0 |
| 1,2-Dichloropropane         | ND | µg/L | 1.0 |
| 1,3-Dichloropropane         | ND | µg/L | 1.0 |
| 2,2-Dichloropropane         | ND | µg/L | 2.0 |
| 1,1-Dichloropropene         | ND | µg/L | 1.0 |
| Hexachlorobutadiene         | ND | µg/L | 2.0 |
| 2-Hexanone                  | ND | µg/L | 10  |
| Isopropylbenzene            | ND | µg/L | 1.0 |
| 4-Isopropyltoluene          | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone        | ND | µg/L | 10  |
| Methylene Chloride          | ND | µg/L | 3.0 |
| n-Butylbenzene              | ND | µg/L | 1.0 |
| n-Propylbenzene             | ND | µg/L | 1.0 |
| sec-Butylbenzene            | ND | µg/L | 2.0 |
| Styrene                     | ND | µg/L | 1.5 |
| tert-Butylbenzene           | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)     | ND | µg/L | 1.0 |
| trans-1,2-DCE               | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene   | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane       | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane       | ND | µg/L | 1.0 |
| Trichloroethene (TCE)       | ND | µg/L | 1.0 |
| Trichlorofluoromethane      | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane      | ND | µg/L | 2.0 |
| Vinyl chloride              | ND | µg/L | 1.0 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 060823

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: bk

MBLK

Batch ID: R20357 Analysis Date: 8/21/2006

Xylenes, Total ND µg/L 3.0

Sample ID: 5ml rb

MBLK

Batch ID: R20387 Analysis Date: 8/22/2006

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |
| Chloroethane                   | ND | µg/L | 2.0 |
| Chloroform                     | ND | µg/L | 1.0 |
| Chloromethane                  | ND | µg/L | 1.0 |
| 2-Chlorotoluene                | ND | µg/L | 1.0 |
| 4-Chlorotoluene                | ND | µg/L | 1.0 |
| cis-1,2-DCE                    | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene        | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane    | ND | µg/L | 2.0 |
| Dibromochloromethane           | ND | µg/L | 1.0 |
| Dibromomethane                 | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene            | ND | µg/L | 1.0 |
| Dichlorodifluoromethane        | ND | µg/L | 1.0 |
| 1,1-Dichloroethane             | ND | µg/L | 2.0 |
| 1,1-Dichloroethene             | ND | µg/L | 1.0 |
| 1,2-Dichloropropane            | ND | µg/L | 1.0 |
| 1,3-Dichloropropane            | ND | µg/L | 1.0 |
| 2,2-Dichloropropane            | ND | µg/L | 2.0 |
| 1,1-Dichloropropene            | ND | µg/L | 1.0 |
| Hexachlorobutadiene            | ND | µg/L | 2.0 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608236

| Analyte                        | Result | Units | PQL | %Rec | LowLimit         | HighLimit | %RPD           | RPDLimit | Qual      |
|--------------------------------|--------|-------|-----|------|------------------|-----------|----------------|----------|-----------|
| <b>Method: SW8260B</b>         |        |       |     |      |                  |           |                |          |           |
| <b>Sample ID: 5ml rb</b>       |        |       |     |      |                  |           |                |          |           |
|                                |        | MBLK  |     |      | Batch ID: R20387 |           | Analysis Date: |          | 8/22/2006 |
| 2-Hexanone                     | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Isopropylbenzene               | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 4-Isopropyltoluene             | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 4-Methyl-2-pentanone           | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Methylene Chloride             | ND     | µg/L  | 3.0 |      |                  |           |                |          |           |
| n-Butylbenzene                 | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| n-Propylbenzene                | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| sec-Butylbenzene               | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Styrene                        | ND     | µg/L  | 1.5 |      |                  |           |                |          |           |
| tert-Butylbenzene              | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,1,2-Tetrachloroethane      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,2,2-Tetrachloroethane      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Tetrachloroethene (PCE)        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| trans-1,2-DCE                  | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| trans-1,3-Dichloropropene      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2,3-Trichlorobenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2,4-Trichlorobenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,1-Trichloroethane          | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1,2-Trichloroethane          | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Trichloroethene (TCE)          | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Trichlorofluoromethane         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2,3-Trichloropropane         | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Vinyl chloride                 | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Xylenes, Total                 | ND     | µg/L  | 3.0 |      |                  |           |                |          |           |
| <b>Sample ID: 5ml rb</b>       |        |       |     |      |                  |           |                |          |           |
|                                |        | MBLK  |     |      | Batch ID: R20396 |           | Analysis Date: |          | 8/23/2006 |
| Benzene                        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Toluene                        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Ethylbenzene                   | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Methyl tert-butyl ether (MTBE) | ND     | µg/L  | 1.5 |      |                  |           |                |          |           |
| 1,2,4-Trimethylbenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,3,5-Trimethylbenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dichloroethane (EDC)       | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dibromoethane (EDB)        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Naphthalene                    | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1-Methylnaphthalene            | ND     | µg/L  | 4.0 |      |                  |           |                |          |           |
| 2-Methylnaphthalene            | ND     | µg/L  | 4.0 |      |                  |           |                |          |           |
| Acetone                        | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Bromobenzene                   | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromochloromethane             | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromodichloromethane           | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromoform                      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromomethane                   | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 2-Butanone                     | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Carbon disulfide               | ND     | µg/L  | 10  |      |                  |           |                |          |           |

## Qualifiers:

- |   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 060823

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb

MBLK

Batch ID: R20396 Analysis Date: 8/23/2006

|                             |    |      |     |
|-----------------------------|----|------|-----|
| Carbon Tetrachloride        | ND | µg/L | 2.0 |
| Chlorobenzene               | ND | µg/L | 1.0 |
| Chloroethane                | ND | µg/L | 2.0 |
| Chloroform                  | ND | µg/L | 1.0 |
| Chloromethane               | ND | µg/L | 1.0 |
| 2-Chlorotoluene             | ND | µg/L | 1.0 |
| 4-Chlorotoluene             | ND | µg/L | 1.0 |
| cis-1,2-DCE                 | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene     | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 |
| Dibromochloromethane        | ND | µg/L | 1.0 |
| Dibromomethane              | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene         | ND | µg/L | 1.0 |
| Dichlorodifluoromethane     | ND | µg/L | 1.0 |
| 1,1-Dichloroethane          | ND | µg/L | 2.0 |
| 1,1-Dichloroethene          | ND | µg/L | 1.0 |
| 1,2-Dichloropropane         | ND | µg/L | 1.0 |
| 1,3-Dichloropropane         | ND | µg/L | 1.0 |
| 2,2-Dichloropropane         | ND | µg/L | 2.0 |
| 1,1-Dichloropropene         | ND | µg/L | 1.0 |
| Hexachlorobutadiene         | ND | µg/L | 2.0 |
| 2-Hexanone                  | ND | µg/L | 10  |
| Isopropylbenzene            | ND | µg/L | 1.0 |
| 4-Isopropyltoluene          | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone        | ND | µg/L | 10  |
| Methylene Chloride          | ND | µg/L | 3.0 |
| n-Butylbenzene              | ND | µg/L | 1.0 |
| n-Propylbenzene             | ND | µg/L | 1.0 |
| sec-Butylbenzene            | ND | µg/L | 2.0 |
| Styrene                     | ND | µg/L | 1.5 |
| tert-Butylbenzene           | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)     | ND | µg/L | 1.0 |
| trans-1,2-DCE               | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene   | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane       | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane       | ND | µg/L | 1.0 |
| Trichloroethene (TCE)       | ND | µg/L | 1.0 |
| Trichlorofluoromethane      | ND | µg/L | 1.0 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608236

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb

MBLK

Batch ID: R20396 Analysis Date: 8/23/2006

|                        |    |      |     |
|------------------------|----|------|-----|
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 |
| Vinyl chloride         | ND | µg/L | 1.0 |
| Xylenes, Total         | ND | µg/L | 3.0 |

Sample ID: bk1

MBLK

Batch ID: R20396 Analysis Date: 8/23/2006

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |
| Chloroethane                   | ND | µg/L | 2.0 |
| Chloroform                     | ND | µg/L | 1.0 |
| Chloromethane                  | ND | µg/L | 1.0 |
| 2-Chlorotoluene                | ND | µg/L | 1.0 |
| 4-Chlorotoluene                | ND | µg/L | 1.0 |
| cis-1,2-DCE                    | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene        | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane    | ND | µg/L | 2.0 |
| Dibromochloromethane           | ND | µg/L | 1.0 |
| Dibromomethane                 | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene            | ND | µg/L | 1.0 |
| Dichlorodifluoromethane        | ND | µg/L | 1.0 |
| 1,1-Dichloroethane             | ND | µg/L | 2.0 |
| 1,1-Dichloroethene             | ND | µg/L | 1.0 |
| 1,2-Dichloropropane            | ND | µg/L | 1.0 |
| 1,3-Dichloropropane            | ND | µg/L | 1.0 |
| 2,2-Dichloropropane            | ND | µg/L | 2.0 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 060823

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: bk1

MBLK

Batch ID: R20396 Analysis Date: 8/23/2006

|                           |    |      |     |
|---------------------------|----|------|-----|
| 1,1-Dichloropropene       | ND | µg/L | 1.0 |
| Hexachlorobutadiene       | ND | µg/L | 2.0 |
| 2-Hexanone                | ND | µg/L | 10  |
| Isopropylbenzene          | ND | µg/L | 1.0 |
| 4-Isopropyltoluene        | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone      | ND | µg/L | 10  |
| Methylene Chloride        | ND | µg/L | 3.0 |
| n-Butylbenzene            | ND | µg/L | 1.0 |
| n-Propylbenzene           | ND | µg/L | 1.0 |
| sec-Butylbenzene          | ND | µg/L | 2.0 |
| Styrene                   | ND | µg/L | 1.5 |
| tert-Butylbenzene         | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)   | ND | µg/L | 1.0 |
| trans-1,2-DCE             | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane     | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane     | ND | µg/L | 1.0 |
| Trichloroethene (TCE)     | ND | µg/L | 1.0 |
| Trichlorofluoromethane    | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane    | ND | µg/L | 2.0 |
| Vinyl chloride            | ND | µg/L | 1.0 |
| Xylenes, Total            | ND | µg/L | 3.0 |

Sample ID: 100ng ccv

LCS

Batch ID: R20357 Analysis Date: 8/21/2006

|                       |       |      |     |      |      |     |
|-----------------------|-------|------|-----|------|------|-----|
| Benzene               | 18.83 | µg/L | 1.0 | 94.1 | 71   | 124 |
| Toluene               | 19.50 | µg/L | 1.0 | 97.5 | 81.5 | 118 |
| Chlorobenzene         | 19.83 | µg/L | 1.0 | 99.1 | 81.2 | 132 |
| 1,1-Dichloroethene    | 19.72 | µg/L | 1.0 | 98.6 | 65.5 | 134 |
| Trichloroethene (TCE) | 19.80 | µg/L | 1.0 | 99.0 | 69.5 | 119 |

Sample ID: 100ng lcs A

LCS

Batch ID: R20387 Analysis Date: 8/22/2006

|                       |       |      |     |      |      |     |
|-----------------------|-------|------|-----|------|------|-----|
| Benzene               | 16.55 | µg/L | 1.0 | 82.7 | 66.2 | 115 |
| Toluene               | 16.09 | µg/L | 1.0 | 80.4 | 72   | 109 |
| Chlorobenzene         | 17.60 | µg/L | 1.0 | 88.0 | 78.5 | 109 |
| 1,1-Dichloroethene    | 18.95 | µg/L | 1.0 | 94.8 | 62.3 | 124 |
| Trichloroethene (TCE) | 17.14 | µg/L | 1.0 | 85.7 | 74.3 | 109 |

Sample ID: 100ng lcs

LCS

Batch ID: R20396 Analysis Date: 8/23/2006

|                    |       |      |     |      |      |     |
|--------------------|-------|------|-----|------|------|-----|
| Benzene            | 17.52 | µg/L | 1.0 | 87.6 | 66.2 | 115 |
| Toluene            | 16.81 | µg/L | 1.0 | 84.0 | 72   | 109 |
| Chlorobenzene      | 18.76 | µg/L | 1.0 | 93.8 | 78.5 | 109 |
| 1,1-Dichloroethene | 20.01 | µg/L | 1.0 | 100  | 62.3 | 124 |

## Qualifiers:

- E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608236

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 100ng lcs

LCS

Batch ID: R20396 Analysis Date: 8/23/2006

Trichloroethene (TCE)

18.72

µg/L

1.0

93.6

74.3

109

Sample ID: 100ng lcs

LCS

Batch ID: R20396 Analysis Date: 8/23/2006

Benzene

17.52

µg/L

1.0

87.6

66.2

115

Toluene

16.81

µg/L

1.0

84.0

72

109

Chlorobenzene

18.76

µg/L

1.0

93.8

78.5

109

1,1-Dichloroethene

20.01

µg/L

1.0

100

62.3

124

Trichloroethene (TCE)

18.72

µg/L

1.0

93.6

74.3

109

## Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

8/18/2006

Work Order Number 0608236

Received by AT:

Checklist completed by

Signature

Date

8/18/06

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

Remarks:

Address: 450 Rd 4990  
Bloomfield, NM 87413

Fax #: 508-632-3911

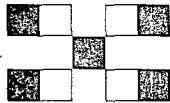
Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished By: (Signature) \_\_\_\_\_

Received By: (Signature)

Remarks:

1611

www.hallenvironmental.com



# ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)

TPH Method 8015B (Gas/Diesel)

EDB (Method 504.1)

8310 (PNA or PAH)

1799

8081 Pesticides / PCB's (8082)

82608 (VOA)

8270 (Semi-VDA)

155010211000

and make the following:

001101/101101

\_\_\_\_\_

# HALL ENVIRONMENTAL ANALYSIS LABORATORY

Other:

Annual Sampling 2006

Project #:

Project Manager:

Sampler: Manantado Shelly Coudem  
Sample Temperature: 157

Sample Temperature:

| Number/Volume | HEAL No. |
|---------------|----------|
|               |          |

Preservative

| HgCl <sub>2</sub> | HNO <sub>3</sub> |
|-------------------|------------------|
|-------------------|------------------|

HEAL No.

|       |  |            |
|-------|--|------------|
| 3-V0A |  | 447-007365 |
|-------|--|------------|

1-250

1-250

1

155

Trip Bank

Relinquished By: (Signature) /

Received By: (Signature)

1191

Remarks:

QA/QC Package:

Std  Level 4 

# ANALYSIS REQUEST

|                                   |                                                                                        |                       |                                                         |                                   |
|-----------------------------------|----------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------|-----------------------------------|
| 8260B (VOA)                       | 8270 (Semi-VOA)                                                                        | MRCC Dissolved Metals | Station Amion TDS, Sulfate, Chloride, Nitrate / Nitrite | Air Bubbles or Headspace (Y or N) |
| 8081 Pesticides / PCB's (8082)    | Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) | PCBs & Metals         | Station Amion TDS, Sulfate, Chloride, Nitrate / Nitrite | Air Bubbles or Headspace (Y or N) |
| 8310 (PNA or PAH)                 | EDC (Method 8021)                                                                      | EDB (Method 504.1)    | TPH (Method 418.1)                                      | TPH / Method 8015B (Gas/Diesel)   |
| BTEX + MTBE + TPH (Gasoline Only) | BTEX + MTBE + TMB's (8021)                                                             |                       |                                                         |                                   |

Water Dissolved Metals  
Carbon Anion,  $\text{HS}^-$ ,  $\text{Sulfate}$ ,  $\text{Nitrate}$ ,  $\text{Nitrite}$

|                                |                                                                                        |                            |                                                          |
|--------------------------------|----------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------|
| 8260B (VOA)                    | 8270 (Semi-VOA)                                                                        | MRCC Dissolved Metals      | Station Amion, TDS, Sulfate, Chloride, Nitrate / Nitrite |
| 8081 Pesticides / PCB's (8082) | Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) | PCRB & Metals              | Station Amion, TDS, Sulfate, Chloride, Nitrate / Nitrite |
| 8310 (PNA or PAH)              | EDC (Method 8021)                                                                      | EDB (Method 504.1)         | TPH (Method 418.1)                                       |
| TPH (Method 8015B (Gas/Diesel) | BTEX + MTBE + TPH (Gasoline Only)                                                      | BTEX + MTBE + TMB's (8021) |                                                          |

## COVER LETTER

Thursday, September 14, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: Annual Sampling 2006

Order No.: 0608280

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 8/23/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001





## Hall Environmental Analysis Laboratory, Inc.

Date: 14-Sep-06

CLIENT: San Juan Refining  
 Lab Order: 0608280  
 Project: Annual Sampling 2006  
 Lab ID: 0608280-01

Client Sample ID: Outfall #3  
 Collection Date: 8/22/2006 8:15:00 AM  
 Date Received: 8/23/2006  
 Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.25   | 0.10    |      | mg/L  | 1  | 9/11/2006 10:43:11 PM |
| Chloride                                  | 5.5    | 0.10    |      | mg/L  | 1  | 9/7/2006 9:59:20 AM   |
| Nitrogen, Nitrite (As N)                  | ND     | 0.50    |      | mg/L  | 5  | 9/7/2006 10:16:44 AM  |
| Bromide                                   | ND     | 0.50    |      | mg/L  | 1  | 9/7/2006 9:59:20 AM   |
| Nitrogen, Nitrate (As N)                  | ND     | 0.50    |      | mg/L  | 5  | 9/7/2006 10:16:44 AM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    | H    | mg/L  | 1  | 9/7/2006 9:59:20 AM   |
| Sulfate                                   | 64     | 0.50    |      | mg/L  | 1  | 9/7/2006 9:59:20 AM   |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 8/29/2006             |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: CMC          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 9/11/2006 6:03:35 PM  |
| Barium                                    | 0.063  | 0.0020  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Calcium                                   | 41     | 1.0     |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Iron                                      | ND     | 0.020   |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Magnesium                                 | 7.3    | 1.0     |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Manganese                                 | ND     | 0.0020  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Potassium                                 | 1.8    | 1.0     |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Sodium                                    | 23     | 1.0     |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 9/11/2006 6:03:35 PM  |
| Zinc                                      | 0.024  | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:13:43 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: CMC          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/1/2006 2:07:14 PM   |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/1/2006 2:07:14 PM   |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: BDH          |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 14-Sep-06

CLIENT: San Juan Refining  
 Lab Order: 0608280  
 Project: Annual Sampling 2006  
 Lab ID: 0608280-01

Client Sample ID: Outfall #3  
 Collection Date: 8/22/2006 8:15:00 AM  
 Date Received: 8/23/2006  
 Matrix: AQUEOUS

| Analyses                           | Result | PQL | Qual | Units | DF | Date Analyzed         |
|------------------------------------|--------|-----|------|-------|----|-----------------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    | Analyst: BDH          |
| 1,2,4-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Naphthalene                        | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Bromochloromethane                 | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Bromomethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Carbon Tetrachloride               | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Chloromethane                      | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Dibromomethane                     | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,1-Dichloroethane                 | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Hexachlorobutadiene                | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| 2-Hexanone                         | ND     | 10  |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |
| Isopropylbenzene                   | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006 11:52:57 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 14-Sep-06

CLIENT: San Juan Refining  
 Lab Order: 0608280  
 Project: Annual Sampling 2006  
 Lab ID: 0608280-01

Client Sample ID: Outfall #3  
 Collection Date: 8/22/2006 8:15:00 AM  
 Date Received: 8/23/2006  
 Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed         |
|-----------------------------------------|--------|----------|------|------------|----|-----------------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: BDH          |
| 4-Isopropyltoluene                      | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 4-Methyl-2-pentanone                    | ND     | 10       |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Methylene Chloride                      | ND     | 3.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| n-Butylbenzene                          | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| n-Propylbenzene                         | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| sec-Butylbenzene                        | ND     | 2.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Styrene                                 | ND     | 1.5      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| tert-Butylbenzene                       | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 1,1,1,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 1,1,2,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Tetrachloroethene (PCE)                 | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| trans-1,2-DCE                           | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| trans-1,3-Dichloropropene               | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 1,2,3-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 1,2,4-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 1,1,1-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 1,1,2-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Trichloroethene (TCE)                   | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Trichlorofluoromethane                  | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| 1,2,3-Trichloropropane                  | ND     | 2.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Vinyl chloride                          | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L       | 1  | 8/28/2006 11:52:57 AM |
| Surr: 1,2-Dichloroethane-d4             | 89.7   | 69.9-130 |      | %REC       | 1  | 8/28/2006 11:52:57 AM |
| Surr: 4-Bromofluorobenzene              | 90.4   | 75-139   |      | %REC       | 1  | 8/28/2006 11:52:57 AM |
| Surr: Dibromofluoromethane              | 98.0   | 57.3-135 |      | %REC       | 1  | 8/28/2006 11:52:57 AM |
| Surr: Toluene-d8                        | 87.2   | 81.9-122 |      | %REC       | 1  | 8/28/2006 11:52:57 AM |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC          |
| Alkalinity, Total (As CaCO3)            | 110    | 2.0      |      | mg/L CaCO3 | 1  | 8/29/2006             |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/29/2006             |
| Bicarbonate                             | 110    | 2.0      |      | mg/L CaCO3 | 1  | 8/29/2006             |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC          |
| Total Carbon Dioxide                    | 97     | 1.0      |      | mg CO2/L   | 1  | 8/29/2006             |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b>  |        |          |      |            |    | Analyst: CMC          |
| Specific Conductance                    | 390    | 0.010    |      | µmhos/cm   | 1  | 8/23/2006             |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 14-Sep-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0608280  
**Project:** Annual Sampling 2006  
**Lab ID:** 0608280-01

**Client Sample ID:** Outfall #3  
**Collection Date:** 8/22/2006 8:15:00 AM  
**Date Received:** 8/23/2006  
**Matrix:** AQUEOUS

| Analyses                     | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 160.1: TDS</b> |        |     |      |       |    |               |
| Total Dissolved Solids       | 230    | 20  |      | mg/L  | 1  | 8/24/2006     |

Analyst: KS

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 060828

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E300

Sample ID: MBLK

MBLK

Batch ID: R20590

Analysis Date:

9/6/2006

|                                   |    |      |      |  |  |  |  |  |  |
|-----------------------------------|----|------|------|--|--|--|--|--|--|
| Fluoride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Chloride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrite (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Bromide                           | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrate (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |  |  |  |  |  |  |
| Sulfate                           | ND | mg/L | 0.50 |  |  |  |  |  |  |

Sample ID: MBLK

MBLK

Batch ID: R20645

Analysis Date:

9/11/2006 9:50:58 PM

|                                   |    |      |      |  |  |  |  |  |  |
|-----------------------------------|----|------|------|--|--|--|--|--|--|
| Fluoride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Chloride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrite (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Bromide                           | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrate (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |  |  |  |  |  |  |
| Sulfate                           | ND | mg/L | 0.50 |  |  |  |  |  |  |

Sample ID: LCS ST300-06008

LCS

Batch ID: R20590

Analysis Date:

9/6/2006

|                                   |        |      |      |      |    |     |  |  |  |
|-----------------------------------|--------|------|------|------|----|-----|--|--|--|
| Fluoride                          | 0.5045 | mg/L | 0.10 | 101  | 90 | 110 |  |  |  |
| Chloride                          | 4.744  | mg/L | 0.10 | 94.9 | 90 | 110 |  |  |  |
| Nitrogen, Nitrite (As N)          | 0.9715 | mg/L | 0.10 | 97.1 | 90 | 110 |  |  |  |
| Bromide                           | 2.483  | mg/L | 0.10 | 99.3 | 90 | 110 |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.340  | mg/L | 0.10 | 93.6 | 90 | 110 |  |  |  |
| Phosphorus, Orthophosphate (As P) | 4.931  | mg/L | 0.50 | 98.6 | 90 | 110 |  |  |  |
| Sulfate                           | 9.681  | mg/L | 0.50 | 96.8 | 90 | 110 |  |  |  |

Sample ID: LCS ST300-06008

LCS

Batch ID: R20645

Analysis Date:

9/11/2006 10:08:22 PM

|                                   |        |      |      |      |    |     |  |  |  |
|-----------------------------------|--------|------|------|------|----|-----|--|--|--|
| Fluoride                          | 0.4713 | mg/L | 0.10 | 94.3 | 90 | 110 |  |  |  |
| Chloride                          | 4.813  | mg/L | 0.10 | 96.3 | 90 | 110 |  |  |  |
| Nitrogen, Nitrite (As N)          | 1.001  | mg/L | 0.10 | 100  | 90 | 110 |  |  |  |
| Bromide                           | 2.492  | mg/L | 0.10 | 99.7 | 90 | 110 |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.398  | mg/L | 0.10 | 95.9 | 90 | 110 |  |  |  |
| Phosphorus, Orthophosphate (As P) | 4.997  | mg/L | 0.50 | 99.9 | 90 | 110 |  |  |  |
| Sulfate                           | 9.827  | mg/L | 0.50 | 98.3 | 90 | 110 |  |  |  |

Method: E310.1

Sample ID: MB

MBLK

Batch ID: R20479

Analysis Date:

8/29/2006

|                              |    |          |     |  |  |  |  |  |  |
|------------------------------|----|----------|-----|--|--|--|--|--|--|
| Alkalinity, Total (As CaCO3) | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Carbonate                    | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Bicarbonate                  | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |

Method: SW7470

Sample ID: MB-11143

MBLK

Batch ID: 11143

Analysis Date:

8/29/2006

|         |    |      |         |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|
| Mercury | ND | mg/L | 0.00020 |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|

Sample ID: LCS-11143

LCS

Batch ID: 11143

Analysis Date:

8/29/2006

|         |          |      |         |     |    |     |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|
| Mercury | 0.005010 | mg/L | 0.00020 | 100 | 80 | 120 |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Snike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608280

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: MB

MBLK

Batch ID: R-20633 Analysis Date: 9/11/2006 12:01:31 PM

|           |    |      |        |  |  |  |  |  |  |
|-----------|----|------|--------|--|--|--|--|--|--|
| Barium    | ND | mg/L | 0.020  |  |  |  |  |  |  |
| Cadmium   | ND | mg/L | 0.0020 |  |  |  |  |  |  |
| Calcium   | ND | mg/L | 1.0    |  |  |  |  |  |  |
| Chromium  | ND | mg/L | 0.0060 |  |  |  |  |  |  |
| Copper    | ND | mg/L | 0.0060 |  |  |  |  |  |  |
| Iron      | ND | mg/L | 0.020  |  |  |  |  |  |  |
| Lead      | ND | mg/L | 0.0050 |  |  |  |  |  |  |
| Magnesium | ND | mg/L | 1.0    |  |  |  |  |  |  |
| Potassium | ND | mg/L | 1.0    |  |  |  |  |  |  |
| Selenium  | ND | mg/L | 0.050  |  |  |  |  |  |  |
| Silver    | ND | mg/L | 0.0050 |  |  |  |  |  |  |
| Sodium    | ND | mg/L | 1.0    |  |  |  |  |  |  |

Sample ID: MB

MBLK

Batch ID: R-20633 Analysis Date: 9/11/2006 5:51:02 PM

|           |    |      |        |  |  |  |  |  |  |
|-----------|----|------|--------|--|--|--|--|--|--|
| Arsenic   | ND | mg/L | 0.020  |  |  |  |  |  |  |
| Manganese | ND | mg/L | 0.0020 |  |  |  |  |  |  |
| Zinc      | ND | mg/L | 0.050  |  |  |  |  |  |  |

Sample ID: LCS

LCS

Batch ID: R-20633 Analysis Date: 9/11/2006 12:04:33 PM

|           |        |      |        |      |    |     |  |  |  |
|-----------|--------|------|--------|------|----|-----|--|--|--|
| Barium    | 0.4734 | mg/L | 0.020  | 94.7 | 80 | 120 |  |  |  |
| Cadmium   | 0.4682 | mg/L | 0.0020 | 93.6 | 80 | 120 |  |  |  |
| Calcium   | 49.27  | mg/L | 1.0    | 97.6 | 80 | 120 |  |  |  |
| Chromium  | 0.4779 | mg/L | 0.0060 | 95.6 | 80 | 120 |  |  |  |
| Copper    | 0.4686 | mg/L | 0.0060 | 93.7 | 80 | 120 |  |  |  |
| Iron      | 0.5632 | mg/L | 0.020  | 113  | 80 | 120 |  |  |  |
| Lead      | 0.4664 | mg/L | 0.0050 | 93.3 | 80 | 120 |  |  |  |
| Magnesium | 49.39  | mg/L | 1.0    | 97.8 | 80 | 120 |  |  |  |
| Potassium | 53.22  | mg/L | 1.0    | 96.8 | 80 | 120 |  |  |  |
| Selenium  | 0.4368 | mg/L | 0.050  | 87.4 | 80 | 120 |  |  |  |
| Silver    | 0.4697 | mg/L | 0.0050 | 93.9 | 80 | 120 |  |  |  |
| Sodium    | 53.72  | mg/L | 1.0    | 106  | 80 | 120 |  |  |  |

Sample ID: LCS

LCS

Batch ID: R-20633 Analysis Date: 9/11/2006 5:56:06 PM

|           |        |      |        |      |    |     |  |  |  |
|-----------|--------|------|--------|------|----|-----|--|--|--|
| Arsenic   | 0.5183 | mg/L | 0.020  | 104  | 80 | 120 |  |  |  |
| Manganese | 0.4958 | mg/L | 0.0020 | 99.2 | 80 | 120 |  |  |  |
| Zinc      | 0.4941 | mg/L | 0.050  | 98.8 | 80 | 120 |  |  |  |

Method: SW6010A

Sample ID: MB-11140

MBLK

Batch ID: 11140 Analysis Date: 9/1/2006 1:55:10 PM

|          |    |      |        |  |  |  |  |  |  |
|----------|----|------|--------|--|--|--|--|--|--|
| Chromium | ND | mg/L | 0.0060 |  |  |  |  |  |  |
| Lead     | ND | mg/L | 0.0050 |  |  |  |  |  |  |

Sample ID: LCS-11140

LCS

Batch ID: 11140 Analysis Date: 9/1/2006 1:58:11 PM

|          |        |      |        |      |    |     |  |  |  |
|----------|--------|------|--------|------|----|-----|--|--|--|
| Chromium | 0.4903 | mg/L | 0.0060 | 98.1 | 80 | 120 |  |  |  |
| Lead     | 0.4890 | mg/L | 0.0050 | 97.1 | 80 | 120 |  |  |  |

## Qualifiers:

- |   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 060828

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E160.1

Sample ID: MB-11114

MBLK

Batch ID: 11114 Analysis Date: 8/24/2006

Total Dissolved Solids ND mg/L 20

Sample ID: LCS-11114

LCS

Batch ID: 11114 Analysis Date: 8/24/2006

Total Dissolved Solids 975.0 mg/L 20 97.5 80 120

## Qualifiers:

E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Spike Recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608280

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb fri

MBLK

Batch ID: R20449 Analysis Date: 8/25/2006 8:44:20 AM

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |
| Chloroethane                   | ND | µg/L | 2.0 |
| Chloroform                     | ND | µg/L | 1.0 |
| Chloromethane                  | ND | µg/L | 1.0 |
| 2-Chlorotoluene                | ND | µg/L | 1.0 |
| 4-Chlorotoluene                | ND | µg/L | 1.0 |
| cis-1,2-DCE                    | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene        | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane    | ND | µg/L | 2.0 |
| Dibromochloromethane           | ND | µg/L | 1.0 |
| Dibromomethane                 | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene            | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene            | ND | µg/L | 1.0 |
| Dichlorodifluoromethane        | ND | µg/L | 1.0 |
| 1,1-Dichloroethane             | ND | µg/L | 2.0 |
| 1,1-Dichloroethene             | ND | µg/L | 1.0 |
| 1,2-Dichloropropane            | ND | µg/L | 1.0 |
| 1,3-Dichloropropane            | ND | µg/L | 1.0 |
| 2,2-Dichloropropane            | ND | µg/L | 2.0 |
| 1,1-Dichloropropene            | ND | µg/L | 1.0 |
| Hexachlorobutadiene            | ND | µg/L | 2.0 |
| 2-Hexanone                     | ND | µg/L | 10  |
| Isopropylbenzene               | ND | µg/L | 1.0 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spoke Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608280

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb fri

MBLK

Batch ID: R20449 Analysis Date: 8/25/2006 8:44:20 AM

|                           |    |      |     |
|---------------------------|----|------|-----|
| 4-Isopropyltoluene        | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone      | ND | µg/L | 10  |
| Methylene Chloride        | ND | µg/L | 3.0 |
| n-Butylbenzene            | ND | µg/L | 1.0 |
| n-Propylbenzene           | ND | µg/L | 1.0 |
| sec-Butylbenzene          | ND | µg/L | 2.0 |
| Styrene                   | ND | µg/L | 1.5 |
| tert-Butylbenzene         | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)   | ND | µg/L | 1.0 |
| trans-1,2-DCE             | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane     | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane     | ND | µg/L | 1.0 |
| Trichloroethene (TCE)     | ND | µg/L | 1.0 |
| Trichlorofluoromethane    | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane    | ND | µg/L | 2.0 |
| Vinyl chloride            | ND | µg/L | 1.0 |
| Xylenes, Total            | ND | µg/L | 3.0 |

Sample ID: 5ml rb

MBLK

Batch ID: R20470 Analysis Date: 8/28/2006 8:54:08 AM

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608280

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb

MBLK

Batch ID: R20470 Analysis Date: 8/28/2006 8:54:08 AM

|                             |    |      |     |
|-----------------------------|----|------|-----|
| Chloroethane                | ND | µg/L | 2.0 |
| Chloroform                  | ND | µg/L | 1.0 |
| Chloromethane               | ND | µg/L | 1.0 |
| 2-Chlorotoluene             | ND | µg/L | 1.0 |
| 4-Chlorotoluene             | ND | µg/L | 1.0 |
| cis-1,2-DCE                 | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene     | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 |
| Dibromochloromethane        | ND | µg/L | 1.0 |
| Dibromomethane              | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene         | ND | µg/L | 1.0 |
| Dichlorodifluoromethane     | ND | µg/L | 1.0 |
| 1,1-Dichloroethane          | ND | µg/L | 2.0 |
| 1,1-Dichloroethene          | ND | µg/L | 1.0 |
| 1,2-Dichloropropane         | ND | µg/L | 1.0 |
| 1,3-Dichloropropane         | ND | µg/L | 1.0 |
| 2,2-Dichloropropane         | ND | µg/L | 2.0 |
| 1,1-Dichloropropene         | ND | µg/L | 1.0 |
| Hexachlorobutadiene         | ND | µg/L | 2.0 |
| 2-Hexanone                  | ND | µg/L | 10  |
| Isopropylbenzene            | ND | µg/L | 1.0 |
| 4-Isopropyltoluene          | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone        | ND | µg/L | 10  |
| Methylene Chloride          | ND | µg/L | 3.0 |
| n-Butylbenzene              | ND | µg/L | 1.0 |
| n-Propylbenzene             | ND | µg/L | 1.0 |
| sec-Butylbenzene            | ND | µg/L | 2.0 |
| Styrene                     | ND | µg/L | 1.5 |
| tert-Butylbenzene           | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)     | ND | µg/L | 1.0 |
| trans-1,2-DCE               | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene   | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane       | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane       | ND | µg/L | 1.0 |
| Trichloroethene (TCE)       | ND | µg/L | 1.0 |
| Trichlorofluoromethane      | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane      | ND | µg/L | 2.0 |
| Vinyl chloride              | ND | µg/L | 1.0 |

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 060828

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb

MBLK

Batch ID: R20470

Analysis Date: 8/28/2006 8:54:08 AM

Xylenes, Total ND µg/L 3.0

Sample ID: 100ng lcs

LCS

Batch ID: R20449

Analysis Date: 8/25/2006 9:55:24 AM

Benzene 18.35 µg/L 1.0 91.7 66.2 115

Toluene 18.84 µg/L 1.0 94.2 72 109

Chlorobenzene 19.27 µg/L 1.0 96.3 78.5 109

1,1-Dichloroethene 18.10 µg/L 1.0 90.5 62.3 124

Trichloroethene (TCE) 18.22 µg/L 1.0 91.1 74.3 109

Sample ID: 100ng lcs

LCS

Batch ID: R20470

Analysis Date: 8/28/2006 10:42:04 AM

Benzene 18.29 µg/L 1.0 91.5 66.2 115

Toluene 18.49 µg/L 1.0 92.5 72 109

Chlorobenzene 19.27 µg/L 1.0 96.3 78.5 109

1,1-Dichloroethene 19.81 µg/L 1.0 99.0 62.3 124

Trichloroethene (TCE) 18.51 µg/L 1.0 92.6 74.3 109

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

8/23/2006

Work Order Number 0608280

Received by AT

Checklist completed by

Signature

Date

8/23/06

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

# CHAIN-OF-CUSTODY RECORD

Client: Son Juan Refining

Address: #502nd 4990

Bloomfield, NM 87413

Phone #: 505-6239-4161

Fax #: 505-6239-3911

| Date    | Time | Matrix           | Sample I.D. No. | Number/Volume | Preservative      | HEAL No.                          |
|---------|------|------------------|-----------------|---------------|-------------------|-----------------------------------|
|         |      |                  |                 |               | HgCl <sub>2</sub> | HNO <sub>3</sub>                  |
| 8/29/06 | 8:15 | H <sub>2</sub> O | Outfall #3      | 3-1000        |                   | HEAL 008280-1                     |
|         |      |                  |                 | 1-250         | X                 |                                   |
|         |      |                  |                 | 1-250         | X                 | Filtered                          |
|         |      |                  |                 | 1-500         |                   |                                   |
|         |      |                  |                 | 1-500         |                   | H <sub>2</sub> SO <sub>4</sub> -1 |

Sampler: Shelly Gordon

Sample Temperature: 3

QA/QC Package:

Std ☐ Level 4 ☐

Other:

Project Name:

Annual Sampling 2006

Project #:

Project Manager:

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D  
Albuquerque, New Mexico 87109  
Tel. 505.345.3975 Fax 505.345.1107  
www.hallenvironmental.com

### ANALYSIS REQUEST

|                                                                                        |   |
|----------------------------------------------------------------------------------------|---|
| BTEX + MTBE + TMB's (8021)                                                             |   |
| BTEX + MTBE + TPH (Gasoline Only)                                                      |   |
| TPH Method 8015B (Gas/Diesel)                                                          |   |
| TPH (Method 418.1)                                                                     |   |
| EDB (Method 504.1)                                                                     |   |
| EDC (Method 8021)                                                                      |   |
| 8310 (PNA or PAH)                                                                      |   |
| PCB's Metals                                                                           | X |
| Anions (F, Cl, NO <sub>2</sub> , NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) |   |
| 8081 Pesticides / PCB's (8082)                                                         |   |
| 8260B (VOA)                                                                            | X |
| 8270 (Semi-VOA)                                                                        |   |
| Metal Dissolved Metals                                                                 |   |
| Cation / Anion Toxic Elements                                                          |   |
| Culture / Nitrile                                                                      |   |
| Air Bubbles or Headspace (Y or N)                                                      |   |

Remarks:

Received By: (Signature)

Received By: (Signature)

Relinquished By: (Signature)

Relinquished By: (Signature)

Date: 8/29/06

Date: 8/29/06

Time: 6:45

Time: 6:45

## COVER LETTER

Thursday, September 14, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161

FAX (505) 632-3911

RE: Annual Sampling 2006

Order No.: 0608317

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 8/25/2006 for the analyses presented in the following report.

This report is an addendum to the report dated September 14, 2006. The metal results for MW#8 have been updated. Please don't hesitate to contact us for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager





# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-01

Client Sample ID: MW#8  
Collection Date: 8/23/2006 1:00:00 PM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|---------|------|-------|----|----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES         |
| Fluoride                                  | 0.67   | 0.10    |      | mg/L  | 1  | 8/26/2006 1:07:01 PM |
| Chloride                                  | 300    | 1.0     |      | mg/L  | 10 | 9/9/2006 2:03:13 AM  |
| Bromide                                   | 1.5    | 0.50    |      | mg/L  | 1  | 8/26/2006 1:07:01 PM |
| Nitrate (As N)+Nitrite (As N)             | 26     | 0.50    |      | mg/L  | 5  | 8/26/2006 2:16:39 PM |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    | H    | mg/L  | 1  | 8/26/2006 1:07:01 PM |
| Sulfate                                   | 980    | 10      |      | mg/L  | 20 | 9/12/2006 8:52:35 AM |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP         |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 9/19/2006            |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Barium                                    | 0.018  | 0.0020  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Calcium                                   | 230    | 10      |      | mg/L  | 10 | 9/22/2006 9:54:39 AM |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Iron                                      | 0.033  | 0.020   |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Magnesium                                 | 35     | 1.0     |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Manganese                                 | 0.42   | 0.0020  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Potassium                                 | 3.2    | 1.0     |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| Sodium                                    | 380    | 10      |      | mg/L  | 10 | 9/22/2006 9:54:39 AM |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 9/21/2006 4:17:31 PM |
| Zinc                                      | 0.044  | 0.0050  |      | mg/L  | 1  | 9/22/2006 9:41:31 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: NMO         |
| Chromium                                  | 2.9    | 0.060   |      | mg/L  | 10 | 9/22/2006 9:45:43 AM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/22/2006 9:01:05 AM |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: SMP         |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006            |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006            |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006            |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1  | 8/28/2006            |
| 1,2,4-Trimethylbenzene                    | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006            |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
 Lab Order: 0608317  
 Project: Annual Sampling 2006  
 Lab ID: 0608317-01

Client Sample ID: MW#8  
 Collection Date: 8/23/2006 1:00:00 PM  
 Date Received: 8/25/2006  
 Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |    |     |  |      |   |           |
|-----------------------------|----|-----|--|------|---|-----------|
| 1,3,5-Trimethylbenzene      | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,2-Dichloroethane (EDC)    | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,2-Dibromoethane (EDB)     | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Naphthalene                 | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| 1-Methylnaphthalene         | ND | 4.0 |  | µg/L | 1 | 8/28/2006 |
| 2-Methylnaphthalene         | ND | 4.0 |  | µg/L | 1 | 8/28/2006 |
| Acetone                     | ND | 10  |  | µg/L | 1 | 8/28/2006 |
| Bromobenzene                | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Bromochloromethane          | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Bromodichloromethane        | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Bromoform                   | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Bromomethane                | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| 2-Butanone                  | ND | 10  |  | µg/L | 1 | 8/28/2006 |
| Carbon disulfide            | ND | 10  |  | µg/L | 1 | 8/28/2006 |
| Carbon Tetrachloride        | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| Chlorobenzene               | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Chloroethane                | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| Chloroform                  | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Chloromethane               | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 2-Chlorotoluene             | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 4-Chlorotoluene             | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| cis-1,2-DCE                 | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| cis-1,3-Dichloropropene     | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| Dibromochloromethane        | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Dibromomethane              | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| 1,2-Dichlorobenzene         | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,3-Dichlorobenzene         | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,4-Dichlorobenzene         | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Dichlorodifluoromethane     | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,1-Dichloroethane          | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| 1,1-Dichloroethene          | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,2-Dichloropropane         | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 1,3-Dichloropropane         | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 2,2-Dichloropropane         | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| 1,1-Dichloropropene         | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| Hexachlorobutadiene         | ND | 2.0 |  | µg/L | 1 | 8/28/2006 |
| 2-Hexanone                  | ND | 10  |  | µg/L | 1 | 8/28/2006 |
| Isopropylbenzene            | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |
| 4-Isopropyltoluene          | ND | 1.0 |  | µg/L | 1 | 8/28/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-01

Client Sample ID: MW#8  
Collection Date: 8/23/2006 1:00:00 PM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: SMP  |
| 4-Methyl-2-pentanone                    | ND     | 10       |      | µg/L       | 1  | 8/28/2006     |
| Methylene Chloride                      | ND     | 3.0      |      | µg/L       | 1  | 8/28/2006     |
| n-Butylbenzene                          | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| n-Propylbenzene                         | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| sec-Butylbenzene                        | ND     | 2.0      |      | µg/L       | 1  | 8/28/2006     |
| Styrene                                 | ND     | 1.5      |      | µg/L       | 1  | 8/28/2006     |
| tert-Butylbenzene                       | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| Tetrachloroethene (PCE)                 | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| trans-1,2-DCE                           | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| trans-1,3-Dichloropropene               | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| 1,1,1-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| 1,1,2-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| Trichloroethene (TCE)                   | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| Trichlorofluoromethane                  | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| 1,2,3-Trichloropropane                  | ND     | 2.0      |      | µg/L       | 1  | 8/28/2006     |
| Vinyl chloride                          | ND     | 1.0      |      | µg/L       | 1  | 8/28/2006     |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L       | 1  | 8/28/2006     |
| Surr: 1,2-Dichloroethane-d4             | 99.6   | 69.9-130 |      | %REC       | 1  | 8/28/2006     |
| Surr: 4-Bromofluorobenzene              | 86.3   | 75-139   |      | %REC       | 1  | 8/28/2006     |
| Surr: Dibromofluoromethane              | 87.5   | 57.3-135 |      | %REC       | 1  | 8/28/2006     |
| Surr: Toluene-d8                        | 84.3   | 81.9-122 |      | %REC       | 1  | 8/28/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 210    | 2.0      |      | mg/L CaCO3 | 1  | 8/30/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/30/2006     |
| Bicarbonate                             | 210    | 2.0      |      | mg/L CaCO3 | 1  | 8/30/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 200    | 1.0      |      | mg CO2/L   | 1  | 8/30/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b>  |        |          |      |            |    | Analyst: CMC  |
| Specific Conductance                    | 3200   | 0.010    |      | µmhos/cm   | 1  | 8/29/2006     |
| <b>EPA METHOD 160.1: TDS</b>            |        |          |      |            |    | Analyst: KS   |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 26-Sep-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0608317  
**Project:** Annual Sampling 2006  
**Lab ID:** 0608317-01

**Client Sample ID:** MW#8  
**Collection Date:** 8/23/2006 1:00:00 PM  
**Date Received:** 8/25/2006  
**Matrix:** AQUEOUS

| Analyses                     | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 160.1: TDS</b> |        |     |      |       |    | Analyst: KS   |
| Total Dissolved Solids       | 2200   | 20  |      | mg/L  | 1  | 8/29/2006     |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-02

Client Sample ID: MW#1  
Collection Date: 8/23/2006 1:45:00 PM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.65   | 0.10    |      | mg/L  | 1  | 8/26/2006 1:24:25 PM  |
| Chloride                                  | 17     | 0.10    |      | mg/L  | 1  | 8/26/2006 1:24:25 PM  |
| Bromide                                   | ND     | 0.50    |      | mg/L  | 1  | 8/26/2006 1:24:25 PM  |
| Nitrate (As N)+Nitrite (As N)             | 1.2    | 0.50    |      | mg/L  | 5  | 8/26/2006 2:34:03 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50    | H    | mg/L  | 1  | 8/26/2006 1:24:25 PM  |
| Sulfate                                   | 190    | 5.0     |      | mg/L  | 10 | 9/9/2006 2:20:37 AM   |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 9/5/2006              |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: CMC          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 9/11/2006 6:11:03 PM  |
| Barium                                    | 0.023  | 0.0020  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Calcium                                   | 74     | 1.0     |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Iron                                      | ND     | 0.020   |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Magnesium                                 | 18     | 1.0     |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Manganese                                 | 0.090  | 0.0020  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Potassium                                 | 2.4    | 1.0     |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| Sodium                                    | 120    | 5.0     |      | mg/L  | 5  | 9/11/2006 2:29:10 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 9/11/2006 6:11:03 PM  |
| Zinc                                      | 0.047  | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:28:02 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: NMO          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/6/2006 12:23:31 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/6/2006 12:23:31 PM  |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: SMP          |
| Benzene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006             |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006             |
| Ethylbenzene                              | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006             |
| Methyl tert-butyl ether (MTBE)            | ND     | 1.5     |      | µg/L  | 1  | 8/28/2006             |
| 1,2,4-Trimethylbenzene                    | ND     | 1.0     |      | µg/L  | 1  | 8/28/2006             |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-02

Client Sample ID: MW#1  
Collection Date: 8/23/2006 1:45:00 PM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    | Analyst: SMP  |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Naphthalene                        | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/28/2006     |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/28/2006     |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 8/28/2006     |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromochloromethane                 | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromomethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 8/28/2006     |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 8/28/2006     |
| Carbon Tetrachloride               | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Chloromethane                      | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Dibromomethane                     | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,1-Dichloroethane                 | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Hexachlorobutadiene                | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 2-Hexanone                         | ND     | 10  |      | µg/L  | 1  | 8/28/2006     |
| Isopropylbenzene                   | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 4-Isopropyltoluene                 | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
 Lab Order: 0608317  
 Project: Annual Sampling 2006  
 Lab ID: 0608317-02

Client Sample ID: MW#1  
 Collection Date: 8/23/2006 1:45:00 PM  
 Date Received: 8/25/2006  
 Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units                  | DF | Date Analyzed |
|-------------------------------------------|--------|----------|------|------------------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |          |      |                        |    | Analyst: SMP  |
| 4-Methyl-2-pentanone                      | ND     | 10       |      | µg/L                   | 1  | 8/28/2006     |
| Methylene Chloride                        | ND     | 3.0      |      | µg/L                   | 1  | 8/28/2006     |
| n-Butylbenzene                            | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| n-Propylbenzene                           | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| sec-Butylbenzene                          | ND     | 2.0      |      | µg/L                   | 1  | 8/28/2006     |
| Styrene                                   | ND     | 1.5      |      | µg/L                   | 1  | 8/28/2006     |
| tert-Butylbenzene                         | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| 1,1,1,2-Tetrachloroethane                 | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| 1,1,2,2-Tetrachloroethane                 | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| Tetrachloroethene (PCE)                   | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| trans-1,2-DCE                             | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| trans-1,3-Dichloropropene                 | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| 1,2,3-Trichlorobenzene                    | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| 1,2,4-Trichlorobenzene                    | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| 1,1,1-Trichloroethane                     | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| 1,1,2-Trichloroethane                     | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| Trichloroethene (TCE)                     | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| Trichlorofluoromethane                    | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| 1,2,3-Trichloropropane                    | ND     | 2.0      |      | µg/L                   | 1  | 8/28/2006     |
| Vinyl chloride                            | ND     | 1.0      |      | µg/L                   | 1  | 8/28/2006     |
| Xylenes, Total                            | ND     | 3.0      |      | µg/L                   | 1  | 8/28/2006     |
| Surr: 1,2-Dichloroethane-d4               | 98.2   | 69.9-130 |      | %REC                   | 1  | 8/28/2006     |
| Surr: 4-Bromofluorobenzene                | 92.6   | 75-139   |      | %REC                   | 1  | 8/28/2006     |
| Surr: Dibromofluoromethane                | 86.1   | 57.3-135 |      | %REC                   | 1  | 8/28/2006     |
| Surr: Toluene-d8                          | 86.0   | 81.9-122 |      | %REC                   | 1  | 8/28/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>       |        |          |      |                        |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO <sub>3</sub> ) | 270    | 2.0      |      | mg/L CaCO <sub>3</sub> | 1  | 8/30/2006     |
| Carbonate                                 | ND     | 2.0      |      | mg/L CaCO <sub>3</sub> | 1  | 8/30/2006     |
| Bicarbonate                               | 270    | 2.0      |      | mg/L CaCO <sub>3</sub> | 1  | 8/30/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b>   |        |          |      |                        |    | Analyst: CMC  |
| Total Carbon Dioxide                      | 240    | 1.0      |      | mg CO <sub>2</sub> /L  | 1  | 8/30/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b>    |        |          |      |                        |    | Analyst: CMC  |
| Specific Conductance                      | 940    | 0.010    |      | µmhos/cm               | 1  | 8/29/2006     |
| <b>EPA METHOD 160.1: TDS</b>              |        |          |      |                        |    | Analyst: KS   |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit



**Hall Environmental Analysis Laboratory, Inc.**

Date: 26-Sep-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0608317  
**Project:** Annual Sampling 2006  
**Lab ID:** 0608317-02

**Client Sample ID:** MW#1  
**Collection Date:** 8/23/2006 1:45:00 PM  
**Date Received:** 8/25/2006  
**Matrix:** AQUEOUS

| Analyses                     | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 160.1: TDS</b> |        |     |      |       |    |               |
| Total Dissolved Solids       | 640    | 20  |      | mg/L  | 1  | 8/29/2006     |

Analyst: KS

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-03

Client Sample ID: RW#1  
Collection Date: 8/23/2006 3:10:00 PM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |    | Analyst: TES          |
| Fluoride                                  | ND     | 0.50    |      | mg/L  | 5  | 8/26/2006 1:41:49 PM  |
| Chloride                                  | 230    | 1.0     |      | mg/L  | 10 | 9/9/2006 2:38:01 AM   |
| Bromide                                   | 2.8    | 2.5     |      | mg/L  | 5  | 8/26/2006 1:41:49 PM  |
| Nitrate (As N)+Nitrite (As N)             | ND     | 0.50    |      | mg/L  | 5  | 8/26/2006 2:51:27 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 2.5     | H    | mg/L  | 5  | 8/26/2006 1:41:49 PM  |
| Sulfate                                   | 3.8    | 2.5     |      | mg/L  | 5  | 8/26/2006 1:41:49 PM  |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |    | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1  | 9/5/2006              |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |    | Analyst: CMC          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1  | 9/11/2006 6:13:54 PM  |
| Barium                                    | 1.7    | 0.020   |      | mg/L  | 10 | 9/11/2006 2:32:17 PM  |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Calcium                                   | 120    | 10      |      | mg/L  | 10 | 9/11/2006 2:32:17 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Iron                                      | 6.4    | 0.20    |      | mg/L  | 10 | 9/11/2006 2:32:17 PM  |
| Lead                                      | 0.0085 | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Magnesium                                 | 32     | 1.0     |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Manganese                                 | 3.0    | 0.020   |      | mg/L  | 10 | 9/11/2006 2:32:17 PM  |
| Potassium                                 | 3.2    | 1.0     |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| Sodium                                    | 500    | 10      |      | mg/L  | 10 | 9/11/2006 2:32:17 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1  | 9/11/2006 6:13:54 PM  |
| Zinc                                      | 0.057  | 0.0050  |      | mg/L  | 1  | 9/11/2006 12:31:04 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |    | Analyst: NMO          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1  | 9/6/2006 12:26:14 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1  | 9/6/2006 12:26:14 PM  |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |    | Analyst: SMP          |
| Benzene                                   | 16     | 1.0     |      | µg/L  | 1  | 8/29/2006             |
| Toluene                                   | ND     | 1.0     |      | µg/L  | 1  | 8/29/2006             |
| Ethylbenzene                              | 5.2    | 1.0     |      | µg/L  | 1  | 8/29/2006             |
| Methyl tert-butyl ether (MTBE)            | 2.0    | 1.5     |      | µg/L  | 1  | 8/29/2006             |
| 1,2,4-Trimethylbenzene                    | 34     | 1.0     |      | µg/L  | 1  | 8/29/2006             |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-03

Client Sample ID: RW#1  
Collection Date: 8/23/2006 3:10:00 PM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                           | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    | Analyst: SMP  |
| 1,3,5-Trimethylbenzene             | 1.7    | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Naphthalene                        | 160    | 100 |      | µg/L  | 50 | 8/29/2006     |
| 1-Methylnaphthalene                | 40     | 4.0 |      | µg/L  | 1  | 8/29/2006     |
| 2-Methylnaphthalene                | 53     | 4.0 |      | µg/L  | 1  | 8/29/2006     |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 8/29/2006     |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Bromochloromethane                 | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Bromomethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 8/29/2006     |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 8/29/2006     |
| Carbon Tetrachloride               | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Chloromethane                      | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Dibromomethane                     | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,1-Dichloroethane                 | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| 1,1-Dichloropropene                | ND     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| Hexachlorobutadiene                | ND     | 2.0 |      | µg/L  | 1  | 8/29/2006     |
| 2-Hexanone                         | ND     | 10  |      | µg/L  | 1  | 8/29/2006     |
| Isopropylbenzene                   | 27     | 1.0 |      | µg/L  | 1  | 8/29/2006     |
| 4-Isopropyltoluene                 | 1.6    | 1.0 |      | µg/L  | 1  | 8/29/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
 Lab Order: 0608317  
 Project: Annual Sampling 2006  
 Lab ID: 0608317-03

Client Sample ID: RW#1  
 Collection Date: 8/23/2006 3:10:00 PM  
 Date Received: 8/25/2006  
 Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |    | Analyst: SMP  |
| 4-Methyl-2-pentanone                    | ND     | 10       |      | µg/L       | 1  | 8/29/2006     |
| Methylene Chloride                      | ND     | 3.0      |      | µg/L       | 1  | 8/29/2006     |
| n-Butylbenzene                          | 4.5    | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| n-Propylbenzene                         | 26     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| sec-Butylbenzene                        | 4.6    | 2.0      |      | µg/L       | 1  | 8/30/2006     |
| Styrene                                 | ND     | 1.5      |      | µg/L       | 1  | 8/29/2006     |
| tert-Butylbenzene                       | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| Tetrachloroethene (PCE)                 | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| trans-1,2-DCE                           | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| trans-1,3-Dichloropropene               | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| 1,1,1-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| 1,1,2-Trichloroethane                   | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| Trichloroethene (TCE)                   | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| Trichlorofluoromethane                  | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| 1,2,3-Trichloropropane                  | ND     | 2.0      |      | µg/L       | 1  | 8/29/2006     |
| Vinyl chloride                          | ND     | 1.0      |      | µg/L       | 1  | 8/29/2006     |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L       | 1  | 8/29/2006     |
| Surr: 1,2-Dichloroethane-d4             | 98.6   | 69.9-130 |      | %REC       | 50 | 8/29/2006     |
| Surr: 4-Bromofluorobenzene              | 94.2   | 75-139   |      | %REC       | 1  | 8/29/2006     |
| Surr: Dibromofluoromethane              | 81.8   | 57.3-135 |      | %REC       | 1  | 8/29/2006     |
| Surr: Toluene-d8                        | 86.3   | 81.9-122 |      | %REC       | 1  | 8/29/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 1200   | 2.0      |      | mg/L CaCO3 | 1  | 8/30/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1  | 8/30/2006     |
| Bicarbonate                             | 1200   | 2.0      |      | mg/L CaCO3 | 1  | 8/30/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |    | Analyst: CMC  |
| Total Carbon Dioxide                    | 1200   | 1.0      |      | mg CO2/L   | 1  | 8/30/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b>  |        |          |      |            |    | Analyst: CMC  |
| Specific Conductance                    | 2800   | 0.010    |      | µmhos/cm   | 1  | 8/29/2006     |
| <b>EPA METHOD 160.1: TDS</b>            |        |          |      |            |    | Analyst: KS   |

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 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-03

Client Sample ID: RW#1  
Collection Date: 8/23/2006 3:10:00 PM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses               | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 160.1: TDS  |        |     |      |       |    | Analyst: KS   |
| Total Dissolved Solids | 1700   | 20  |      | mg/L  | 1  | 8/29/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
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B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
 Lab Order: 0608317  
 Project: Annual Sampling 2006  
 Lab ID: 0608317-04

Client Sample ID: RW#15  
 Collection Date: 8/24/2006 8:30:00 AM  
 Date Received: 8/25/2006  
 Matrix: AQUEOUS

| Analyses                                  | Result | PQL     | Qual | Units | DF  | Date Analyzed         |
|-------------------------------------------|--------|---------|------|-------|-----|-----------------------|
| <b>EPA METHOD 300.0: ANIONS</b>           |        |         |      |       |     | Analyst: TES          |
| Fluoride                                  | ND     | 0.50    |      | mg/L  | 5   | 8/26/2006 1:59:14 PM  |
| Chloride                                  | 370    | 1.0     |      | mg/L  | 10  | 9/12/2006 9:10:00 AM  |
| Bromide                                   | 7.6    | 2.5     |      | mg/L  | 5   | 8/26/2006 1:59:14 PM  |
| Nitrate (As N)+Nitrite (As N)             | ND     | 0.50    |      | mg/L  | 5   | 8/26/2006 3:43:41 PM  |
| Phosphorus, Orthophosphate (As P)         | ND     | 2.5     | H    | mg/L  | 5   | 8/26/2006 1:59:14 PM  |
| Sulfate                                   | ND     | 2.5     |      | mg/L  | 5   | 8/26/2006 1:59:14 PM  |
| <b>EPA METHOD 7470: MERCURY</b>           |        |         |      |       |     | Analyst: MAP          |
| Mercury                                   | ND     | 0.00020 |      | mg/L  | 1   | 9/5/2006              |
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |         |      |       |     | Analyst: CMC          |
| Arsenic                                   | ND     | 0.020   |      | mg/L  | 1   | 9/11/2006 6:16:24 PM  |
| Barium                                    | 1.3    | 0.020   |      | mg/L  | 10  | 9/11/2006 2:46:19 PM  |
| Cadmium                                   | ND     | 0.0020  |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Calcium                                   | 140    | 10      |      | mg/L  | 10  | 9/11/2006 2:46:19 PM  |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Copper                                    | ND     | 0.0060  |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Iron                                      | 9.9    | 0.20    |      | mg/L  | 10  | 9/11/2006 2:46:19 PM  |
| Lead                                      | 0.0094 | 0.0050  |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Magnesium                                 | 43     | 1.0     |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Manganese                                 | 3.2    | 0.020   |      | mg/L  | 10  | 9/11/2006 7:09:11 PM  |
| Potassium                                 | 3.2    | 1.0     |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Selenium                                  | ND     | 0.050   |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Silver                                    | ND     | 0.0050  |      | mg/L  | 1   | 9/11/2006 12:45:58 PM |
| Sodium                                    | 560    | 10      |      | mg/L  | 10  | 9/11/2006 2:46:19 PM  |
| Uranium                                   | ND     | 0.10    |      | mg/L  | 1   | 9/11/2006 6:16:24 PM  |
| Zinc                                      | 0.034  | 0.0050  |      | mg/L  | 1   | 9/11/2006 6:16:24 PM  |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |         |      |       |     | Analyst: NMO          |
| Chromium                                  | ND     | 0.0060  |      | mg/L  | 1   | 9/6/2006 12:29:18 PM  |
| Lead                                      | ND     | 0.0050  |      | mg/L  | 1   | 9/6/2006 12:29:18 PM  |
| <b>EPA METHOD 8260B: VOLATILES</b>        |        |         |      |       |     | Analyst: SMP          |
| Benzene                                   | 20000  | 250     |      | µg/L  | 250 | 8/29/2006             |
| Toluene                                   | 20000  | 250     |      | µg/L  | 250 | 8/29/2006             |
| Ethylbenzene                              | 7200   | 250     |      | µg/L  | 250 | 8/29/2006             |
| Methyl tert-butyl ether (MTBE)            | ND     | 380     |      | µg/L  | 250 | 8/29/2006             |
| 1,2,4-Trimethylbenzene                    | 5100   | 250     |      | µg/L  | 250 | 8/29/2006             |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
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 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-04

Client Sample ID: RW#15  
Collection Date: 8/24/2006 8:30:00 AM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |      |  |      |     |           |
|-----------------------------|------|------|--|------|-----|-----------|
| 1,3,5-Trimethylbenzene      | 1400 | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,2-Dichloroethane (EDC)    | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,2-Dibromoethane (EDB)     | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Naphthalene                 | 2400 | 500  |  | µg/L | 250 | 8/29/2006 |
| 1-Methylnaphthalene         | ND   | 1000 |  | µg/L | 250 | 8/29/2006 |
| 2-Methylnaphthalene         | ND   | 1000 |  | µg/L | 250 | 8/29/2006 |
| Acetone                     | ND   | 2500 |  | µg/L | 250 | 8/29/2006 |
| Bromobenzene                | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Bromochloromethane          | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Bromodichloromethane        | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Bromoform                   | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Bromomethane                | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| 2-Butanone                  | ND   | 2500 |  | µg/L | 250 | 8/29/2006 |
| Carbon disulfide            | ND   | 2500 |  | µg/L | 250 | 8/29/2006 |
| Carbon Tetrachloride        | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| Chlorobenzene               | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Chloroethane                | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| Chloroform                  | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Chloromethane               | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 2-Chlorotoluene             | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 4-Chlorotoluene             | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| cis-1,2-DCE                 | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| cis-1,3-Dichloropropene     | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,2-Dibromo-3-chloropropane | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| Dibromochloromethane        | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Dibromomethane              | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| 1,2-Dichlorobenzene         | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,3-Dichlorobenzene         | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,4-Dichlorobenzene         | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Dichlorodifluoromethane     | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,1-Dichloroethane          | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| 1,1-Dichloroethene          | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,2-Dichloropropane         | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 1,3-Dichloropropane         | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| 2,2-Dichloropropane         | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| 1,1-Dichloropropene         | ND   | 250  |  | µg/L | 250 | 8/29/2006 |
| Hexachlorobutadiene         | ND   | 500  |  | µg/L | 250 | 8/29/2006 |
| 2-Hexanone                  | ND   | 2500 |  | µg/L | 250 | 8/29/2006 |
| Isopropylbenzene            | 350  | 250  |  | µg/L | 250 | 8/29/2006 |
| 4-Isopropyltoluene          | ND   | 250  |  | µg/L | 250 | 8/29/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
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# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-04

Client Sample ID: RW#15  
Collection Date: 8/24/2006 8:30:00 AM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                                | Result | PQL      | Qual | Units      | DF  | Date Analyzed |
|-----------------------------------------|--------|----------|------|------------|-----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b>      |        |          |      |            |     | Analyst: SMP  |
| 4-Methyl-2-pentanone                    | ND     | 2500     |      | µg/L       | 250 | 8/29/2006     |
| Methylene Chloride                      | ND     | 750      |      | µg/L       | 250 | 8/29/2006     |
| n-Butylbenzene                          | 460    | 250      |      | µg/L       | 250 | 8/29/2006     |
| n-Propylbenzene                         | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| sec-Butylbenzene                        | ND     | 500      |      | µg/L       | 250 | 8/29/2006     |
| Styrene                                 | ND     | 380      |      | µg/L       | 250 | 8/29/2006     |
| tert-Butylbenzene                       | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| 1,1,1,2-Tetrachloroethane               | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| 1,1,2,2-Tetrachloroethane               | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| Tetrachloroethene (PCE)                 | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| trans-1,2-DCE                           | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| trans-1,3-Dichloropropene               | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| 1,2,3-Trichlorobenzene                  | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| 1,2,4-Trichlorobenzene                  | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| 1,1,1-Trichloroethane                   | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| 1,1,2-Trichloroethane                   | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| Trichloroethene (TCE)                   | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| Trichlorofluoromethane                  | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| 1,2,3-Trichloropropane                  | ND     | 500      |      | µg/L       | 250 | 8/29/2006     |
| Vinyl chloride                          | ND     | 250      |      | µg/L       | 250 | 8/29/2006     |
| Xylenes, Total                          | 43000  | 750      |      | µg/L       | 250 | 8/29/2006     |
| Surr: 1,2-Dichloroethane-d4             | 48.2   | 69.9-130 | S    | %REC       | 250 | 8/29/2006     |
| Surr: 4-Bromofluorobenzene              | 94.4   | 75-139   |      | %REC       | 250 | 8/29/2006     |
| Surr: Dibromofluoromethane              | 89.7   | 57.3-135 |      | %REC       | 250 | 8/29/2006     |
| Surr: Toluene-d8                        | 91.0   | 81.9-122 |      | %REC       | 250 | 8/29/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>     |        |          |      |            |     | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)            | 1200   | 2.0      |      | mg/L CaCO3 | 1   | 8/30/2006     |
| Carbonate                               | ND     | 2.0      |      | mg/L CaCO3 | 1   | 8/30/2006     |
| Bicarbonate                             | 1200   | 2.0      |      | mg/L CaCO3 | 1   | 8/30/2006     |
| <b>TOTAL CARBON DIOXIDE CALCULATION</b> |        |          |      |            |     | Analyst: CMC  |
| Total Carbon Dioxide                    | 1200   | 1.0      |      | mg CO2/L   | 1   | 8/30/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b>  |        |          |      |            |     | Analyst: CMC  |
| Specific Conductance                    | 3300   | 0.010    |      | µmhos/cm   | 1   | 8/29/2006     |
| <b>EPA METHOD 160.1: TDS</b>            |        |          |      |            |     | Analyst: KS   |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |

**Hall Environmental Analysis Laboratory, Inc.**

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-04

Client Sample ID: RW#15  
Collection Date: 8/24/2006 8:30:00 AM  
Date Received: 8/25/2006  
Matrix: AQUEOUS

| Analyses                     | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 160.1: TDS</b> |        |     |      |       |    |               |
| Total Dissolved Solids       | 2000   | 20  |      | mg/L  | 1  | 8/29/2006     |

Analyst: KS

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-05

Client Sample ID: Trip Blank  
Collection Date:  
Date Received: 8/25/2006  
Matrix: TRIP BLANK

| Analyses                           | Result | PQL | Qual | Units | DF | Date Analyzed |
|------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8260B: VOLATILES</b> |        |     |      |       |    | Analyst: SMP  |
| Benzene                            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Toluene                            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Ethylbenzene                       | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Methyl tert-butyl ether (MTBE)     | ND     | 1.5 |      | µg/L  | 1  | 8/28/2006     |
| 1,2,4-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,3,5-Trimethylbenzene             | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dichloroethane (EDC)           | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dibromoethane (EDB)            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Naphthalene                        | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 1-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/28/2006     |
| 2-Methylnaphthalene                | ND     | 4.0 |      | µg/L  | 1  | 8/28/2006     |
| Acetone                            | ND     | 10  |      | µg/L  | 1  | 8/28/2006     |
| Bromobenzene                       | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromochloromethane                 | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromodichloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromoform                          | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Bromomethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 2-Butanone                         | ND     | 10  |      | µg/L  | 1  | 8/28/2006     |
| Carbon disulfide                   | ND     | 10  |      | µg/L  | 1  | 8/28/2006     |
| Carbon Tetrachloride               | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| Chlorobenzene                      | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Chloroethane                       | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| Chloroform                         | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Chloromethane                      | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 2-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 4-Chlorotoluene                    | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| cis-1,2-DCE                        | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| cis-1,3-Dichloropropene            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dibromo-3-chloropropane        | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| Dibromochloromethane               | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Dibromomethane                     | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,3-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,4-Dichlorobenzene                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| Dichlorodifluoromethane            | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,1-Dichloroethane                 | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,1-Dichloroethene                 | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,2-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 1,3-Dichloropropane                | ND     | 1.0 |      | µg/L  | 1  | 8/28/2006     |
| 2,2-Dichloropropane                | ND     | 2.0 |      | µg/L  | 1  | 8/28/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 26-Sep-06

CLIENT: San Juan Refining  
Lab Order: 0608317  
Project: Annual Sampling 2006  
Lab ID: 0608317-05

Client Sample ID: Trip Blank  
Collection Date:  
Date Received: 8/25/2006  
Matrix: TRIP BLANK

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

## EPA METHOD 8260B: VOLATILES

Analyst: SMP

|                             |      |          |  |      |   |           |
|-----------------------------|------|----------|--|------|---|-----------|
| 1,1-Dichloropropene         | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| Hexachlorobutadiene         | ND   | 2.0      |  | µg/L | 1 | 8/28/2006 |
| 2-Hexanone                  | ND   | 10       |  | µg/L | 1 | 8/28/2006 |
| Isopropylbenzene            | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 4-Isopropyltoluene          | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 4-Methyl-2-pentanone        | ND   | 10       |  | µg/L | 1 | 8/28/2006 |
| Methylene Chloride          | ND   | 3.0      |  | µg/L | 1 | 8/28/2006 |
| n-Butylbenzene              | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| n-Propylbenzene             | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| sec-Butylbenzene            | ND   | 2.0      |  | µg/L | 1 | 8/28/2006 |
| Styrene                     | ND   | 1.5      |  | µg/L | 1 | 8/28/2006 |
| tert-Butylbenzene           | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 1,1,1,2-Tetrachloroethane   | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 1,1,1,2,2-Tetrachloroethane | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| Tetrachloroethene (PCE)     | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| trans-1,2-DCE               | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| trans-1,3-Dichloropropene   | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 1,2,3-Trichlorobenzene      | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 1,2,4-Trichlorobenzene      | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 1,1,1-Trichloroethane       | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 1,1,2-Trichloroethane       | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| Trichloroethene (TCE)       | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| Trichlorofluoromethane      | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| 1,2,3-Trichloropropane      | ND   | 2.0      |  | µg/L | 1 | 8/28/2006 |
| Vinyl chloride              | ND   | 1.0      |  | µg/L | 1 | 8/28/2006 |
| Xylenes, Total              | ND   | 3.0      |  | µg/L | 1 | 8/28/2006 |
| Surr: 1,2-Dichloroethane-d4 | 99.6 | 69.9-130 |  | %REC | 1 | 8/28/2006 |
| Surr: 4-Bromofluorobenzene  | 89.5 | 75-139   |  | %REC | 1 | 8/28/2006 |
| Surr: Dibromofluoromethane  | 88.1 | 57.3-135 |  | %REC | 1 | 8/28/2006 |
| Surr: Toluene-d8            | 84.7 | 81.9-122 |  | %REC | 1 | 8/28/2006 |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E300

Sample ID: MBLK

MBLK

Batch ID: R20622

Analysis Date: 9/8/2006 11:50:11 AM

|                                   |    |      |      |
|-----------------------------------|----|------|------|
| Fluoride                          | ND | mg/L | 0.10 |
| Chloride                          | ND | mg/L | 0.10 |
| Bromide                           | ND | mg/L | 0.10 |
| Nitrate (As N)+Nitrite (As N)     | ND | mg/L | 0.10 |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |
| Sulfate                           | ND | mg/L | 0.50 |

Sample ID: MBLK

MBLK

Batch ID: R20645

Analysis Date: 9/11/2006 9:50:58 PM

|                                   |    |      |      |
|-----------------------------------|----|------|------|
| Fluoride                          | ND | mg/L | 0.10 |
| Chloride                          | ND | mg/L | 0.10 |
| Bromide                           | ND | mg/L | 0.10 |
| Nitrate (As N)+Nitrite (As N)     | ND | mg/L | 0.10 |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |
| Sulfate                           | ND | mg/L | 0.50 |

Sample ID: LCS ST300-06008

LCS

Batch ID: R20622

Analysis Date: 9/8/2006 12:07:35 PM

|                                   |        |      |      |      |    |     |
|-----------------------------------|--------|------|------|------|----|-----|
| Fluoride                          | 0.4696 | mg/L | 0.10 | 93.9 | 90 | 110 |
| Chloride                          | 4.739  | mg/L | 0.10 | 94.8 | 90 | 110 |
| Bromide                           | 2.495  | mg/L | 0.10 | 99.8 | 90 | 110 |
| Nitrate (As N)+Nitrite (As N)     | 3.284  | mg/L | 0.10 | 93.8 | 90 | 110 |
| Phosphorus, Orthophosphate (As P) | 4.977  | mg/L | 0.50 | 99.5 | 90 | 110 |
| Sulfate                           | 9.762  | mg/L | 0.50 | 97.6 | 90 | 110 |

Sample ID: LCS ST300-06008

LCS

Batch ID: R20645

Analysis Date: 9/11/2006 10:08:22 PM

|                                   |        |      |      |      |    |     |
|-----------------------------------|--------|------|------|------|----|-----|
| Fluoride                          | 0.4713 | mg/L | 0.10 | 94.3 | 90 | 110 |
| Chloride                          | 4.813  | mg/L | 0.10 | 96.3 | 90 | 110 |
| Bromide                           | 2.492  | mg/L | 0.10 | 99.7 | 90 | 110 |
| Nitrate (As N)+Nitrite (As N)     | 3.399  | mg/L | 0.10 | 97.1 | 90 | 110 |
| Phosphorus, Orthophosphate (As P) | 4.997  | mg/L | 0.50 | 99.9 | 90 | 110 |
| Sulfate                           | 9.827  | mg/L | 0.50 | 98.3 | 90 | 110 |

Method: E310.1

Sample ID: MB

MBLK

Batch ID: R20500

Analysis Date: 8/30/2006

|                              |    |          |     |
|------------------------------|----|----------|-----|
| Alkalinity, Total (As CaCO3) | ND | mg/L CaC | 2.0 |
| Carbonate                    | ND | mg/L CaC | 2.0 |
| Bicarbonate                  | ND | mg/L CaC | 2.0 |

Sample ID: 0608231-01ADUP

DUP

Batch ID: R20500

Analysis Date: 8/30/2006

|                              |       |          |     |      |    |
|------------------------------|-------|----------|-----|------|----|
| Alkalinity, Total (As CaCO3) | 119.0 | mg/L CaC | 2.0 | 2.55 | 15 |
| Carbonate                    | ND    | mg/L CaC | 2.0 | 0    | 15 |
| Bicarbonate                  | 119.0 | mg/L CaC | 2.0 | 2.55 | 15 |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Recovery outside accepted recovery limits          |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608317

| Analyte                        | Result | Units | PQL | %Rec | LowLimit         | HighLimit | %RPD           | RPDLimit | Qual      |
|--------------------------------|--------|-------|-----|------|------------------|-----------|----------------|----------|-----------|
| <b>Method: SW8260B</b>         |        |       |     |      |                  |           |                |          |           |
| Sample ID: bk                  |        | MBLK  |     |      | Batch ID: R20467 |           | Analysis Date: |          | 8/28/2006 |
| Benzene                        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Toluene                        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Ethylbenzene                   | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Methyl tert-butyl ether (MTBE) | ND     | µg/L  | 1.5 |      |                  |           |                |          |           |
| 1,2,4-Trimethylbenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,3,5-Trimethylbenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dichloroethane (EDC)       | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dibromoethane (EDB)        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Naphthalene                    | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1-Methylnaphthalene            | ND     | µg/L  | 4.0 |      |                  |           |                |          |           |
| 2-Methylnaphthalene            | ND     | µg/L  | 4.0 |      |                  |           |                |          |           |
| Acetone                        | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Bromobenzene                   | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromochloromethane             | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromodichloromethane           | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromoform                      | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Bromomethane                   | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 2-Butanone                     | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Carbon disulfide               | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Carbon Tetrachloride           | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Chlorobenzene                  | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Chloroethane                   | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Chloroform                     | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Chloromethane                  | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 2-Chlorotoluene                | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 4-Chlorotoluene                | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| cis-1,2-DCE                    | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| cis-1,3-Dichloropropene        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dibromo-3-chloropropane    | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| Dibromochloromethane           | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Dibromomethane                 | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1,2-Dichlorobenzene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,3-Dichlorobenzene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,4-Dichlorobenzene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Dichlorodifluoromethane        | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,1-Dichloroethane             | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1,1-Dichloroethene             | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,2-Dichloropropane            | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 1,3-Dichloropropane            | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| 2,2-Dichloropropane            | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 1,1-Dichloropropene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |
| Hexachlorobutadiene            | ND     | µg/L  | 2.0 |      |                  |           |                |          |           |
| 2-Hexanone                     | ND     | µg/L  | 10  |      |                  |           |                |          |           |
| Isopropylbenzene               | ND     | µg/L  | 1.0 |      |                  |           |                |          |           |

## Qualifiers:

E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: bk MBLK Batch ID: R20467 Analysis Date: 8/28/2006

|                           |    |      |     |
|---------------------------|----|------|-----|
| 4-Isopropyltoluene        | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone      | ND | µg/L | 10  |
| Methylene Chloride        | ND | µg/L | 3.0 |
| n-Butylbenzene            | ND | µg/L | 1.0 |
| n-Propylbenzene           | ND | µg/L | 1.0 |
| sec-Butylbenzene          | ND | µg/L | 2.0 |
| Styrene                   | ND | µg/L | 1.5 |
| tert-Butylbenzene         | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)   | ND | µg/L | 1.0 |
| trans-1,2-DCE             | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane     | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane     | ND | µg/L | 1.0 |
| Trichloroethene (TCE)     | ND | µg/L | 1.0 |
| Trichlorofluoromethane    | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane    | ND | µg/L | 2.0 |
| Vinyl chloride            | ND | µg/L | 1.0 |
| Xylenes, Total            | ND | µg/L | 3.0 |

Sample ID: bk MBLK Batch ID: R20491 Analysis Date: 8/29/2006

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.5 |
| 1,2,4-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,3,5-Trimethylbenzene         | ND | µg/L | 1.0 |
| 1,2-Dichloroethane (EDC)       | ND | µg/L | 1.0 |
| 1,2-Dibromoethane (EDB)        | ND | µg/L | 1.0 |
| Naphthalene                    | ND | µg/L | 2.0 |
| 1-Methylnaphthalene            | ND | µg/L | 4.0 |
| 2-Methylnaphthalene            | ND | µg/L | 4.0 |
| Acetone                        | ND | µg/L | 10  |
| Bromobenzene                   | ND | µg/L | 1.0 |
| Bromochloromethane             | ND | µg/L | 1.0 |
| Bromodichloromethane           | ND | µg/L | 1.0 |
| Bromoform                      | ND | µg/L | 1.0 |
| Bromomethane                   | ND | µg/L | 2.0 |
| 2-Butanone                     | ND | µg/L | 10  |
| Carbon disulfide               | ND | µg/L | 10  |
| Carbon Tetrachloride           | ND | µg/L | 2.0 |
| Chlorobenzene                  | ND | µg/L | 1.0 |

## Qualifiers:

- E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: bk

MBLK

Batch ID: R20491

Analysis Date:

8/29/2006

|                             |    |      |     |
|-----------------------------|----|------|-----|
| Chloroethane                | ND | µg/L | 2.0 |
| Chloroform                  | ND | µg/L | 1.0 |
| Chloromethane               | ND | µg/L | 1.0 |
| 2-Chlorotoluene             | ND | µg/L | 1.0 |
| 4-Chlorotoluene             | ND | µg/L | 1.0 |
| cis-1,2-DCE                 | ND | µg/L | 1.0 |
| cis-1,3-Dichloropropene     | ND | µg/L | 1.0 |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 |
| Dibromochloromethane        | ND | µg/L | 1.0 |
| Dibromomethane              | ND | µg/L | 2.0 |
| 1,2-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,3-Dichlorobenzene         | ND | µg/L | 1.0 |
| 1,4-Dichlorobenzene         | ND | µg/L | 1.0 |
| Dichlorodifluoromethane     | ND | µg/L | 1.0 |
| 1,1-Dichloroethane          | ND | µg/L | 2.0 |
| 1,1-Dichloroethene          | ND | µg/L | 1.0 |
| 1,2-Dichloropropane         | ND | µg/L | 1.0 |
| 1,3-Dichloropropane         | ND | µg/L | 1.0 |
| 1,2-Dichloropropane         | ND | µg/L | 2.0 |
| 1,1-Dichloropropene         | ND | µg/L | 1.0 |
| Hexachlorobutadiene         | ND | µg/L | 2.0 |
| 2-Hexanone                  | ND | µg/L | 10  |
| Isopropylbenzene            | ND | µg/L | 1.0 |
| 4-Isopropyltoluene          | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone        | ND | µg/L | 10  |
| Methylene Chloride          | ND | µg/L | 3.0 |
| n-Butylbenzene              | ND | µg/L | 1.0 |
| n-Propylbenzene             | ND | µg/L | 1.0 |
| sec-Butylbenzene            | ND | µg/L | 2.0 |
| Styrene                     | ND | µg/L | 1.5 |
| tert-Butylbenzene           | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane   | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)     | ND | µg/L | 1.0 |
| trans-1,2-DCE               | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene   | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene      | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane       | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane       | ND | µg/L | 1.0 |
| Trichloroethene (TCE)       | ND | µg/L | 1.0 |
| Trichlorofluoromethane      | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane      | ND | µg/L | 2.0 |
| Vinyl chloride              | ND | µg/L | 1.0 |

## Qualifiers:

E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

S Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608317

| Analyte                        | Result | Units | PQL | %Rec | LowLimit         | HighLimit | %RPD           | RPDLimit | Qual                 |
|--------------------------------|--------|-------|-----|------|------------------|-----------|----------------|----------|----------------------|
| <b>Method: SW8260B</b>         |        |       |     |      |                  |           |                |          |                      |
| Sample ID: bk                  |        | MBLK  |     |      | Batch ID: R20491 |           | Analysis Date: |          | 8/29/2006            |
| Xylenes, Total                 | ND     | µg/L  | 3.0 |      |                  |           |                |          |                      |
| Sample ID: 5ml rb wed          |        | MBLK  |     |      | Batch ID: R20506 |           | Analysis Date: |          | 8/30/2006 9:31:35 AM |
| Benzene                        | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Toluene                        | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Ethylbenzene                   | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Methyl tert-butyl ether (MTBE) | ND     | µg/L  | 1.5 |      |                  |           |                |          |                      |
| 1,2,4-Trimethylbenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,3,5-Trimethylbenzene         | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,2-Dichloroethane (EDC)       | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,2-Dibromoethane (EDB)        | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Naphthalene                    | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| 1-Methylnaphthalene            | ND     | µg/L  | 4.0 |      |                  |           |                |          |                      |
| 2-Methylnaphthalene            | ND     | µg/L  | 4.0 |      |                  |           |                |          |                      |
| Acetone                        | ND     | µg/L  | 10  |      |                  |           |                |          |                      |
| Bromobenzene                   | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Bromochloromethane             | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Bromodichloromethane           | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Bromoform                      | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Bromomethane                   | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| 2-Butanone                     | ND     | µg/L  | 10  |      |                  |           |                |          |                      |
| Carbon disulfide               | ND     | µg/L  | 10  |      |                  |           |                |          |                      |
| Carbon Tetrachloride           | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| Chlorobenzene                  | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Chloroethane                   | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| Chloroform                     | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Chloromethane                  | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 2-Chlorotoluene                | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 4-Chlorotoluene                | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| cis-1,2-DCE                    | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| cis-1,3-Dichloropropene        | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,2-Dibromo-3-chloropropane    | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| Dibromochloromethane           | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Dibromomethane                 | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| 1,2-Dichlorobenzene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,3-Dichlorobenzene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,4-Dichlorobenzene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Dichlorodifluoromethane        | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,1-Dichloroethane             | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| 1,1-Dichloroethene             | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,2-Dichloropropane            | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 1,3-Dichloropropane            | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| 2,2-Dichloropropane            | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |
| 1,1-Dichloropropene            | ND     | µg/L  | 1.0 |      |                  |           |                |          |                      |
| Hexachlorobutadiene            | ND     | µg/L  | 2.0 |      |                  |           |                |          |                      |

## Qualifiers:

E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 5ml rb wed

MBLK

Batch ID: R20506 Analysis Date: 8/30/2006 9:31:35 AM

|                           |    |      |     |
|---------------------------|----|------|-----|
| 2-Hexanone                | ND | µg/L | 10  |
| Isopropylbenzene          | ND | µg/L | 1.0 |
| 4-Isopropyltoluene        | ND | µg/L | 1.0 |
| 4-Methyl-2-pentanone      | ND | µg/L | 10  |
| Methylene Chloride        | ND | µg/L | 3.0 |
| n-Butylbenzene            | ND | µg/L | 1.0 |
| n-Propylbenzene           | ND | µg/L | 1.0 |
| sec-Butylbenzene          | ND | µg/L | 2.0 |
| Styrene                   | ND | µg/L | 1.5 |
| tert-Butylbenzene         | ND | µg/L | 1.0 |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 1.0 |
| Tetrachloroethene (PCE)   | ND | µg/L | 1.0 |
| trans-1,2-DCE             | ND | µg/L | 1.0 |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 |
| 1,2,3-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,2,4-Trichlorobenzene    | ND | µg/L | 1.0 |
| 1,1,1-Trichloroethane     | ND | µg/L | 1.0 |
| 1,1,2-Trichloroethane     | ND | µg/L | 1.0 |
| Trichloroethene (TCE)     | ND | µg/L | 1.0 |
| Trichlorofluoromethane    | ND | µg/L | 1.0 |
| 1,2,3-Trichloropropane    | ND | µg/L | 2.0 |
| Vinyl chloride            | ND | µg/L | 1.0 |
| Xylenes, Total            | ND | µg/L | 3.0 |

Sample ID: 100ng lcs

LCS

Batch ID: R20467 Analysis Date: 8/28/2006

|                       |       |      |     |      |      |     |
|-----------------------|-------|------|-----|------|------|-----|
| Benzene               | 17.63 | µg/L | 1.0 | 88.1 | 66.2 | 115 |
| Toluene               | 16.61 | µg/L | 1.0 | 80.5 | 72   | 109 |
| Chlorobenzene         | 18.20 | µg/L | 1.0 | 91.0 | 78.5 | 109 |
| 1,1-Dichloroethene    | 19.28 | µg/L | 1.0 | 96.4 | 62.3 | 124 |
| Trichloroethene (TCE) | 19.06 | µg/L | 1.0 | 95.3 | 74.3 | 109 |

Sample ID: 100ng lcs

LCS

Batch ID: R20491 Analysis Date: 8/29/2006

|                       |       |      |     |      |      |     |
|-----------------------|-------|------|-----|------|------|-----|
| Benzene               | 16.79 | µg/L | 1.0 | 83.9 | 66.2 | 115 |
| Toluene               | 15.87 | µg/L | 1.0 | 79.4 | 72   | 109 |
| Chlorobenzene         | 17.37 | µg/L | 1.0 | 86.8 | 78.5 | 109 |
| 1,1-Dichloroethene    | 18.40 | µg/L | 1.0 | 92.0 | 62.3 | 124 |
| Trichloroethene (TCE) | 17.81 | µg/L | 1.0 | 89.1 | 74.3 | 109 |

Sample ID: 100ng lcs

LCS

Batch ID: R20506 Analysis Date: 8/30/2006 10:42:20 AM

|                       |       |      |     |      |      |     |
|-----------------------|-------|------|-----|------|------|-----|
| Benzene               | 19.00 | µg/L | 1.0 | 95.0 | 66.2 | 115 |
| Toluene               | 18.36 | µg/L | 1.0 | 91.8 | 72   | 109 |
| Chlorobenzene         | 18.54 | µg/L | 1.0 | 92.7 | 78.5 | 109 |
| 1,1-Dichloroethene    | 17.97 | µg/L | 1.0 | 89.8 | 62.3 | 124 |
| Trichloroethene (TCE) | 18.19 | µg/L | 1.0 | 90.9 | 74.3 | 109 |

Sample ID: 100ng lcsd

LCSD

Batch ID: R20506 Analysis Date: 8/30/2006 11:05:45 PM

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8260B

Sample ID: 100ng lcsd

LCSD

Batch ID: R20506

Analysis Date: 8/30/2006 11:05:45 PM

|                       |       |      |     |      |      |     |       |      |  |
|-----------------------|-------|------|-----|------|------|-----|-------|------|--|
| Benzene               | 19.75 | µg/L | 1.0 | 98.7 | 66.2 | 115 | 3.84  | 11   |  |
| Toluene               | 18.47 | µg/L | 1.0 | 92.3 | 72   | 109 | 0.565 | 12.2 |  |
| Chlorobenzene         | 18.87 | µg/L | 1.0 | 94.4 | 78.5 | 109 | 1.76  | 12   |  |
| 1,1-Dichloroethene    | 21.59 | µg/L | 1.0 | 108  | 62.3 | 124 | 18.3  | 19.3 |  |
| Trichloroethene (TCE) | 19.51 | µg/L | 1.0 | 97.6 | 74.3 | 109 | 7.01  | 15.5 |  |

Method: E120.1

Sample ID: 0608283-02ADUP

DUP

Batch ID: R20481

Analysis Date: 8/29/2006

|                      |       |          |       |  |  |  |       |    |  |
|----------------------|-------|----------|-------|--|--|--|-------|----|--|
| Specific Conductance | 190.5 | µmhos/cm | 0.010 |  |  |  | 0.263 | 20 |  |
|----------------------|-------|----------|-------|--|--|--|-------|----|--|

Method: SW7470

Sample ID: MB-11183

MBLK

Batch ID: 11183

Analysis Date: 9/5/2006

|         |    |      |         |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|
| Mercury | ND | mg/L | 0.00020 |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|

Sample ID: MB-11302

MBLK

Batch ID: 11302

Analysis Date: 9/19/2006

|         |    |      |         |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|
| Mercury | ND | mg/L | 0.00020 |  |  |  |  |  |  |
|---------|----|------|---------|--|--|--|--|--|--|

Sample ID: LCS-11183

LCS

Batch ID: 11183

Analysis Date: 9/5/2006

|         |          |      |         |     |    |     |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|
| Mercury | 0.005340 | mg/L | 0.00020 | 107 | 80 | 120 |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|

Sample ID: LCS-11302

LCS

Batch ID: 11302

Analysis Date: 9/19/2006

|         |          |      |         |     |    |     |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|
| Mercury | 0.005880 | mg/L | 0.00020 | 118 | 80 | 120 |  |  |  |
|---------|----------|------|---------|-----|----|-----|--|--|--|

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: MB

MBLK

Batch ID: R-20633 Analysis Date: 9/11/2006 12:01:31 PM

|           |    |      |        |
|-----------|----|------|--------|
| Barium    | ND | mg/L | 0.020  |
| Cadmium   | ND | mg/L | 0.0020 |
| Calcium   | ND | mg/L | 1.0    |
| Chromium  | ND | mg/L | 0.0060 |
| Copper    | ND | mg/L | 0.0060 |
| Iron      | ND | mg/L | 0.020  |
| Lead      | ND | mg/L | 0.0050 |
| Magnesium | ND | mg/L | 1.0    |
| Potassium | ND | mg/L | 1.0    |
| Selenium  | ND | mg/L | 0.050  |
| Silver    | ND | mg/L | 0.0050 |
| Sodium    | ND | mg/L | 1.0    |

Sample ID: MB

MBLK

Batch ID: R-20633 Analysis Date: 9/11/2006 5:51:02 PM

|           |    |      |        |
|-----------|----|------|--------|
| Arsenic   | ND | mg/L | 0.020  |
| Manganese | ND | mg/L | 0.0020 |
| Zinc      | ND | mg/L | 0.050  |

Sample ID: MB

MBLK

Batch ID: R20773 Analysis Date: 9/21/2006 4:08:17 PM

|           |    |      |        |
|-----------|----|------|--------|
| Arsenic   | ND | mg/L | 0.020  |
| Barium    | ND | mg/L | 0.020  |
| Cadmium   | ND | mg/L | 0.0020 |
| Calcium   | ND | mg/L | 1.0    |
| Chromium  | ND | mg/L | 0.0060 |
| Copper    | ND | mg/L | 0.0060 |
| Iron      | ND | mg/L | 0.020  |
| Lead      | ND | mg/L | 0.0050 |
| Magnesium | ND | mg/L | 1.0    |
| Manganese | ND | mg/L | 0.0020 |
| Potassium | ND | mg/L | 1.0    |
| Selenium  | ND | mg/L | 0.050  |
| Silver    | ND | mg/L | 0.0050 |
| Sodium    | ND | mg/L | 1.0    |
| Uranium   | ND | mg/L | 0.10   |
| Zinc      | ND | mg/L | 0.050  |

Sample ID: MB

MBLK

Batch ID: R20773 Analysis Date: 9/22/2006 9:33:08 AM

|           |    |      |        |
|-----------|----|------|--------|
| Arsenic   | ND | mg/L | 0.020  |
| Barium    | ND | mg/L | 0.020  |
| Cadmium   | ND | mg/L | 0.0020 |
| Calcium   | ND | mg/L | 1.0    |
| Chromium  | ND | mg/L | 0.0060 |
| Copper    | ND | mg/L | 0.0060 |
| Iron      | ND | mg/L | 0.020  |
| Lead      | ND | mg/L | 0.0050 |
| Magnesium | ND | mg/L | 1.0    |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Recovery outside accepted recovery limits          |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: MB

MBLK

Batch ID: R20773

Analysis Date: 9/22/2006 9:33:08 AM

|           |    |      |        |
|-----------|----|------|--------|
| Manganese | ND | mg/L | 0.0020 |
| Potassium | ND | mg/L | 1.0    |
| Selenium  | ND | mg/L | 0.050  |
| Silver    | ND | mg/L | 0.0050 |
| Sodium    | ND | mg/L | 1.0    |
| Uranium   | ND | mg/L | 0.10   |
| Zinc      | ND | mg/L | 0.050  |

Sample ID: LCS

LCS

Batch ID: R-20633

Analysis Date: 9/11/2006 12:04:33 PM

|           |        |      |        |      |    |     |
|-----------|--------|------|--------|------|----|-----|
| Barium    | 0.4734 | mg/L | 0.020  | 94.7 | 80 | 120 |
| Cadmium   | 0.4682 | mg/L | 0.0020 | 93.6 | 80 | 120 |
| Calcium   | 49.27  | mg/L | 1.0    | 97.6 | 80 | 120 |
| Chromium  | 0.4779 | mg/L | 0.0060 | 95.6 | 80 | 120 |
| Copper    | 0.4686 | mg/L | 0.0060 | 93.7 | 80 | 120 |
| Iron      | 0.5632 | mg/L | 0.020  | 113  | 80 | 120 |
| Lead      | 0.4664 | mg/L | 0.0050 | 93.3 | 80 | 120 |
| Magnesium | 49.39  | mg/L | 1.0    | 97.8 | 80 | 120 |
| Potassium | 53.22  | mg/L | 1.0    | 96.8 | 80 | 120 |
| Selenium  | 0.4368 | mg/L | 0.050  | 87.4 | 80 | 120 |
| Silver    | 0.4697 | mg/L | 0.0050 | 93.9 | 80 | 120 |
| Sodium    | 53.72  | mg/L | 1.0    | 106  | 80 | 120 |

Sample ID: LCS

LCS

Batch ID: R-20633

Analysis Date: 9/11/2006 5:56:06 PM

|           |        |      |        |      |    |     |
|-----------|--------|------|--------|------|----|-----|
| Arsenic   | 0.5183 | mg/L | 0.020  | 104  | 80 | 120 |
| Manganese | 0.4958 | mg/L | 0.0020 | 99.2 | 80 | 120 |
| Zinc      | 0.4941 | mg/L | 0.050  | 98.8 | 80 | 120 |

Sample ID: LCS

LCS

Batch ID: R20773

Analysis Date: 9/21/2006 4:11:21 PM

|           |        |      |        |      |    |     |
|-----------|--------|------|--------|------|----|-----|
| Arsenic   | 0.4983 | mg/L | 0.020  | 99.7 | 80 | 120 |
| Barium    | 0.4820 | mg/L | 0.020  | 96.3 | 80 | 120 |
| Cadmium   | 0.4948 | mg/L | 0.0020 | 99.0 | 80 | 120 |
| Calcium   | 49.14  | mg/L | 1.0    | 97.3 | 80 | 120 |
| Chromium  | 0.4821 | mg/L | 0.0060 | 96.4 | 80 | 120 |
| Copper    | 0.4955 | mg/L | 0.0060 | 99.1 | 80 | 120 |
| Iron      | 0.4778 | mg/L | 0.020  | 95.6 | 80 | 120 |
| Lead      | 0.4777 | mg/L | 0.0050 | 95.5 | 80 | 120 |
| Magnesium | 49.69  | mg/L | 1.0    | 98.4 | 80 | 120 |
| Manganese | 0.4825 | mg/L | 0.0020 | 96.5 | 80 | 120 |
| Potassium | 54.93  | mg/L | 1.0    | 99.4 | 80 | 120 |
| Selenium  | 0.4470 | mg/L | 0.050  | 86.5 | 80 | 120 |
| Silver    | 0.4967 | mg/L | 0.0050 | 99.3 | 80 | 120 |
| Sodium    | 54.70  | mg/L | 1.0    | 108  | 80 | 120 |
| Uranium   | 0.5041 | mg/L | 0.10   | 20.2 | 80 | 120 |
| Zinc      | 0.4715 | mg/L | 0.050  | 94.3 | 80 | 120 |

Sample ID: LCS

LCS

Batch ID: R20773

Analysis Date: 9/22/2006 9:35:17 AM

|         |        |      |       |     |    |     |
|---------|--------|------|-------|-----|----|-----|
| Arsenic | 0.5005 | mg/L | 0.020 | 100 | 80 | 120 |
|---------|--------|------|-------|-----|----|-----|

## Qualifiers:

E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: Annual Sampling 2006

Work Order: 0608317

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

|            |        |      |        |      |           |        |                |                      |   |
|------------|--------|------|--------|------|-----------|--------|----------------|----------------------|---|
| Sample ID: | LCS    | LCS  |        |      | Batch ID: | R20773 | Analysis Date: | 9/22/2006 9:35:17 AM |   |
| Barium     | 0.4708 | mg/L | 0.020  | 94.2 | 80        | 120    |                |                      |   |
| Cadmium    | 0.4782 | mg/L | 0.0020 | 95.6 | 80        | 120    |                |                      |   |
| Calcium    | 47.77  | mg/L | 1.0    | 94.6 | 80        | 120    |                |                      |   |
| Chromium   | 0.4962 | mg/L | 0.0060 | 99.2 | 80        | 120    |                |                      |   |
| Copper     | 0.4717 | mg/L | 0.0060 | 94.3 | 80        | 120    |                |                      |   |
| Iron       | 0.4818 | mg/L | 0.020  | 96.4 | 80        | 120    |                |                      |   |
| Lead       | 0.4746 | mg/L | 0.0050 | 94.9 | 80        | 120    |                |                      |   |
| Magnesium  | 47.72  | mg/L | 1.0    | 94.5 | 80        | 120    |                |                      |   |
| Manganese  | 0.4669 | mg/L | 0.0020 | 93.4 | 80        | 120    |                |                      |   |
| Potassium  | 52.08  | mg/L | 1.0    | 94.7 | 80        | 120    |                |                      |   |
| Selenium   | 0.4604 | mg/L | 0.050  | 92.1 | 80        | 120    |                |                      |   |
| Silver     | 0.4722 | mg/L | 0.0050 | 94.4 | 80        | 120    |                |                      |   |
| Sodium     | 51.69  | mg/L | 1.0    | 102  | 80        | 120    |                |                      |   |
| Uranium    | 0.4921 | mg/L | 0.10   | 19.7 | 80        | 120    |                |                      | S |
| Zinc       | 0.4857 | mg/L | 0.050  | 97.1 | 80        | 120    |                |                      |   |

Method: SW6010A

|            |          |      |        |  |           |       |                |                      |  |
|------------|----------|------|--------|--|-----------|-------|----------------|----------------------|--|
| Sample ID: | MB-11158 | MBLK |        |  | Batch ID: | 11158 | Analysis Date: | 9/6/2006 11:44:38 AM |  |
| Chromium   | ND       | mg/L | 0.0060 |  |           |       |                |                      |  |
| Lead       | ND       | mg/L | 0.0050 |  |           |       |                |                      |  |

|            |          |      |        |  |           |       |                |                      |  |
|------------|----------|------|--------|--|-----------|-------|----------------|----------------------|--|
| Sample ID: | MB-11158 | MBLK |        |  | Batch ID: | 11158 | Analysis Date: | 9/13/2006 1:47:05 PM |  |
| Chromium   | ND       | mg/L | 0.0060 |  |           |       |                |                      |  |
| Lead       | ND       | mg/L | 0.0050 |  |           |       |                |                      |  |

|            |          |      |        |  |           |       |                |                      |  |
|------------|----------|------|--------|--|-----------|-------|----------------|----------------------|--|
| Sample ID: | MB-11309 | MBLK |        |  | Batch ID: | 11309 | Analysis Date: | 9/22/2006 8:51:31 AM |  |
| Chromium   | ND       | mg/L | 0.0060 |  |           |       |                |                      |  |
| Lead       | ND       | mg/L | 0.0050 |  |           |       |                |                      |  |

|            |           |      |        |      |           |       |                |                      |  |
|------------|-----------|------|--------|------|-----------|-------|----------------|----------------------|--|
| Sample ID: | LCS-11158 | LCS  |        |      | Batch ID: | 11158 | Analysis Date: | 9/6/2006 11:47:50 AM |  |
| Chromium   | 0.5045    | mg/L | 0.0060 | 101  | 80        | 120   |                |                      |  |
| Lead       | 0.4903    | mg/L | 0.0050 | 98.1 | 80        | 120   |                |                      |  |

|            |           |      |        |      |           |       |                |                      |  |
|------------|-----------|------|--------|------|-----------|-------|----------------|----------------------|--|
| Sample ID: | LCS-11158 | LCS  |        |      | Batch ID: | 11158 | Analysis Date: | 9/13/2006 1:49:16 PM |  |
| Chromium   | 0.4724    | mg/L | 0.0060 | 94.2 | 80        | 120   |                |                      |  |
| Lead       | 0.4591    | mg/L | 0.0050 | 91.8 | 80        | 120   |                |                      |  |

|            |           |      |        |      |           |       |                |                      |  |
|------------|-----------|------|--------|------|-----------|-------|----------------|----------------------|--|
| Sample ID: | LCS-11309 | LCS  |        |      | Batch ID: | 11309 | Analysis Date: | 9/22/2006 8:54:31 AM |  |
| Chromium   | 0.5178    | mg/L | 0.0060 | 104  | 80        | 120   |                |                      |  |
| Lead       | 0.4974    | mg/L | 0.0050 | 99.5 | 80        | 120   |                |                      |  |

Method: E160.1

|                        |                 |      |    |      |           |       |                |           |  |
|------------------------|-----------------|------|----|------|-----------|-------|----------------|-----------|--|
| Sample ID:             | MB-11144        | MBLK |    |      | Batch ID: | 11144 | Analysis Date: | 8/29/2006 |  |
| Total Dissolved Solids | ND              | mg/L | 20 |      |           |       |                |           |  |
| Sample ID:             | LCS-11144       | LCS  |    |      | Batch ID: | 11144 | Analysis Date: | 8/29/2006 |  |
| Total Dissolved Solids | 979.0           | mg/L | 20 | 97.9 | 80        | 120   |                |           |  |
| Sample ID:             | 0608325-03A DUP | DUP  |    |      | Batch ID: | 11144 | Analysis Date: | 8/29/2006 |  |
| Total Dissolved Solids | 1390            | mg/L | 20 |      |           |       | 0.867          | 20        |  |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Recovery outside accepted recovery limits          |







COVER LETTER

Wednesday, February 22, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: River Sampling 1st Qtr 2006

Order No.: 0601064

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/6/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



## Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Project: River Sampling 1st Qtr 2006  
Lab Order: 0601064

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## CASE NARRATIVE

The 8270 samples were analyzed by a subcontract laboratory.

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-01

Client Sample ID: N of MW #45  
Collection Date: 1/5/2006 2:55:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    |                      |
|                                           |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 1/9/2006 8:01:56 PM  |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 1/9/2006 8:01:56 PM  |
| Surr: DNOP                                | 120    | 58-140   |      | %REC  | 1  | 1/9/2006 8:01:56 PM  |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    |                      |
|                                           |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 1/12/2006 7:46:33 PM |
| Surr: BFB                                 | 94.9   | 79.7-118 |      | %REC  | 1  | 1/12/2006 7:46:33 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    |                      |
|                                           |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 1/12/2006 7:46:33 PM |
| Benzene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 7:46:33 PM |
| Toluene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 7:46:33 PM |
| Ethylbenzene                              | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 7:46:33 PM |
| Xylenes, Total                            | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 7:46:33 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    |                      |
|                                           |        |          |      |       |    | Analyst: TES         |
| Fluoride                                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Chloride                                  | 2.6    | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006             |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006             |
| Sulfate                                   | 61     | 0.50     |      | mg/L  | 1  | 1/7/2006             |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    |                      |
|                                           |        |          |      |       |    | Analyst: CMC         |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 1/9/2006             |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    |                      |
|                                           |        |          |      |       |    | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Barium                                    | 0.060  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Calcium                                   | 35     | 1.0      |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Iron                                      | 0.025  | 0.020    |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Magnesium                                 | 6.1    | 1.0      |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Manganese                                 | 0.022  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-01

Client Sample ID: N of MW #45  
Collection Date: 1/5/2006 2:55:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|--------|------|-------|----|----------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: NMO         |
| Potassium                                 | 1.9    | 1.0    |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Sodium                                    | 20     | 1.0    |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| Zinc                                      | 0.11   | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:49:39 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: CMC         |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 1/16/2006 2:43:12 PM |
| Barium                                    | 0.063  | 0.020  |      | mg/L  | 1  | 1/16/2006 2:43:12 PM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 1/16/2006 2:43:12 PM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 1/16/2006 2:43:12 PM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:43:12 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 2:43:12 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:43:12 PM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL          |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 2/16/2006            |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| 2-Chloronaphthalene                       | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| 2-Chlorophenol                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chlorophenyl phenyl ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Chrysene                                  | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-01

Client Sample ID: N of MW #45  
Collection Date: 1/5/2006 2:55:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                        | Result | PQL | Qual | Units | DF | Date Analyzed |
|---------------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8270C: SEMIVOLATILES |        |     |      |       |    | Analyst: BL   |
| Di-n-butyl phthalate            | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Di-n-octyl phthalate            | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Dibenz(a,h)anthracene           | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dibenzofuran                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,2-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,3-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,4-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 3,3'-Dichlorobenzidine          | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Diethyl phthalate               | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dimethyl phthalate              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dichlorophenol              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dimethylphenol              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 4,6-Dinitro-2-methylphenol      | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrophenol               | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrotoluene              | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,6-Dinitrotoluene              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluoranthene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluorene                        | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobenzene               | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobutadiene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachloroethane                | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Indeno(1,2,3-cd)pyrene          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Isophorone                      | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylnaphthalene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylphenol                  | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 3+4-Methylphenol                | ND     | 20  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodi-n-propylamine       | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodiphenylamine          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Naphthalene                     | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 3-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Nitrobenzene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitrophenol                   | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitrophenol                   | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Pentachlorophenol               | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Phenanthrene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Phenol                          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Pyrene                          | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 1,2,4-Trichlorobenzene          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-01

Client Sample ID: N of MW #45  
Collection Date: 1/5/2006 2:55:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 2,4,5-Trichlorophenol                  | ND     | 50        |      | µg/L       | 1  | 2/16/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 2/16/2006     |
| Surr: 2,4,6-Tribromophenol             | 66.0   | 16.6-150  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorobiphenyl                 | 67.0   | 19.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorophenol                   | 49.0   | 9.54-113  |      | %REC       | 1  | 2/16/2006     |
| Surr: 4-Terphenyl-d14                  | 81.0   | 22.7-145  |      | %REC       | 1  | 2/16/2006     |
| Surr: Nitrobenzene-d5                  | 64.0   | 14.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: Phenol-d5                        | 36.0   | 10.7-80.3 |      | %REC       | 1  | 2/16/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: TES  |
| Alkalinity, Total (As CaCO3)           | 81     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Bicarbonate                            | 81     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: TES  |
| Specific Conductance                   | 300    | 0.010     |      | µmhos/cm   | 1  | 1/11/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: TES  |
| Total Dissolved Solids                 | 190    | 50        |      | mg/L       | 1  | 1/12/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-02

Client Sample ID: N of MW #46  
Collection Date: 1/5/2006 2:30:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 1/9/2006 8:34:52 PM  |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 1/9/2006 8:34:52 PM  |
| Surr: DNOP                                | 120    | 58-140   |      | %REC  | 1  | 1/9/2006 8:34:52 PM  |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 1/12/2006 9:16:30 PM |
| Surr: BFB                                 | 102    | 79.7-118 |      | %REC  | 1  | 1/12/2006 9:16:30 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 1/12/2006 9:16:30 PM |
| Benzene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 9:16:30 PM |
| Toluene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 9:16:30 PM |
| Ethylbenzene                              | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 9:16:30 PM |
| Xylenes, Total                            | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 9:16:30 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: TES         |
| Fluoride                                  | 0.10   | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Chloride                                  | 2.7    | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006             |
| Nitrogen, Nitrate (As N)                  | 0.11   | 0.10     |      | mg/L  | 1  | 1/7/2006             |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006             |
| Sulfate                                   | 62     | 0.50     |      | mg/L  | 1  | 1/7/2006             |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC         |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 1/9/2006             |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Barium                                    | 0.060  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Calcium                                   | 36     | 1.0      |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Iron                                      | ND     | 0.020    |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Magnesium                                 | 6.2    | 1.0      |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |
| Manganese                                 | 0.021  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:52:41 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-02

Client Sample ID: N of MW #46  
Collection Date: 1/5/2006 2:30:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed                        |
|-------------------------------------------|--------|--------|------|-------|----|--------------------------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    |                                      |
| Potassium                                 | 2.0    | 1.0    |      | mg/L  | 1  | Analyst: NMO<br>1/16/2006 9:52:41 AM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 9:52:41 AM                 |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:52:41 AM                 |
| Sodium                                    | 20     | 1.0    |      | mg/L  | 1  | 1/16/2006 9:52:41 AM                 |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 1/16/2006 9:52:41 AM                 |
| Zinc                                      | 0.067  | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:52:41 AM                 |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    |                                      |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | Analyst: CMC<br>1/16/2006 2:45:23 PM |
| Barium                                    | 0.064  | 0.020  |      | mg/L  | 1  | 1/16/2006 2:45:23 PM                 |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 1/16/2006 2:45:23 PM                 |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 1/16/2006 2:45:23 PM                 |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:45:23 PM                 |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 2:45:23 PM                 |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:45:23 PM                 |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    |                                      |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | Analyst: BL<br>2/16/2006             |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 2/16/2006                            |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 2/16/2006                            |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 2/16/2006                            |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 2/16/2006                            |
| 2-Chloronaphthalene                       | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| 2-Chlorophenol                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006                            |
| 4-Chlorophenyl phenyl ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |
| Chrysene                                  | ND     | 15     |      | µg/L  | 1  | 2/16/2006                            |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-02

Client Sample ID: N of MW #46  
Collection Date: 1/5/2006 2:30:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                        | Result | PQL | Qual | Units | DF | Date Analyzed |
|---------------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8270C: SEMIVOLATILES |        |     |      |       |    | Analyst: BL   |
| Di-n-butyl phthalate            | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Di-n-octyl phthalate            | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Dibenz(a,h)anthracene           | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dibenzofuran                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,2-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,3-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,4-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 3,3'-Dichlorobenzidine          | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Diethyl phthalate               | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dimethyl phthalate              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dichlorophenol              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dimethylphenol              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 4,6-Dinitro-2-methylphenol      | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrophenol               | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrotoluene              | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,6-Dinitrotoluene              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluoranthene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluorene                        | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobenzene               | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobutadiene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachloroethane                | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Indeno(1,2,3-cd)pyrene          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Isophorone                      | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylnaphthalene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylphenol                  | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 3+4-Methylphenol                | ND     | 20  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodi-n-propylamine       | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodiphenylamine          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Naphthalene                     | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 3-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Nitrobenzene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitrophenol                   | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitrophenol                   | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Pentachlorophenol               | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Phenanthrene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Phenol                          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Pyrene                          | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 1,2,4-Trichlorobenzene          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-02

Client Sample ID: N of MW #46  
Collection Date: 1/5/2006 2:30:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 2,4,5-Trichlorophenol                  | ND     | 50        |      | µg/L       | 1  | 2/16/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 2/16/2006     |
| Surr: 2,4,6-Tribromophenol             | 70.0   | 16.6-150  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorobiphenyl                 | 80.0   | 19.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorophenol                   | 52.0   | 9.54-113  |      | %REC       | 1  | 2/16/2006     |
| Surr: 4-Terphenyl-d14                  | 97.0   | 22.7-145  |      | %REC       | 1  | 2/16/2006     |
| Surr: Nitrobenzene-d5                  | 73.0   | 14.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: Phenol-d5                        | 42.0   | 10.7-80.3 |      | %REC       | 1  | 2/16/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: TES  |
| Alkalinity, Total (As CaCO3)           | 83     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Bicarbonate                            | 83     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: TES  |
| Specific Conductance                   | 300    | 0.010     |      | µmhos/cm   | 1  | 1/11/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: TES  |
| Total Dissolved Solids                 | 190    | 50        |      | mg/L       | 1  | 1/12/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-03

Client Sample ID: River Downstream  
Collection Date: 1/5/2006 3:45:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 1/9/2006 9:07:54 PM   |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 1/9/2006 9:07:54 PM   |
| Surr: DNOP                                | 117    | 58-140   |      | %REC  | 1  | 1/9/2006 9:07:54 PM   |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 1/12/2006 10:46:02 PM |
| Surr: BFB                                 | 102    | 79.7-118 |      | %REC  | 1  | 1/12/2006 10:46:02 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 1/12/2006 10:46:02 PM |
| Benzene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 10:46:02 PM |
| Toluene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 10:46:02 PM |
| Ethylbenzene                              | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 10:46:02 PM |
| Xylenes, Total                            | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 10:46:02 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.17   | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Chloride                                  | 3.9    | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006              |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006              |
| Sulfate                                   | 84     | 2.5      |      | mg/L  | 5  | 1/9/2006              |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC          |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 1/9/2006              |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Barium                                    | 0.058  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Calcium                                   | 40     | 1.0      |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Iron                                      | 0.030  | 0.020    |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Magnesium                                 | 6.7    | 1.0      |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |
| Manganese                                 | 0.070  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:55:44 AM  |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-03

Client Sample ID: River Downstream  
Collection Date: 1/5/2006 3:45:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|--------|------|-------|----|----------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: NMO         |
| Potassium                                 | 2.0    | 1.0    |      | mg/L  | 1  | 1/16/2006 9:55:44 AM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 9:55:44 AM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:55:44 AM |
| Sodium                                    | 27     | 1.0    |      | mg/L  | 1  | 1/16/2006 9:55:44 AM |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 1/16/2006 9:55:44 AM |
| Zinc                                      | 0.056  | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:55:44 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: CMC         |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 1/16/2006 2:47:38 PM |
| Barium                                    | 0.063  | 0.020  |      | mg/L  | 1  | 1/16/2006 2:47:38 PM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 1/16/2006 2:47:38 PM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 1/16/2006 2:47:38 PM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:47:38 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 2:47:38 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:47:38 PM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL          |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 2/16/2006            |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| 2-Chloronaphthalene                       | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| 2-Chlorophenol                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chlorophenyl phenyl ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Chrysene                                  | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |



# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-03

Client Sample ID: River Downstream  
Collection Date: 1/5/2006 3:45:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |       |    | Analyst: BL   |
| Di-n-butyl phthalate                   | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Di-n-octyl phthalate                   | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Dibenz(a,h)anthracene                  | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dibenzofuran                           | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,2-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,3-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,4-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 3,3'-Dichlorobenzidine                 | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Diethyl phthalate                      | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dimethyl phthalate                     | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dichlorophenol                     | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dimethylphenol                     | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 4,6-Dinitro-2-methylphenol             | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrophenol                      | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrotoluene                     | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,6-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluoranthene                           | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluorene                               | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobenzene                      | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobutadiene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachloroethane                       | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Isophorone                             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylnaphthalene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylphenol                         | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 3+4-Methylphenol                       | ND     | 20  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodi-n-propylamine              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodiphenylamine                 | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Naphthalene                            | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 3-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Nitrobenzene                           | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitrophenol                          | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitrophenol                          | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Pentachlorophenol                      | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Phenanthrene                           | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Phenol                                 | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Pyrene                                 | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-03

Client Sample ID: River Downstream  
Collection Date: 1/5/2006 3:45:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 2,4,5-Trichlorophenol                  | ND     | 50        |      | µg/L       | 1  | 2/16/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 2/16/2006     |
| Surr: 2,4,6-Tribromophenol             | 61.0   | 16.6-150  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorobiphenyl                 | 65.0   | 19.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorophenol                   | 46.0   | 9.54-113  |      | %REC       | 1  | 2/16/2006     |
| Surr: 4-Terphenyl-d14                  | 83.0   | 22.7-145  |      | %REC       | 1  | 2/16/2006     |
| Surr: Nitrobenzene-d5                  | 61.0   | 14.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: Phenol-d5                        | 36.0   | 10.7-80.3 |      | %REC       | 1  | 2/16/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: TES  |
| Alkalinity, Total (As CaCO3)           | 86     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Bicarbonate                            | 86     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: TES  |
| Specific Conductance                   | 370    | 0.010     |      | µmhos/cm   | 1  | 1/11/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: TES  |
| Total Dissolved Solids                 | 240    | 50        |      | mg/L       | 1  | 1/12/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-04

Client Sample ID: River Upstream  
Collection Date: 1/5/2006 3:15:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC          |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 1/9/2006 9:40:55 PM   |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 1/9/2006 9:40:55 PM   |
| Surr: DNOP                                | 115    | 58-140   |      | %REC  | 1  | 1/9/2006 9:40:55 PM   |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 1/12/2006 11:15:50 PM |
| Surr: BFB                                 | 102    | 79.7-118 |      | %REC  | 1  | 1/12/2006 11:15:50 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 1/12/2006 11:15:50 PM |
| Benzene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 11:15:50 PM |
| Toluene                                   | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 11:15:50 PM |
| Ethylbenzene                              | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 11:15:50 PM |
| Xylenes, Total                            | ND     | 0.50     |      | µg/L  | 1  | 1/12/2006 11:15:50 PM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: TES          |
| Fluoride                                  | 0.11   | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Chloride                                  | 2.4    | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006              |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 1/7/2006              |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 1/7/2006              |
| Sulfate                                   | 58     | 0.50     |      | mg/L  | 1  | 1/7/2006              |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC          |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 1/9/2006              |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Barium                                    | 0.061  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Calcium                                   | 35     | 1.0      |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Iron                                      | ND     | 0.020    |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Magnesium                                 | 6.1    | 1.0      |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |
| Manganese                                 | 0.022  | 0.0020   |      | mg/L  | 1  | 1/16/2006 9:58:47 AM  |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-04

Client Sample ID: River Upstream  
Collection Date: 1/5/2006 3:15:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|--------|------|-------|----|----------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: NMO         |
| Potassium                                 | 1.9    | 1.0    |      | mg/L  | 1  | 1/16/2006 9:58:47 AM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 9:58:47 AM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:58:47 AM |
| Sodium                                    | 20     | 1.0    |      | mg/L  | 1  | 1/16/2006 9:58:47 AM |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 1/16/2006 9:58:47 AM |
| Zinc                                      | 0.12   | 0.0050 |      | mg/L  | 1  | 1/16/2006 9:58:47 AM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: CMC         |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 1/16/2006 2:49:47 PM |
| Barium                                    | 0.063  | 0.020  |      | mg/L  | 1  | 1/16/2006 2:49:47 PM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 1/16/2006 2:49:47 PM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 1/16/2006 2:49:47 PM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:49:47 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 1/16/2006 2:49:47 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 1/16/2006 2:49:47 PM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL          |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Benzoic acid                              | ND     | 100    |      | µg/L  | 1  | 2/16/2006            |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 2/16/2006            |
| 2-Chloronaphthalene                       | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| 2-Chlorophenol                            | ND     | 10     |      | µg/L  | 1  | 2/16/2006            |
| 4-Chlorophenyl phenyl ether               | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |
| Chrysene                                  | ND     | 15     |      | µg/L  | 1  | 2/16/2006            |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-04

Client Sample ID: River Upstream  
Collection Date: 1/5/2006 3:15:00 PM  
Date Received: 1/6/2006  
Matrix: AQUEOUS

| Analyses                        | Result | PQL | Qual | Units | DF | Date Analyzed |
|---------------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8270C: SEMIVOLATILES |        |     |      |       |    | Analyst: BL   |
| Di-n-butyl phthalate            | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Di-n-octyl phthalate            | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Dibenz(a,h)anthracene           | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dibenzofuran                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,2-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,3-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 1,4-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 3,3'-Dichlorobenzidine          | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| Diethyl phthalate               | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Dimethyl phthalate              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dichlorophenol              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dimethylphenol              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 4,6-Dinitro-2-methylphenol      | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrophenol               | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,4-Dinitrotoluene              | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 2,6-Dinitrotoluene              | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluoranthene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Fluorene                        | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobenzene               | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachlorobutadiene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Hexachloroethane                | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Indeno(1,2,3-cd)pyrene          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Isophorone                      | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylnaphthalene             | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Methylphenol                  | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 3+4-Methylphenol                | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodi-n-propylamine       | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| N-Nitrosodiphenylamine          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Naphthalene                     | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 3-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Nitrobenzene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| 2-Nitrophenol                   | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 4-Nitrophenol                   | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Pentachlorophenol               | ND     | 50  |      | µg/L  | 1  | 2/16/2006     |
| Phenanthrene                    | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Phenol                          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |
| Pyrene                          | ND     | 15  |      | µg/L  | 1  | 2/16/2006     |
| 1,2,4-Trichlorobenzene          | ND     | 10  |      | µg/L  | 1  | 2/16/2006     |

|             |   |                                                 |    |                                                    |
|-------------|---|-------------------------------------------------|----|----------------------------------------------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level         | B  | Analyte detected in the associated Method Blank    |
|             | E | Value above quantitation range                  | H  | Holding times for preparation or analysis exceeded |
|             | J | Analyte detected below quantitation limits      | ND | Not Detected at the Reporting Limit                |
|             | S | Spike Recovery outside accepted recovery limits |    |                                                    |

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
 Lab Order: 0601064  
 Project: River Sampling 1st Qtr 2006  
 Lab ID: 0601064-04

Client Sample ID: River Upstream  
 Collection Date: 1/5/2006 3:15:00 PM  
 Date Received: 1/6/2006  
 Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 2,4,5-Trichlorophenol                  | ND     | 50        |      | µg/L       | 1  | 2/16/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 2/16/2006     |
| Surr: 2,4,6-Tribromophenol             | 63.0   | 16.6-150  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorobiphenyl                 | 70.0   | 19.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: 2-Fluorophenol                   | 52.0   | 9.54-113  |      | %REC       | 1  | 2/16/2006     |
| Surr: 4-Terphenyl-d14                  | 83.0   | 22.7-145  |      | %REC       | 1  | 2/16/2006     |
| Surr: Nitrobenzene-d5                  | 66.0   | 14.6-134  |      | %REC       | 1  | 2/16/2006     |
| Surr: Phenol-d5                        | 39.0   | 10.7-80.3 |      | %REC       | 1  | 2/16/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: TES  |
| Alkalinity, Total (As CaCO3)           | 82     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| Bicarbonate                            | 82     | 2.0       |      | mg/L CaCO3 | 1  | 1/9/2006      |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: TES  |
| Specific Conductance                   | 290    | 0.010     |      | µmhos/cm   | 1  | 1/11/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: TES  |
| Total Dissolved Solids                 | 180    | 50        |      | mg/L       | 1  | 1/12/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level B Analyte detected in the associated Method Blank  
 E Value above quantitation range H Holding times for preparation or analysis exceeded  
 J Analyte detected below quantitation limits ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory

Date: 22-Feb-06

CLIENT: San Juan Refining  
Lab Order: 0601064  
Project: River Sampling 1st Qtr 2006  
Lab ID: 0601064-05

Client Sample ID: Trip Blank  
Collection Date:  
Date Received: 1/6/2006  
Matrix: TRIP BLANK

| Analyses                                | Result | PQL      | Qual | Units | DF | Date Analyzed         |
|-----------------------------------------|--------|----------|------|-------|----|-----------------------|
| <b>EPA METHOD 8015B: GASOLINE RANGE</b> |        |          |      |       |    | Analyst: NSB          |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L  | 1  | 1/12/2006 11:45:43 PM |
| Surr: BFB                               | 102    | 79.7-118 |      | %REC  | 1  | 1/12/2006 11:45:43 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>      |        |          |      |       |    | Analyst: NSB          |
| Methyl tert-butyl ether (MTBE)          | ND     | 2.5      |      | µg/L  | 1  | 1/12/2006 11:45:43 PM |
| Benzene                                 | ND     | 1.0      |      | µg/L  | 1  | 1/12/2006 11:45:43 PM |
| Toluene                                 | ND     | 1.0      |      | µg/L  | 1  | 1/12/2006 11:45:43 PM |
| Ethylbenzene                            | ND     | 1.0      |      | µg/L  | 1  | 1/12/2006 11:45:43 PM |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L  | 1  | 1/12/2006 11:45:43 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



## Hall Environmental Analysis Laboratory

Date: 22-Feb-06

## ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0601064

Project: River Sampling 1st Qtr 2006

TestCode: 300\_W

|                  |                  |                 |             |                         |               |          |           |             |      |          |      |
|------------------|------------------|-----------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MBLK  | SampType: MBLK   | TestCode: 300_W | Units: mg/L | Prep Date:              | RunNo: 17841  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R17841 | TestNo: E300    |             | Analysis Date: 1/6/2006 | SeqNo: 438674 |          |           |             |      |          |      |
| Analyte          | Result           | PQL             | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                  |                  |                 |             |                         |               |          |           |             |      |          |      |
|------------------|------------------|-----------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MBLK  | SampType: MBLK   | TestCode: 300_W | Units: mg/L | Prep Date:              | RunNo: 17866  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R17866 | TestNo: E300    |             | Analysis Date: 1/9/2006 | SeqNo: 439207 |          |           |             |      |          |      |
| Analyte          | Result           | PQL             | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

10/36

|                            |                  |                 |             |                         |               |          |           |             |      |          |      |
|----------------------------|------------------|-----------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-ST300-05023 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:              | RunNo: 17841  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R17841 | TestNo: E300    |             | Analysis Date: 1/6/2006 | SeqNo: 438675 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL             | SPK_value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Qualifiers: E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

S Spike Recovery outside accepted recovery limits

**CLIENT:** San Juan Refining  
**Work Order:** 0601064  
**Project:** River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

**TestCode:** 300\_W

|                            |                  |                 |             |                         |               |          |           |             |      |          |      |
|----------------------------|------------------|-----------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-ST300-05023 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:              | RunNo: 17841  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R17841 | TestNo: E300    |             | Analysis Date: 1/6/2006 | SeqNo: 438675 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL             | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                   |       |      |    |   |      |    |     |  |  |  |  |
|-----------------------------------|-------|------|----|---|------|----|-----|--|--|--|--|
| Phosphorus, Orthophosphate (As P) | 4.700 | 0.50 | 5  | 0 | 94.0 | 90 | 110 |  |  |  |  |
| Sulfate                           | 9.384 | 0.50 | 10 | 0 | 93.8 | 90 | 110 |  |  |  |  |

|                            |                  |                 |             |                         |               |          |           |             |      |          |      |
|----------------------------|------------------|-----------------|-------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-ST300-05023 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:              | RunNo: 17866  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R17866 | TestNo: E300    |             | Analysis Date: 1/9/2006 | SeqNo: 439208 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL             | SPK value   | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                   |        |      |     |   |      |    |     |  |  |  |  |
|-----------------------------------|--------|------|-----|---|------|----|-----|--|--|--|--|
| Fluoride                          | 0.4877 | 0.10 | 0.5 | 0 | 97.5 | 90 | 110 |  |  |  |  |
| Chloride                          | 4.537  | 0.10 | 5   | 0 | 90.7 | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrite (As N)          | 0.9265 | 0.10 | 1   | 0 | 92.6 | 90 | 110 |  |  |  |  |
| Bromide                           | 2.343  | 0.50 | 2.5 | 0 | 93.7 | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.283  | 0.10 | 2.5 | 0 | 91.3 | 90 | 110 |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | 4.681  | 0.50 | 5   | 0 | 93.6 | 90 | 110 |  |  |  |  |
| Sulfate                           | 9.534  | 0.50 | 10  | 0 | 95.3 | 90 | 110 |  |  |  |  |

2036

**Qualifiers:** E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

**CLIENT:** San Juan Refining  
**Work Order:** 0601064  
**Project:** River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

**TestCode:** 310.1\_W

|                         |                         |                          |                          |                                |                      |          |           |             |      |          |      |
|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID: <b>MBLK</b>  | SampType: <b>MBLK</b>   | TestCode: <b>310.1_W</b> | Units: <b>mg/L CaCO3</b> | Prep Date:                     | RunNo: <b>17847</b>  |          |           |             |      |          |      |
| Client ID: <b>ZZZZZ</b> | Batch ID: <b>R17847</b> | TestNo: <b>E310.1</b>    |                          | Analysis Date: <b>1/9/2006</b> | SeqNo: <b>438805</b> |          |           |             |      |          |      |
| Analyte                 | Result                  | PQL                      | SPK value                | SPK Ref Val                    | %REC                 | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Alkalinity, Total (As CaCO3) ND 2.0  
 Carbonate ND 2.0  
 Bicarbonate ND 2.0

|                         |                         |                          |                          |                                |                      |          |           |             |      |          |      |
|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID: <b>MBLK</b>  | SampType: <b>MBLK</b>   | TestCode: <b>310.1_W</b> | Units: <b>mg/L CaCO3</b> | Prep Date:                     | RunNo: <b>17847</b>  |          |           |             |      |          |      |
| Client ID: <b>ZZZZZ</b> | Batch ID: <b>R17847</b> | TestNo: <b>E310.1</b>    |                          | Analysis Date: <b>1/9/2006</b> | SeqNo: <b>438812</b> |          |           |             |      |          |      |
| Analyte                 | Result                  | PQL                      | SPK value                | SPK Ref Val                    | %REC                 | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Alkalinity, Total (As CaCO3) ND 2.0  
 Carbonate ND 2.0  
 Bicarbonate ND 2.0

**Qualifiers:** E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0601064  
 Project: River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO\_W

|                                |                |                     |             |                         |                                                        |
|--------------------------------|----------------|---------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: MB-9535             | SampType: MBLK | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17852                                           |
| Client ID: ZZZZZ               | Batch ID: 9535 | TestNo: SW8015      |             | Analysis Date: 1/9/2006 | SeqNo: 438884                                          |
| Analyte                        | Result         | PQL                 | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Diesel Range Organics (DRO)    | ND             | 1.0                 |             |                         |                                                        |
| Motor Oil Range Organics (MRO) | ND             | 5.0                 |             |                         |                                                        |

|                             |                |                     |             |                         |                                                        |
|-----------------------------|----------------|---------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: LCS-9535         | SampType: LCS  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17852                                           |
| Client ID: ZZZZZ            | Batch ID: 9535 | TestNo: SW8015      |             | Analysis Date: 1/9/2006 | SeqNo: 438885                                          |
| Analyte                     | Result         | PQL                 | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 5.740          | 1.0                 | 5           | 0                       | 115 81.2 149                                           |

|                             |                |                     |             |                         |                                                        |
|-----------------------------|----------------|---------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: LCSD-9535        | SampType: LCSD | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17852                                           |
| Client ID: ZZZZZ            | Batch ID: 9535 | TestNo: SW8015      |             | Analysis Date: 1/9/2006 | SeqNo: 438886                                          |
| Analyte                     | Result         | PQL                 | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 5.962          | 1.0                 | 5           | 0                       | 119 81.2 149 5.74 3.80 23                              |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

**CLIENT:** San Juan Refining  
**Work Order:** 0601064  
**Project:** River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

**TestCode:** 8015GRO\_W

|                                     |                         |                            |                    |                                 |                      |          |           |             |      |          |      |
|-------------------------------------|-------------------------|----------------------------|--------------------|---------------------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID: <b>Reagent Blank 5ml</b> | SampType: <b>MBLK</b>   | TestCode: <b>8015GRO_W</b> | Units: <b>mg/L</b> | Prep Date:                      | RunNo: <b>17890</b>  |          |           |             |      |          |      |
| Client ID: <b>ZZZZZ</b>             | Batch ID: <b>R17890</b> | TestNo: <b>SW8015</b>      |                    | Analysis Date: <b>1/12/2006</b> | SeqNo: <b>439931</b> |          |           |             |      |          |      |
| Analyte                             | Result                  | PQL                        | SPK value          | SPK Ref Val                     | %REC                 | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                          |                  |                     |             |                          |               |          |           |             |      |          |      |
|--------------------------|------------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: GRO lcs 2.5ug | SampType: LCS    | TestCode: 8015GRO_W | Units: mg/L | Prep Date:               | RunNo: 17890  |          |           |             |      |          |      |
| Client ID: ZZZZZ         | Batch ID: R17890 | TestNo: SW8015      |             | Analysis Date: 1/13/2006 | SeqNo: 439932 |          |           |             |      |          |      |
| Analyte                  | Result           | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                           |                  |                     |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0601064-02a ms | SampType: MS     | TestCode: 8015GRO_W | Units: mg/L | Prep Date:               | RunNo: 17890  |          |           |             |      |          |      |
| Client ID: N of MW #46    | Batch ID: R17890 | TestNo: SW8015      |             | Analysis Date: 1/12/2006 | SeqNo: 439951 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                            |                  |                     |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0601064-02a msd | SampType: MSD    | TestCode: 8015GRO_W | Units: mg/L | Prep Date:               | RunNo: 17890  |          |           |             |      |          |      |
| Client ID: N of MW #46     | Batch ID: R17890 | TestNo: SW8015      |             | Analysis Date: 1/12/2006 | SeqNo: 439952 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

**Qualifiers:** E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0601064  
 Project: River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                              |                  |                      |             |                          |                                                        |
|------------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: Reagent Blank 5ml | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 17890                                           |
| Client ID: ZZZZ              | Batch ID: R17890 | TestNo: SW8021       |             | Analysis Date: 1/12/2006 | SeqNo: 439913                                          |
| Analyte                      | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: BTEX lcs 100ng | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 17890                                           |
| Client ID: ZZZZ           | Batch ID: R17890 | TestNo: SW8021       |             | Analysis Date: 1/12/2006 | SeqNo: 440002                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 0601064-01a ms | SampType: MS     | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 17890                                           |
| Client ID: N of MW #45    | Batch ID: R17890 | TestNo: SW8021       |             | Analysis Date: 1/12/2006 | SeqNo: 439929                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 0601064-01a msd | SampType: MSD    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 17890                                           |
| Client ID: N of MW #45     | Batch ID: R17890 | TestNo: SW8021       |             | Analysis Date: 1/12/2006 | SeqNo: 439930                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

CLIENT:

San Juan Refining

Work Order:

0601064

Project:

River Sampling 1st Qtr 2006

ANALYTICAL QC SUMMARY REPORT

TestCode: 8021BTEX\_W

|                                |                  |                      |             |                          |               |          |           |             |       |          |      |
|--------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|-------|----------|------|
| Sample ID: 0601064-01a msd     | SampType: MSD    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 17890  |          |           |             |       |          |      |
| Client ID: N of MW #45         | Batch ID: R17890 | TestNo: SW8021       |             | Analysis Date: 1/12/2006 | SeqNo: 439930 |          |           |             |       |          |      |
| Analyte                        | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 19.41            | 2.5                  | 20          | 0                        | 97.1          | 64.5     | 133       | 20.07       | 3.33  | 28       |      |
| Benzene                        | 16.95            | 1.0                  | 20          | 0                        | 84.7          | 84.2     | 114       | 17.58       | 3.64  | 27       |      |
| Toluene                        | 18.24            | 1.0                  | 20          | 0                        | 91.2          | 87.2     | 114       | 18.56       | 1.74  | 19       |      |
| Ethylbenzene                   | 18.72            | 1.0                  | 20          | 0                        | 93.6          | 88.6     | 113       | 18.64       | 0.412 | 10       |      |
| Xylenes, Total                 | 38.20            | 3.0                  | 40          | 0                        | 95.5          | 83.3     | 114       | 38.83       | 1.64  | 13       |      |

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

S Spike Recovery outside accepted recovery limits

Page 7 of 17



|                             |                |                  |             |                          |               |          |           |             |      |          |      |
|-----------------------------|----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-9552          | SampType: MBLK | TestCode: 8270_W | Units: µg/L | Prep Date: 1/10/2006     | RunNo: 18276  |          |           |             |      |          |      |
| Client ID: ZZZZZ            | Batch ID: 9552 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 2/16/2006 | SeqNo: 450546 |          |           |             |      |          |      |
| Analyte                     | Result         | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Acenaphthylene              | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Anthracene                  | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Benz(a)anthracene           | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Benzo(a)pyrene              | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Benzo(b)fluoranthene        | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Benzo(g,h,i)perylene        | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Benzo(k)fluoranthene        | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Benzoic acid                | ND             | 50               |             |                          |               |          |           |             |      |          |      |
| Benzyl alcohol              | ND             | 20               |             |                          |               |          |           |             |      |          |      |
| Bis(2-chloroethoxy)methane  | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Bis(2-chloroethyl)ether     | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Bis(2-chloroisopropyl)ether | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| 4-Bromophenyl phenyl ether  | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Butyl benzyl phthalate      | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| 4-Chloro-3-methylphenol     | ND             | 20               |             |                          |               |          |           |             |      |          |      |
| 4-Chloroaniline             | ND             | 20               |             |                          |               |          |           |             |      |          |      |
| 2-Chloronaphthalene         | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| 2-Chlorophenol              | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| 4-Chlorophenyl phenyl ether | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Chrysene                    | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Di-n-butyl phthalate        | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Di-n-octyl phthalate        | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Dibenz(a,h)anthracene       | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| Dibenzofuran                | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| 1,2-Dichlorobenzene         | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| 1,3-Dichlorobenzene         | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| 1,4-Dichlorobenzene         | ND             | 10               |             |                          |               |          |           |             |      |          |      |
| 3,3'-Dichlorobenzidine      | ND             | 15               |             |                          |               |          |           |             |      |          |      |
| Diethyl phthalate           | ND             | 10               |             |                          |               |          |           |             |      |          |      |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
Work Order: 0601064  
Project: River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_W

|                    |                |                  |             |                          |               |          |           |             |      |          |      |
|--------------------|----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-9552 | SampType: MBLK | TestCode: 8270_W | Units: µg/L | Prep Date: 1/10/2006     | RunNo: 18276  |          |           |             |      |          |      |
| Client ID: ZZZZZ   | Batch ID: 9552 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 2/16/2006 | SeqNo: 450546 |          |           |             |      |          |      |
| Analyte            | Result         | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                            |    |    |  |  |  |  |  |  |  |  |  |
|----------------------------|----|----|--|--|--|--|--|--|--|--|--|
| Dimethyl phthalate         | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2,4-Dichlorophenol         | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2,4-Dimethylphenol         | ND | 10 |  |  |  |  |  |  |  |  |  |
| 4,6-Dinitro-2-methylphenol | ND | 50 |  |  |  |  |  |  |  |  |  |
| 2,4-Dinitrophenol          | ND | 50 |  |  |  |  |  |  |  |  |  |
| 2,4-Dinitrotoluene         | ND | 50 |  |  |  |  |  |  |  |  |  |
| 2,6-Dinitrotoluene         | ND | 10 |  |  |  |  |  |  |  |  |  |
| Fluoranthene               | ND | 10 |  |  |  |  |  |  |  |  |  |
| Fluorene                   | ND | 10 |  |  |  |  |  |  |  |  |  |
| Hexachlorobenzene          | ND | 10 |  |  |  |  |  |  |  |  |  |
| Hexachlorobutadiene        | ND | 10 |  |  |  |  |  |  |  |  |  |
| Hexachloroethane           | ND | 10 |  |  |  |  |  |  |  |  |  |
| Indeno(1,2,3-cd)pyrene     | ND | 10 |  |  |  |  |  |  |  |  |  |
| Isophorone                 | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2-Methylnaphthalene        | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2-Methylphenol             | ND | 15 |  |  |  |  |  |  |  |  |  |
| 3+4-Methylphenol           | ND | 20 |  |  |  |  |  |  |  |  |  |
| N-Nitrosodi-n-propylamine  | ND | 10 |  |  |  |  |  |  |  |  |  |
| N-Nitrosodiphenylamine     | ND | 10 |  |  |  |  |  |  |  |  |  |
| Naphthalene                | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2-Nitroaniline             | ND | 50 |  |  |  |  |  |  |  |  |  |
| 3-Nitroaniline             | ND | 50 |  |  |  |  |  |  |  |  |  |
| 4-Nitroaniline             | ND | 50 |  |  |  |  |  |  |  |  |  |
| Nitrobenzene               | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2-Nitrophenol              | ND | 15 |  |  |  |  |  |  |  |  |  |
| 4-Nitrophenol              | ND | 50 |  |  |  |  |  |  |  |  |  |
| Pentachlorophenol          | ND | 50 |  |  |  |  |  |  |  |  |  |
| Phenanthrene               | ND | 10 |  |  |  |  |  |  |  |  |  |
| Phenol                     | ND | 10 |  |  |  |  |  |  |  |  |  |
| Pyrene                     | ND | 15 |  |  |  |  |  |  |  |  |  |
| 1,2,4-Trichlorobenzene     | ND | 10 |  |  |  |  |  |  |  |  |  |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0601064  
 Project: River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_W

|                    |                |                  |             |                          |               |          |           |             |      |          |      |
|--------------------|----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-9552 | SampType: MBLK | TestCode: 8270_W | Units: µg/L | Prep Date: 1/10/2006     | RunNo: 18276  |          |           |             |      |          |      |
| Client ID: ZZZZZ   | Batch ID: 9552 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 2/16/2006 | SeqNo: 450546 |          |           |             |      |          |      |
| Analyte            | Result         | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                     |                |                  |             |                          |               |          |           |             |      |          |      |
|---------------------|----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-9552 | SampType: LCS  | TestCode: 8270_W | Units: µg/L | Prep Date: 1/10/2006     | RunNo: 18276  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 9552 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 2/16/2006 | SeqNo: 450547 |          |           |             |      |          |      |
| Analyte             | Result         | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                      |                |                  |             |                          |               |          |           |             |      |          |      |
|----------------------|----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-9552 | SampType: LCSD | TestCode: 8270_W | Units: µg/L | Prep Date: 1/10/2006     | RunNo: 18276  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 9552 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 2/16/2006 | SeqNo: 450548 |          |           |             |      |          |      |
| Analyte              | Result         | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

**CLIENT:** San Juan Refining  
**Work Order:** 0601064  
**Project:** River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

**TestCode:** 8270\_W

|                        |                |                  |             |                          |               |          |           |             |      |          |      |
|------------------------|----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-9552   | SampType: LCSD | TestCode: 8270_W | Units: µg/L | Prep Date: 1/10/2006     | RunNo: 18276  |          |           |             |      |          |      |
| Client ID: ZZZZZ       | Batch ID: 9552 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 2/16/2006 | SeqNo: 450548 |          |           |             |      |          |      |
| Analyte                | Result         | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Pentachlorophenol      | 140.0          | 50               | 200         | 0                        | 70.0          | 3.55     | 114       | 140         | 0    | 49       |      |
| Phenol                 | 79.00          | 10               | 200         | 0                        | 39.5          | 7.53     | 73.1      | 81          | 2.50 | 52.4     |      |
| Pyrene                 | 85.00          | 15               | 100         | 0                        | 85.0          | 12.6     | 140       | 95          | 11.1 | 16.3     |      |
| 1,2,4-Trichlorobenzene | 68.00          | 10               | 100         | 0                        | 68.0          | 17.4     | 98.7      | 66          | 2.99 | 36.4     |      |

**Qualifiers:** E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0601064  
 Project: River Sampling 1st Qtr 2006

TestCode: HG\_CTW

|                    |                |                  |             |                         |                                                        |
|--------------------|----------------|------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: MB-9544 | SampType: MBLK | TestCode: HG_CTW | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17848                                           |
| Client ID: ZZZZZ   | Batch ID: 9544 | TestNo: SW7470   | (SW7470)    | Analysis Date: 1/9/2006 | SeqNo: 438823                                          |
| Analyte            | Result         | PQL              | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Mercury            | ND             | 0.00020          |             |                         |                                                        |

|                     |                |                  |             |                         |                                                        |
|---------------------|----------------|------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: LCS-9544 | SampType: LCS  | TestCode: HG_CTW | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17848                                           |
| Client ID: ZZZZZ    | Batch ID: 9544 | TestNo: SW7470   | (SW7470)    | Analysis Date: 1/9/2006 | SeqNo: 438824                                          |
| Analyte             | Result         | PQL              | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Mercury             | 0.004253       | 0.00020          | 0.005       | 0                       | 85.1 80 120                                            |

|                      |                |                  |             |                         |                                                        |
|----------------------|----------------|------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: LCSD-9544 | SampType: LCSD | TestCode: HG_CTW | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17848                                           |
| Client ID: ZZZZZ     | Batch ID: 9544 | TestNo: SW7470   | (SW7470)    | Analysis Date: 1/9/2006 | SeqNo: 438848                                          |
| Analyte              | Result         | PQL              | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Mercury              | 0.004311       | 0.00020          | 0.005       | 0                       | 86.2 80 120 0.004253 1.35 0                            |

|                           |                |                  |             |                         |                                                        |
|---------------------------|----------------|------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: 0601064-04D MS | SampType: MS   | TestCode: HG_CTW | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17848                                           |
| Client ID: River Upstream | Batch ID: 9544 | TestNo: SW7470   | (SW7470)    | Analysis Date: 1/9/2006 | SeqNo: 438842                                          |
| Analyte                   | Result         | PQL              | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Mercury                   | 0.004008       | 0.00020          | 0.005       | 0                       | 80.2 75 125                                            |

|                            |                |                  |             |                         |                                                        |
|----------------------------|----------------|------------------|-------------|-------------------------|--------------------------------------------------------|
| Sample ID: 0601064-04D MSD | SampType: MSD  | TestCode: HG_CTW | Units: mg/L | Prep Date: 1/9/2006     | RunNo: 17848                                           |
| Client ID: River Upstream  | Batch ID: 9544 | TestNo: SW7470   | (SW7470)    | Analysis Date: 1/9/2006 | SeqNo: 438843                                          |
| Analyte                    | Result         | PQL              | SPK value   | SPK Ref Val             | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Mercury                    | 0.004173       | 0.00020          | 0.005       | 0                       | 83.5 75 125 0.004008 4.03 20                           |

Qualifiers: E Value above quantitation range ND Not Detected at the Reporting Limit H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0601064  
 Project: River Sampling 1st Qtr 2006

ANALYTICAL QC SUMMARY REPORT

TestCode: METALS\_DISS

|                  |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB    | SampType: MBLK   | TestCode: METALS_DIS | Units: mg/L | Prep Date:               | RunNo: 17918  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R17918 | TestNo: SW6010A      |             | Analysis Date: 1/16/2006 | SeqNo: 440450 |          |           |             |      |          |      |
| Analyte          | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|           |    |        |  |  |  |  |  |  |  |  |  |
|-----------|----|--------|--|--|--|--|--|--|--|--|--|
| Arsenic   | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Barium    | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Cadmium   | ND | 0.0020 |  |  |  |  |  |  |  |  |  |
| Calcium   | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Chromium  | ND | 0.0060 |  |  |  |  |  |  |  |  |  |
| Copper    | ND | 0.0060 |  |  |  |  |  |  |  |  |  |
| Iron      | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Lead      | ND | 0.0050 |  |  |  |  |  |  |  |  |  |
| Magnesium | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Manganese | ND | 0.0020 |  |  |  |  |  |  |  |  |  |
| Potassium | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Selenium  | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Silver    | ND | 0.0050 |  |  |  |  |  |  |  |  |  |
| Sodium    | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Uranium   | ND | 0.10   |  |  |  |  |  |  |  |  |  |
| Zinc      | ND | 0.050  |  |  |  |  |  |  |  |  |  |

31  
36

|                  |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS   | SampType: LCS    | TestCode: METALS_DIS | Units: mg/L | Prep Date:               | RunNo: 17918  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R17918 | TestNo: SW6010A      |             | Analysis Date: 1/16/2006 | SeqNo: 440451 |          |           |             |      |          |      |
| Analyte          | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|           |        |        |      |   |      |    |     |  |  |  |  |
|-----------|--------|--------|------|---|------|----|-----|--|--|--|--|
| Arsenic   | 0.5073 | 0.020  | 0.5  | 0 | 101  | 80 | 120 |  |  |  |  |
| Barium    | 0.4828 | 0.020  | 0.5  | 0 | 96.6 | 80 | 120 |  |  |  |  |
| Cadmium   | 0.4898 | 0.0020 | 0.5  | 0 | 98.0 | 80 | 120 |  |  |  |  |
| Calcium   | 52.54  | 1.0    | 50.5 | 0 | 104  | 80 | 120 |  |  |  |  |
| Chromium  | 0.4951 | 0.0060 | 0.5  | 0 | 99.0 | 80 | 120 |  |  |  |  |
| Copper    | 0.4786 | 0.0060 | 0.5  | 0 | 95.7 | 80 | 120 |  |  |  |  |
| Iron      | 0.4537 | 0.020  | 0.5  | 0 | 90.7 | 80 | 120 |  |  |  |  |
| Lead      | 0.4843 | 0.0050 | 0.5  | 0 | 96.9 | 80 | 120 |  |  |  |  |
| Magnesium | 51.97  | 1.0    | 50.5 | 0 | 103  | 80 | 120 |  |  |  |  |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

|                  |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS   | SampType: LCS    | TestCode: METALS_DIS | Units: mg/L | Prep Date:               | RunNo: 17918  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R17918 | TestNo: SW6010A      |             | Analysis Date: 1/16/2006 | SeqNo: 440451 |          |           |             |      |          |      |
| Analyte          | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|           |        |        |      |   |      |    |     |  |  |  |  |
|-----------|--------|--------|------|---|------|----|-----|--|--|--|--|
| Manganese | 0.4847 | 0.0020 | 0.5  | 0 | 92.9 | 80 | 120 |  |  |  |  |
| Potassium | 55.25  | 1.0    | 55   | 0 | 100  | 80 | 120 |  |  |  |  |
| Selenium  | 0.4899 | 0.020  | 0.5  | 0 | 98.0 | 80 | 120 |  |  |  |  |
| Silver    | 0.4934 | 0.0050 | 0.5  | 0 | 98.7 | 80 | 120 |  |  |  |  |
| Sodium    | 54.67  | 1.0    | 50.5 | 0 | 108  | 80 | 120 |  |  |  |  |
| Uranium   | 2.408  | 0.10   | 2.5  | 0 | 96.3 | 80 | 120 |  |  |  |  |
| Zinc      | 0.4904 | 0.050  | 0.5  | 0 | 98.1 | 80 | 120 |  |  |  |  |

|                 |                  |                      |             |                          |               |          |           |             |      |          |      |
|-----------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD | SampType: LCSD   | TestCode: METALS_DIS | Units: mg/L | Prep Date:               | RunNo: 17918  |          |           |             |      |          |      |
| Client ID: ZZZZ | Batch ID: R17918 | TestNo: SW6010A      |             | Analysis Date: 1/16/2006 | SeqNo: 440452 |          |           |             |      |          |      |
| Analyte         | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|           |        |        |      |   |      |    |     |        |         |    |  |
|-----------|--------|--------|------|---|------|----|-----|--------|---------|----|--|
| Arsenic   | 0.4999 | 0.020  | 0.5  | 0 | 100  | 80 | 120 | 0.5073 | 1.47    | 20 |  |
| Barium    | 0.4844 | 0.020  | 0.5  | 0 | 96.9 | 80 | 120 | 0.4828 | 0.335   | 20 |  |
| Cadmium   | 0.4857 | 0.0020 | 0.5  | 0 | 97.1 | 80 | 120 | 0.4898 | 0.857   | 20 |  |
| Calcium   | 52.35  | 1.0    | 50.5 | 0 | 104  | 80 | 120 | 52.54  | 0.358   | 20 |  |
| Chromium  | 0.4950 | 0.0060 | 0.5  | 0 | 99.0 | 80 | 120 | 0.4951 | 0.0310  | 20 |  |
| Copper    | 0.4807 | 0.0060 | 0.5  | 0 | 96.1 | 80 | 120 | 0.4786 | 0.433   | 20 |  |
| Iron      | 0.4533 | 0.020  | 0.5  | 0 | 90.7 | 80 | 120 | 0.4537 | 0.0691  | 20 |  |
| Lead      | 0.4844 | 0.0050 | 0.5  | 0 | 96.9 | 80 | 120 | 0.4843 | 0.00570 | 20 |  |
| Magnesium | 51.74  | 1.0    | 50.5 | 0 | 102  | 80 | 120 | 51.97  | 0.449   | 20 |  |
| Manganese | 0.4864 | 0.0020 | 0.5  | 0 | 93.3 | 80 | 120 | 0.4647 | 0.360   | 20 |  |
| Potassium | 55.04  | 1.0    | 55   | 0 | 100  | 80 | 120 | 55.25  | 0.382   | 20 |  |
| Selenium  | 0.4915 | 0.020  | 0.5  | 0 | 98.3 | 80 | 120 | 0.4899 | 0.340   | 20 |  |
| Silver    | 0.4947 | 0.0050 | 0.5  | 0 | 98.9 | 80 | 120 | 0.4934 | 0.255   | 20 |  |
| Sodium    | 54.48  | 1.0    | 50.5 | 0 | 108  | 80 | 120 | 54.67  | 0.350   | 20 |  |
| Uranium   | 2.399  | 0.10   | 2.5  | 0 | 96.0 | 80 | 120 | 2.408  | 0.393   | 20 |  |
| Zinc      | 0.4950 | 0.050  | 0.5  | 0 | 99.0 | 80 | 120 | 0.4904 | 0.921   | 20 |  |

**Qualifiers:** E Value above quantitation range    H Holding times for preparation or analysis exceeded    J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit    R RPD outside accepted recovery limits    S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining  
 Work Order: 0601064  
 Project: River Sampling 1st Qtr 2006

ANALYTICAL QC SUMMARY REPORT

TestCode: METALS\_TOTAL

|                    |                |                     |             |                          |                                                        |
|--------------------|----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MB-9536 | SampType: MBLK | TestCode: METALS_TO | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17885                                           |
| Client ID: ZZZZZ   | Batch ID: 9536 | TestNo: SW6010A     |             | Analysis Date: 1/12/2006 | SeqNo: 439739                                          |
| Analyte            | Result         | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

|          |    |        |  |  |  |
|----------|----|--------|--|--|--|
| Arsenic  | ND | 0.020  |  |  |  |
| Barium   | ND | 0.020  |  |  |  |
| Cadmium  | ND | 0.0020 |  |  |  |
| Chromium | ND | 0.0060 |  |  |  |
| Lead     | ND | 0.0050 |  |  |  |
| Selenium | ND | 0.050  |  |  |  |
| Silver   | ND | 0.0050 |  |  |  |

|                    |                |                     |             |                          |                                                        |
|--------------------|----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MB-9536 | SampType: MBLK | TestCode: METALS_TO | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17932                                           |
| Client ID: ZZZZZ   | Batch ID: 9536 | TestNo: SW6010A     |             | Analysis Date: 1/16/2006 | SeqNo: 440773                                          |
| Analyte            | Result         | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

|          |    |        |  |  |  |
|----------|----|--------|--|--|--|
| Arsenic  | ND | 0.020  |  |  |  |
| Barium   | ND | 0.020  |  |  |  |
| Cadmium  | ND | 0.0020 |  |  |  |
| Chromium | ND | 0.0060 |  |  |  |
| Lead     | ND | 0.0050 |  |  |  |
| Selenium | ND | 0.050  |  |  |  |
| Silver   | ND | 0.0050 |  |  |  |

|                     |                |                     |             |                          |                                                        |
|---------------------|----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCS-9536 | SampType: LCS  | TestCode: METALS_TO | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17885                                           |
| Client ID: ZZZZZ    | Batch ID: 9536 | TestNo: SW6010A     |             | Analysis Date: 1/12/2006 | SeqNo: 439740                                          |
| Analyte             | Result         | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

|      |        |        |     |   |      |    |     |  |  |
|------|--------|--------|-----|---|------|----|-----|--|--|
| Lead | 0.4894 | 0.0050 | 0.5 | 0 | 97.9 | 80 | 120 |  |  |
|------|--------|--------|-----|---|------|----|-----|--|--|

|                     |                |                     |             |                          |                                                        |
|---------------------|----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCS-9536 | SampType: LCS  | TestCode: METALS_TO | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17932                                           |
| Client ID: ZZZZZ    | Batch ID: 9536 | TestNo: SW6010A     |             | Analysis Date: 1/16/2006 | SeqNo: 440774                                          |
| Analyte             | Result         | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

|             |    |                                     |   |                                                    |   |                                                 |
|-------------|----|-------------------------------------|---|----------------------------------------------------|---|-------------------------------------------------|
| Qualifiers: | E  | Value above quantitation range      | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits      |
|             | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits               | S | Spike Recovery outside accepted recovery limits |



CLIENT: San Juan Refining  
 Work Order: 0601064  
 Project: River Sampling 1st Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: METALS\_TOTAL

|                     |                |                        |             |                          |               |          |           |             |      |          |      |
|---------------------|----------------|------------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-9536 | SampType: LCS  | TestCode: METALS_TOTAL | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17932  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 9536 | TestNo: SW6010A        |             | Analysis Date: 1/16/2006 | SeqNo: 440774 |          |           |             |      |          |      |
| Analyte             | Result         | PQL                    | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|          |        |        |     |          |      |    |     |  |  |  |  |
|----------|--------|--------|-----|----------|------|----|-----|--|--|--|--|
| Arsenic  | 0.4853 | 0.020  | 0.5 | 0        | 97.1 | 80 | 120 |  |  |  |  |
| Barium   | 0.4613 | 0.020  | 0.5 | 0        | 92.3 | 80 | 120 |  |  |  |  |
| Cadmium  | 0.4680 | 0.0020 | 0.5 | 0        | 93.6 | 80 | 120 |  |  |  |  |
| Chromium | 0.4714 | 0.0060 | 0.5 | 0        | 94.3 | 80 | 120 |  |  |  |  |
| Lead     | 0.4601 | 0.0050 | 0.5 | 0        | 92.0 | 80 | 120 |  |  |  |  |
| Selenium | 0.4684 | 0.0050 | 0.5 | 0        | 93.7 | 80 | 120 |  |  |  |  |
| Silver   | 0.4791 | 0.0050 | 0.5 | 0.001109 | 95.6 | 80 | 120 |  |  |  |  |

|                      |                |                        |             |                          |               |          |           |             |      |          |      |
|----------------------|----------------|------------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-9536 | SampType: LCSD | TestCode: METALS_TOTAL | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17885  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 9536 | TestNo: SW6010A        |             | Analysis Date: 1/12/2006 | SeqNo: 439741 |          |           |             |      |          |      |
| Analyte              | Result         | PQL                    | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|      |        |        |     |   |      |    |     |        |      |    |  |
|------|--------|--------|-----|---|------|----|-----|--------|------|----|--|
| Lead | 0.4769 | 0.0050 | 0.5 | 0 | 95.4 | 80 | 120 | 0.4894 | 2.60 | 20 |  |
|------|--------|--------|-----|---|------|----|-----|--------|------|----|--|

|                      |                |                        |             |                          |               |          |           |             |      |          |      |
|----------------------|----------------|------------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-9536 | SampType: LCSD | TestCode: METALS_TOTAL | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17932  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 9536 | TestNo: SW6010A        |             | Analysis Date: 1/16/2006 | SeqNo: 440775 |          |           |             |      |          |      |
| Analyte              | Result         | PQL                    | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|          |        |        |     |          |      |    |     |        |        |    |  |
|----------|--------|--------|-----|----------|------|----|-----|--------|--------|----|--|
| Arsenic  | 0.4891 | 0.020  | 0.5 | 0        | 97.8 | 80 | 120 | 0.4853 | 0.775  | 20 |  |
| Barium   | 0.4627 | 0.020  | 0.5 | 0        | 92.5 | 80 | 120 | 0.4613 | 0.308  | 20 |  |
| Cadmium  | 0.4676 | 0.0020 | 0.5 | 0        | 93.5 | 80 | 120 | 0.468  | 0.0760 | 20 |  |
| Chromium | 0.4741 | 0.0060 | 0.5 | 0        | 94.8 | 80 | 120 | 0.4714 | 0.582  | 20 |  |
| Lead     | 0.4560 | 0.0050 | 0.5 | 0        | 91.2 | 80 | 120 | 0.4601 | 0.907  | 20 |  |
| Selenium | 0.4633 | 0.0050 | 0.5 | 0        | 92.7 | 80 | 120 | 0.4684 | 1.11   | 20 |  |
| Silver   | 0.4795 | 0.0050 | 0.5 | 0.001109 | 95.7 | 80 | 120 | 0.4791 | 0.0776 | 20 |  |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

|                        |                |                 |             |                          |               |          |           |             |      |          |      |
|------------------------|----------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-9542     | SampType: MBLK | TestCode: TDS_W | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17898  |          |           |             |      |          |      |
| Client ID: ZZZZZ       | Batch ID: 9542 | TestNo: E160.1  |             | Analysis Date: 1/12/2006 | SeqNo: 439871 |          |           |             |      |          |      |
| Analyte                | Result         | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Total Dissolved Solids |                |                 |             |                          |               |          |           |             |      |          |      |
|                        |                | ND              | 50          |                          |               |          |           |             |      |          |      |

|                     |                |                 |             |                          |               |          |           |             |      |          |      |
|---------------------|----------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-9542 | SampType: LCS  | TestCode: TDS_W | Units: mg/L | Prep Date: 1/9/2006      | RunNo: 17898  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 9542 | TestNo: E160.1  |             | Analysis Date: 1/12/2006 | SeqNo: 439872 |          |           |             |      |          |      |
| Analyte             | Result         | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|                     |                |                 |             |                          |               |          |           |             |      |          |      |

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist



Client Name SJR

Date and Time Received:

1/6/2006

Work Order Number 0601064

Received by AT

Checklist completed by

Signature

Date

Matrix

Carrier name Greyhound

|                                                         |                                                 |                                                          |                                      |                                      |
|---------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------|--------------------------------------|--------------------------------------|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/> |                                      |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              | Not Present <input type="checkbox"/> | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>                   | N/A <input type="checkbox"/>         |                                      |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                      |                                      |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                      |                                      |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                      |                                      |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                      |                                      |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                      |                                      |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                      |                                      |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>         | No <input type="checkbox"/>                              |                                      |                                      |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input type="checkbox"/> | Yes <input checked="" type="checkbox"/>                  | No <input type="checkbox"/>          |                                      |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                    | No <input checked="" type="checkbox"/>                   | N/A <input type="checkbox"/>         |                                      |
| Container/Temp Blank temperature?                       | 1°                                              | 4° C ± 2 Acceptable<br>If given sufficient time to cool. |                                      |                                      |

COMMENTS:

\_\_\_\_\_

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Corrective Action



# CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refinery

Address: #50 Rd 4990  
Bloomfield, NM  
87413

Phone #: 505-632-4161

Fax #: 505-632-3911

| Date            | Time         | Matrix     | Sample I.D. No.     |
|-----------------|--------------|------------|---------------------|
| <u>10/25/06</u> | <u>2:55</u>  | <u>H2O</u> | <u>N&amp;MW #45</u> |
| <u>11/1/06</u>  | <u>11:11</u> | <u>1</u>   | <u>1</u>            |
| <u>11/1/06</u>  | <u>11:11</u> | <u>1</u>   | <u>1</u>            |
| <u>11/1/06</u>  | <u>11:11</u> | <u>1</u>   | <u>1</u>            |
| <u>11/1/06</u>  | <u>11:11</u> | <u>1</u>   | <u>1</u>            |
| <u>11/1/06</u>  | <u>11:11</u> | <u>1</u>   | <u>1</u>            |

| Number/Volume  | Preservative | HEAL No.        |
|----------------|--------------|-----------------|
| <u>2-VOA</u>   | <u>X</u>     | <u>801064-1</u> |
| <u>3-VOA</u>   | <u>X</u>     |                 |
| <u>1-500ml</u> | <u>X</u>     |                 |
| <u>1-250ml</u> | <u>X</u>     |                 |
| <u>1-500ml</u> | <u>X</u>     |                 |
| <u>1-500ml</u> | <u>X</u>     |                 |
| <u>1-Lite</u>  | <u>Asky</u>  |                 |

Date: 10/25/06 Time: 2:55  
 Relinquished By: (Signature) Cindy Hunsicker  
 Relinquished By: (Signature) Cindy Hunsicker

Received By: (Signature) Cindy Hunsicker  
 Received By: (Signature) Cindy Hunsicker

QA/QC Package:  
 Std ☐ Level 4 ☐  
 Other: \_\_\_\_\_

Project Name: River Sample 1st Qtr-2006  
 Project #: \_\_\_\_\_

Project Manager: \_\_\_\_\_  
 Sampler: Cindy Hunsicker  
 Sample Temperature: \_\_\_\_\_

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 4901 Hawkins NE, Suite D  
 Albuquerque, New Mexico 87109  
 Tel. 505.345.3975 Fax 505.345.4107  
 www.hallenvironmental.com

## ANALYSIS REQUEST

|                                                                                        |  |
|----------------------------------------------------------------------------------------|--|
| BTEX + MTBE + TPAH (Gasoline Only)                                                     |  |
| BTEX + MTBE + TPAH (Gasoline Only)                                                     |  |
| TPH Method 8015B (Gas/Diesel)                                                          |  |
| TPH (Method 418.1)                                                                     |  |
| EDB (Method 504.1)                                                                     |  |
| EDC (Method 8021)                                                                      |  |
| 8310 (PNA or PAH)                                                                      |  |
| PCRA 8 Metals                                                                          |  |
| Anions (F, Cl, NO <sub>2</sub> , NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) |  |
| 8081 Pesticides / PCB's (8082)                                                         |  |
| 8260B (VOA)                                                                            |  |
| 8270 (Semi-VOA)                                                                        |  |
| WQC Dissolved Metals                                                                   |  |
| NO <sub>3</sub> Backing                                                                |  |
| Gen Chem - Cation / Anion                                                              |  |
| Air Bubbles or Headspace (Y or N)                                                      |  |

Remarks:



# CHAIN-OF-CUSTODY RECORD

Client: San Juan Refining

Address: 450 Rd 4990

Bloomfield, NM

87413

Phone #: 505-632-4161

Fax #: 505-632-3911

| Date     | Time | Matrix           | Sample I.D. No. | Number/Volume | Preservative                   | HEAL No.  |
|----------|------|------------------|-----------------|---------------|--------------------------------|-----------|
| 01/05/00 | 3:45 | H <sub>2</sub> O | River-Downtown  | 2-VOA X       |                                | 0100164-3 |
|          |      |                  |                 | 3-VOA X       |                                |           |
|          |      |                  |                 | 1-500ml       | X                              |           |
|          |      |                  |                 | 1-250ml       | X filtered                     |           |
|          |      |                  |                 | 1-500         | H <sub>2</sub> SO <sub>4</sub> |           |
|          |      |                  |                 | 1-500         |                                |           |
|          |      |                  |                 | 1-liter       | Amber                          |           |

Date: 01/06/00  
Time: 8:30am

Relinquished By: (Signature) Cindy Hurtado  
Date: 01/06/00

Received By: (Signature) [Signature]  
Date: 01/06/00

Received By: (Signature) [Signature]  
Date: 01/06/00

QA/QC Package: ☐ Std ☐ Level 4 ☐

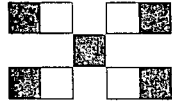
Other: \_\_\_\_\_

Project Name: River Samples 1<sup>st</sup> Qtr-2000

Project #: \_\_\_\_\_

Project Manager: Cindy Hurtado

Sample Temperature: 10



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
4901 Hawkins NE, Suite D  
Albuquerque, New Mexico 87109  
Tel. 505.345.3975 Fax 505.345.4107  
www.hallenvironmental.com

## ANALYSIS REQUEST

| BTEX + MTBE + TPH (Gasoline Only) | BTEX + MTBE + TPH (8021) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | EDC (Method 8021) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) | 8081 Pesticides / PCB's (8082) | 8260B (VOA) | 8270 (Semi-VOA) | WAC Dissolved Metals | NO <sub>3</sub> Backup | Gen Chem Cathan/Amion | Air Bubbles or Headspace (Y or N) |
|-----------------------------------|--------------------------|-------------------------------|--------------------|--------------------|-------------------|-------------------|---------------|----------------------------------------------------------------------------------------|--------------------------------|-------------|-----------------|----------------------|------------------------|-----------------------|-----------------------------------|
| X                                 |                          | X                             |                    |                    |                   |                   | X             |                                                                                        |                                |             | X               | X                    | X                      |                       |                                   |

Remarks:

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D  
Albuquerque, New Mexico 87109  
Tel. 505.345.3975 Fax 505.345.4107  
[www.hallenvironmental.com](http://www.hallenvironmental.com)

Glenn Field, NM

Project Manager:

XB #: SDS-632-3911

| Date     | Time   | Matrix           | Sample I.D. No. |
|----------|--------|------------------|-----------------|
| 11/05/06 | 3:15 p | H <sub>2</sub> O | River-Upstream  |
|          |        |                  |                 |
|          |        |                  |                 |
|          |        |                  |                 |
|          |        |                  |                 |
|          |        |                  | Trip Blank      |

| Number/Volume | HEAL No.          |                  |
|---------------|-------------------|------------------|
|               | HgCl <sub>2</sub> | HNO <sub>3</sub> |
| 2-Vol         | X                 |                  |
| 3-Vol         | X                 |                  |
| 1-500ml       |                   | X                |
| 1-250ml       |                   | X                |
| 1-500ml       |                   | X                |
| 1-500ml       |                   | X                |
| 1-liter       |                   | Amber            |

|             |             |                                                   |
|-------------|-------------|---------------------------------------------------|
| Date: 06/26 | Time: 8:30A | Relinquished By: (Signature) <i>Erny Quintado</i> |
| Date: 06/26 | Time: 8:30A | Relinquished By: (Signature) <i>Erny Quintado</i> |

|                          |                    |
|--------------------------|--------------------|
| Received By: (Signature) | <i>[Signature]</i> |
| Received By: (Signature) | <i>[Signature]</i> |

Remarks:

| <b>ANALYSIS REQUEST</b>                                              |   |   |   |   |   |
|----------------------------------------------------------------------|---|---|---|---|---|
| BTEX + MTBE + TMS (8021)                                             | X |   |   |   |   |
| BTEX + MTBE + TPH (Gasoline Only)                                    |   |   |   |   |   |
| TPH Method 8015B (Gas/Diesel)                                        |   | X |   |   |   |
| TPH (Method 418.1)                                                   |   |   |   |   |   |
| EDB (Method 504.1)                                                   |   |   |   |   |   |
| EDC (Method 8021)                                                    |   |   |   |   |   |
| 8310 (PNA or PAH)                                                    |   |   |   |   |   |
| RCRA 8 Metals                                                        |   |   | X |   |   |
| Anions (F, Cl, NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub> ) |   |   |   |   |   |
| 8081 Pesticides / PCB's (8082)                                       |   |   |   |   |   |
| 8260B (VOA)                                                          |   |   |   |   |   |
| 8270 (Semi-VOA)                                                      |   |   |   | X |   |
| MGC Dissolved Metals                                                 |   |   | X |   |   |
| NO <sub>3</sub> Back up                                              |   |   |   | X |   |
| Gen Chem Cation Anion                                                |   |   |   |   | X |
| Air Bubbles or Headspace (Y or N)                                    |   |   |   |   |   |

COVER LETTER

Friday, April 28, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413

TEL: (505) 632-4161  
FAX (505) 632-3911

RE: River Sampling 2nd Qtr 2006

Order No.: 0604132

Dear Cindy Hurtado:

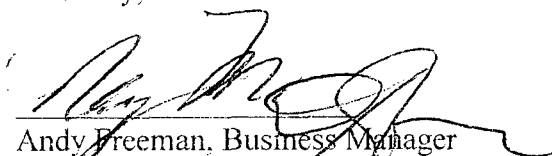
Hall Environmental Analysis Laboratory received 5 sample(s) on 4/14/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

  
Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001





# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-01

Client Sample ID: River-Upstream  
Collection Date: 4/13/2006 9:45:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 4/18/2006 3:56:30 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 4/18/2006 3:56:30 PM |
| Surr: DNOP                                | 140    | 58-140   |      | %REC  | 1  | 4/18/2006 3:56:30 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 4/22/2006 1:14:34 AM |
| Surr: BFB                                 | 97.0   | 79.7-118 |      | %REC  | 1  | 4/22/2006 1:14:34 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 4/22/2006 1:14:34 AM |
| Benzene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 1:14:34 AM |
| Toluene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 1:14:34 AM |
| Ethylbenzene                              | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 1:14:34 AM |
| Xylenes, Total                            | ND     | 3.0      |      | µg/L  | 1  | 4/22/2006 1:14:34 AM |
| Surr: 4-Bromofluorobenzene                | 104    | 82.2-119 |      | %REC  | 1  | 4/22/2006 1:14:34 AM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: MAP         |
| Fluoride                                  | 0.16   | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Chloride                                  | 2.9    | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Sulfate                                   | 83     | 2.5      |      | mg/L  | 5  | 4/17/2006            |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC         |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 4/18/2006            |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Barium                                    | 0.061  | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Calcium                                   | 36     | 1.0      |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Iron                                      | ND     | 0.020    |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Magnesium                                 | 6.1    | 1.0      |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining

Client Sample ID: River-Upstream

Lab Order: 0604132

Collection Date: 4/13/2006 9:45:00 AM

Project: River Sampling 2nd Qtr 2006

Date Received: 4/14/2006

Lab ID: 0604132-01

Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|--------|------|-------|----|----------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: NMO         |
| Manganese                                 | 0.074  | 0.0020 |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Potassium                                 | 1.8    | 1.0    |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Sodium                                    | 28     | 1.0    |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |
| Zinc                                      | 0.062  | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:30:00 PM |

|                                           |       |        |  |      |   |                      |
|-------------------------------------------|-------|--------|--|------|---|----------------------|
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |       |        |  |      |   | Analyst: CMC         |
| Arsenic                                   | ND    | 0.020  |  | mg/L | 1 | 4/20/2006 3:17:13 PM |
| Barium                                    | 0.070 | 0.020  |  | mg/L | 1 | 4/20/2006 3:17:13 PM |
| Cadmium                                   | ND    | 0.0020 |  | mg/L | 1 | 4/20/2006 3:17:13 PM |
| Chromium                                  | ND    | 0.0060 |  | mg/L | 1 | 4/20/2006 3:17:13 PM |
| Lead                                      | ND    | 0.0050 |  | mg/L | 1 | 4/20/2006 3:17:13 PM |
| Selenium                                  | ND    | 0.050  |  | mg/L | 1 | 4/20/2006 3:17:13 PM |
| Silver                                    | ND    | 0.0050 |  | mg/L | 1 | 4/20/2006 3:17:13 PM |

|                                        |    |    |  |      |   |             |
|----------------------------------------|----|----|--|------|---|-------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |    |    |  |      |   | Analyst: BL |
| Acenaphthene                           | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Acenaphthylene                         | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Aniline                                | ND | 20 |  | µg/L | 1 | 4/25/2006   |
| Anthracene                             | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Azobenzene                             | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Benz(a)anthracene                      | ND | 15 |  | µg/L | 1 | 4/25/2006   |
| Benzo(a)pyrene                         | ND | 15 |  | µg/L | 1 | 4/25/2006   |
| Benzo(b)fluoranthene                   | ND | 15 |  | µg/L | 1 | 4/25/2006   |
| Benzo(g,h,i)perylene                   | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Benzo(k)fluoranthene                   | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Benzoic acid                           | ND | 50 |  | µg/L | 1 | 4/25/2006   |
| Benzyl alcohol                         | ND | 20 |  | µg/L | 1 | 4/25/2006   |
| Bis(2-chloroethoxy)methane             | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Bis(2-chloroethyl)ether                | ND | 15 |  | µg/L | 1 | 4/25/2006   |
| Bis(2-chloroisopropyl)ether            | ND | 15 |  | µg/L | 1 | 4/25/2006   |
| Bis(2-ethylhexyl)phthalate             | ND | 15 |  | µg/L | 1 | 4/25/2006   |
| 4-Bromophenyl phenyl ether             | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| Butyl benzyl phthalate                 | ND | 15 |  | µg/L | 1 | 4/25/2006   |
| Carbazole                              | ND | 10 |  | µg/L | 1 | 4/25/2006   |
| 4-Chloro-3-methylphenol                | ND | 20 |  | µg/L | 1 | 4/25/2006   |
| 4-Chloroaniline                        | ND | 20 |  | µg/L | 1 | 4/25/2006   |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-01

Client Sample ID: River-Upstream  
Collection Date: 4/13/2006 9:45:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |       |    | Analyst: BL   |
| 2-Chloronaphthalene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Chlorophenol                         | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4-Chlorophenyl phenyl ether            | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Chrysene                               | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-butyl phthalate                   | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-octyl phthalate                   | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Dibenz(a,h)anthracene                  | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dibenzofuran                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,2-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,3-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,4-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 3,3'-Dichlorobenzidine                 | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Diethyl phthalate                      | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dimethyl phthalate                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dichlorophenol                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dimethylphenol                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4,6-Dinitro-2-methylphenol             | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrophenol                      | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,6-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluoranthene                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluorene                               | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobenzene                      | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobutadiene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorocyclopentadiene              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachloroethane                       | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Isophorone                             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylnaphthalene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylphenol                         | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| 3+4-Methylphenol                       | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodi-n-propylamine              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodimethylamine                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodiphenylamine                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Naphthalene                            | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 3-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 4-Nitroaniline                         | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| Nitrobenzene                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitrophenol                          | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-01

Client Sample ID: River-Upstream  
Collection Date: 4/13/2006 9:45:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 4/25/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Surr: 2,4,6-Tribromophenol             | 55.4   | 16.6-150  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorobiphenyl                 | 59.1   | 19.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorophenol                   | 41.4   | 9.54-113  |      | %REC       | 1  | 4/25/2006     |
| Surr: 4-Terphenyl-d14                  | 48.7   | 22.7-145  |      | %REC       | 1  | 4/25/2006     |
| Surr: Nitrobenzene-d5                  | 50.4   | 14.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: Phenol-d5                        | 27.3   | 10.7-80.3 |      | %REC       | 1  | 4/25/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: ks   |
| Alkalinity, Total (As CaCO3)           | 89     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Bicarbonate                            | 89     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: ks   |
| Specific Conductance                   | 360    | 0.010     |      | µmhos/cm   | 1  | 4/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 250    | 20        |      | mg/L       | 1  | 4/18/2006     |

|             |                                                   |                                                      |
|-------------|---------------------------------------------------|------------------------------------------------------|
| Qualifiers: | * Value exceeds Maximum Contaminant Level         | B Analyte detected in the associated Method Blank    |
|             | E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
|             | J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
|             | S Spike Recovery outside accepted recovery limits |                                                      |

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-02

Client Sample ID: N of MW #45  
Collection Date: 4/13/2006 10:45:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 4/18/2006 4:29:54 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 4/18/2006 4:29:54 PM |
| Surr: DNOP                                | 138    | 58-140   |      | %REC  | 1  | 4/18/2006 4:29:54 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 4/22/2006 3:39:53 AM |
| Surr: BFB                                 | 95.9   | 79.7-118 |      | %REC  | 1  | 4/22/2006 3:39:53 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 4/22/2006 3:39:53 AM |
| Benzene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 3:39:53 AM |
| Toluene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 3:39:53 AM |
| Ethylbenzene                              | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 3:39:53 AM |
| Xylenes, Total                            | ND     | 3.0      |      | µg/L  | 1  | 4/22/2006 3:39:53 AM |
| Surr: 4-Bromofluorobenzene                | 102    | 82.2-119 |      | %REC  | 1  | 4/22/2006 3:39:53 AM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: MAP         |
| Fluoride                                  | 0.16   | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Chloride                                  | 2.9    | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Sulfate                                   | 85     | 2.5      |      | mg/L  | 5  | 4/17/2006            |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC         |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 4/18/2006            |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Barium                                    | 0.061  | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Calcium                                   | 37     | 1.0      |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Iron                                      | 0.025  | 0.020    |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Magnesium                                 | 6.2    | 1.0      |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-02

Client Sample ID: N of MW #45  
Collection Date: 4/13/2006 10:45:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|--------|------|-------|----|----------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: NMO         |
| Manganese                                 | 0.071  | 0.0020 |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Potassium                                 | 1.8    | 1.0    |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Sodium                                    | 28     | 1.0    |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| Zinc                                      | 0.42   | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:33:04 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: CMC         |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 4/20/2006 3:45:46 PM |
| Barium                                    | 0.068  | 0.020  |      | mg/L  | 1  | 4/20/2006 3:45:46 PM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 4/20/2006 3:45:46 PM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 4/20/2006 3:45:46 PM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 4/20/2006 3:45:46 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 4/20/2006 3:45:46 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 4/20/2006 3:45:46 PM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL          |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Aniline                                   | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Azobenzene                                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 4/25/2006            |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Carbazole                                 | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-02

Client Sample ID: N of MW #45  
Collection Date: 4/13/2006 10:45:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                        | Result | PQL | Qual | Units | DF | Date Analyzed |
|---------------------------------|--------|-----|------|-------|----|---------------|
| EPA METHOD 8270C: SEMIVOLATILES |        |     |      |       |    | Analyst: BL   |
| 2-Chloronaphthalene             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Chlorophenol                  | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4-Chlorophenyl phenyl ether     | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Chrysene                        | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-butyl phthalate            | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-octyl phthalate            | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Dibenz(a,h)anthracene           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dibenzofuran                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,2-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,3-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,4-Dichlorobenzene             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 3,3'-Dichlorobenzidine          | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Diethyl phthalate               | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dimethyl phthalate              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dichlorophenol              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dimethylphenol              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4,6-Dinitro-2-methylphenol      | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrophenol               | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrotoluene              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,6-Dinitrotoluene              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluoranthene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluorene                        | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobenzene               | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobutadiene             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorocyclopentadiene       | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachloroethane                | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Indeno(1,2,3-cd)pyrene          | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Isophorone                      | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylnaphthalene             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylphenol                  | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| 3+4-Methylphenol                | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodi-n-propylamine       | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodimethylamine          | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodiphenylamine          | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Naphthalene                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 3-Nitroaniline                  | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 4-Nitroaniline                  | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| Nitrobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitrophenol                   | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #45

Lab Order: 0604132

Collection Date: 4/13/2006 10:45:00 AM

Project: River Sampling 2nd Qtr 2006

Date Received: 4/14/2006

Lab ID: 0604132-02

Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 4/25/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Surr: 2,4,6-Tribromophenol             | 47.8   | 16.6-150  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorobiphenyl                 | 53.5   | 19.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorophenol                   | 44.4   | 9.54-113  |      | %REC       | 1  | 4/25/2006     |
| Surr: 4-Terphenyl-d14                  | 46.8   | 22.7-145  |      | %REC       | 1  | 4/25/2006     |
| Surr: Nitrobenzene-d5                  | 50.9   | 14.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: Phenol-d5                        | 28.5   | 10.7-80.3 |      | %REC       | 1  | 4/25/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: ks   |
| Alkalinity, Total (As CaCO3)           | 88     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Bicarbonate                            | 88     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: ks   |
| Specific Conductance                   | 360    | 0.010     |      | µmhos/cm   | 1  | 4/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 230    | 20        |      | mg/L       | 1  | 4/18/2006     |

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-03

Client Sample ID: N of MW #46  
Collection Date: 4/13/2006 10:30:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 4/18/2006 5:03:21 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 4/18/2006 5:03:21 PM |
| Surr: DNOP                                | 139    | 58-140   |      | %REC  | 1  | 4/18/2006 5:03:21 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 4/22/2006 5:07:07 AM |
| Surr: BFB                                 | 92.7   | 79.7-118 |      | %REC  | 1  | 4/22/2006 5:07:07 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 4/22/2006 5:07:07 AM |
| Benzene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 5:07:07 AM |
| Toluene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 5:07:07 AM |
| Ethylbenzene                              | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 5:07:07 AM |
| Xylenes, Total                            | ND     | 3.0      |      | µg/L  | 1  | 4/22/2006 5:07:07 AM |
| Surr: 4-Bromofluorobenzene                | 99.0   | 82.2-119 |      | %REC  | 1  | 4/22/2006 5:07:07 AM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: MAP         |
| Fluoride                                  | 0.16   | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Chloride                                  | 2.9    | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Sulfate                                   | 84     | 2.5      |      | mg/L  | 5  | 4/18/2006            |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC         |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 4/18/2006            |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Barium                                    | 0.061  | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Calcium                                   | 37     | 1.0      |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Iron                                      | 0.023  | 0.020    |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Magnesium                                 | 6.2    | 1.0      |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-03

Client Sample ID: N of MW #46  
Collection Date: 4/13/2006 10:30:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|--------|------|-------|----|----------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: NMO         |
| Manganese                                 | 0.071  | 0.0020 |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Potassium                                 | 1.8    | 1.0    |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Sodium                                    | 28     | 1.0    |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| Zinc                                      | 0.046  | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:36:06 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: CMC         |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 4/20/2006 3:20:16 PM |
| Barium                                    | 0.069  | 0.020  |      | mg/L  | 1  | 4/20/2006 3:20:16 PM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 4/20/2006 3:20:16 PM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 4/20/2006 3:20:16 PM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 4/20/2006 3:20:16 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 4/20/2006 3:20:16 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 4/20/2006 3:20:16 PM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL          |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Aniline                                   | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Azobenzene                                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 4/25/2006            |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Carbazole                                 | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-03

Client Sample ID: N of MW #46  
Collection Date: 4/13/2006 10:30:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |       |    | Analyst: BL   |
| 2-Chloronaphthalene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Chlorophenol                         | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4-Chlorophenyl phenyl ether            | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Chrysene                               | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-butyl phthalate                   | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-octyl phthalate                   | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Dibenz(a,h)anthracene                  | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dibenzofuran                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,2-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,3-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,4-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 3,3'-Dichlorobenzidine                 | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Diethyl phthalate                      | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dimethyl phthalate                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dichlorophenol                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dimethylphenol                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4,6-Dinitro-2-methylphenol             | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrophenol                      | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,6-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluoranthene                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluorene                               | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobenzene                      | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobutadiene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorocyclopentadiene              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachloroethane                       | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Isophorone                             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylnaphthalene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylphenol                         | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| 3+4-Methylphenol                       | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodi-n-propylamine              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodimethylamine                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodiphenylamine                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Naphthalene                            | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 3-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 4-Nitroaniline                         | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| Nitrobenzene                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitrophenol                          | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0604132  
**Project:** River Sampling 2nd Qtr 2006  
**Lab ID:** 0604132-03

**Client Sample ID:** N of MW #46  
**Collection Date:** 4/13/2006 10:30:00 AM  
**Date Received:** 4/14/2006  
**Matrix:** AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 4/25/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Surr: 2,4,6-Tribromophenol             | 45.0   | 16.6-150  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorobiphenyl                 | 53.0   | 19.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorophenol                   | 42.6   | 9.54-113  |      | %REC       | 1  | 4/25/2006     |
| Surr: 4-Terphenyl-d14                  | 44.5   | 22.7-145  |      | %REC       | 1  | 4/25/2006     |
| Surr: Nitrobenzene-d5                  | 50.9   | 14.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: Phenol-d5                        | 28.4   | 10.7-80.3 |      | %REC       | 1  | 4/25/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: ks   |
| Alkalinity, Total (As CaCO3)           | 88     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Bicarbonate                            | 88     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: ks   |
| Specific Conductance                   | 360    | 0.010     |      | µmhos/cm   | 1  | 4/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 240    | 20        |      | mg/L       | 1  | 4/18/2006     |

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-04

Client Sample ID: River Downstream  
Collection Date: 4/13/2006 11:15:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                                  | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>     |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)               | ND     | 1.0      |      | mg/L  | 1  | 4/18/2006 5:36:45 PM |
| Motor Oil Range Organics (MRO)            | ND     | 5.0      |      | mg/L  | 1  | 4/18/2006 5:36:45 PM |
| Surr: DNOP                                | 137    | 58-140   |      | %REC  | 1  | 4/18/2006 5:36:45 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>   |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)             | ND     | 0.050    |      | mg/L  | 1  | 4/22/2006 6:34:17 AM |
| Surr: BFB                                 | 96.3   | 79.7-118 |      | %REC  | 1  | 4/22/2006 6:34:17 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>        |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)            | ND     | 2.5      |      | µg/L  | 1  | 4/22/2006 6:34:17 AM |
| Benzene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 6:34:17 AM |
| Toluene                                   | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 6:34:17 AM |
| Ethylbenzene                              | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 6:34:17 AM |
| Xylenes, Total                            | ND     | 3.0      |      | µg/L  | 1  | 4/22/2006 6:34:17 AM |
| Surr: 4-Bromofluorobenzene                | 105    | 82.2-119 |      | %REC  | 1  | 4/22/2006 6:34:17 AM |
| <b>EPA METHOD 300.0: ANIONS</b>           |        |          |      |       |    | Analyst: MAP         |
| Fluoride                                  | 0.16   | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Chloride                                  | 3.5    | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrite (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Bromide                                   | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Nitrogen, Nitrate (As N)                  | ND     | 0.10     |      | mg/L  | 1  | 4/14/2006            |
| Phosphorus, Orthophosphate (As P)         | ND     | 0.50     |      | mg/L  | 1  | 4/14/2006            |
| Sulfate                                   | 110    | 2.5      |      | mg/L  | 5  | 4/17/2006            |
| <b>EPA METHOD 7470: MERCURY</b>           |        |          |      |       |    | Analyst: CMC         |
| Mercury                                   | ND     | 0.00020  |      | mg/L  | 1  | 4/18/2006            |
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: NMO         |
| Arsenic                                   | ND     | 0.020    |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Barium                                    | 0.060  | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Cadmium                                   | ND     | 0.0020   |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Calcium                                   | 43     | 1.0      |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Chromium                                  | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Copper                                    | ND     | 0.0060   |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Iron                                      | 0.037  | 0.020    |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Lead                                      | ND     | 0.0050   |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Magnesium                                 | 6.9    | 1.0      |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
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S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining

Client Sample ID: River Downstream

Lab Order: 0604132

Collection Date: 4/13/2006 11:15:00 AM

Project: River Sampling 2nd Qtr 2006

Date Received: 4/14/2006

Lab ID: 0604132-04

Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed        |
|-------------------------------------------|--------|--------|------|-------|----|----------------------|
| <b>EPA METHOD 6010B: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: NMO         |
| Manganese                                 | 0.14   | 0.0020 |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Potassium                                 | 1.9    | 1.0    |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Sodium                                    | 36     | 1.0    |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| Zinc                                      | 0.024  | 0.0050 |      | mg/L  | 1  | 4/26/2006 2:39:07 PM |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: CMC         |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 4/20/2006 3:23:17 PM |
| Barium                                    | 0.068  | 0.020  |      | mg/L  | 1  | 4/20/2006 3:23:17 PM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 4/20/2006 3:23:17 PM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 4/20/2006 3:23:17 PM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 4/20/2006 3:23:17 PM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 4/20/2006 3:23:17 PM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 4/20/2006 3:23:17 PM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL          |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Aniline                                   | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Azobenzene                                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 4/25/2006            |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 4/25/2006            |
| Carbazole                                 | ND     | 10     |      | µg/L  | 1  | 4/25/2006            |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 4/25/2006            |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-04

Client Sample ID: River Downstream  
Collection Date: 4/13/2006 11:15:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |       |    | Analyst: BL   |
| 2-Chloronaphthalene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Chlorophenol                         | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4-Chlorophenyl phenyl ether            | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Chrysene                               | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-butyl phthalate                   | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Di-n-octyl phthalate                   | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Dibenz(a,h)anthracene                  | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dibenzofuran                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,2-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,3-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 1,4-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 3,3'-Dichlorobenzidine                 | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| Diethyl phthalate                      | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Dimethyl phthalate                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dichlorophenol                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dimethylphenol                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 4,6-Dinitro-2-methylphenol             | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrophenol                      | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 2,4-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2,6-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluoranthene                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Fluorene                               | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobenzene                      | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorobutadiene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachlorocyclopentadiene              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Hexachloroethane                       | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Isophorone                             | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylnaphthalene                    | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Methylphenol                         | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |
| 3+4-Methylphenol                       | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodi-n-propylamine              | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodimethylamine                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| N-Nitrosodiphenylamine                 | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| Naphthalene                            | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 3-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 4/25/2006     |
| 4-Nitroaniline                         | ND     | 20  |      | µg/L  | 1  | 4/25/2006     |
| Nitrobenzene                           | ND     | 10  |      | µg/L  | 1  | 4/25/2006     |
| 2-Nitrophenol                          | ND     | 15  |      | µg/L  | 1  | 4/25/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-04

Client Sample ID: River Downstream  
Collection Date: 4/13/2006 11:15:00 AM  
Date Received: 4/14/2006  
Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 4/25/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 4/25/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 4/25/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 4/25/2006     |
| Surr: 2,4,6-Tribromophenol             | 42.4   | 16.6-150  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorobiphenyl                 | 54.0   | 19.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: 2-Fluorophenol                   | 40.8   | 9.54-113  |      | %REC       | 1  | 4/25/2006     |
| Surr: 4-Terphenyl-d14                  | 43.9   | 22.7-145  |      | %REC       | 1  | 4/25/2006     |
| Surr: Nitrobenzene-d5                  | 48.5   | 14.6-134  |      | %REC       | 1  | 4/25/2006     |
| Surr: Phenol-d5                        | 26.2   | 10.7-80.3 |      | %REC       | 1  | 4/25/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: ks   |
| Alkalinity, Total (As CaCO3)           | 99     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| Bicarbonate                            | 99     | 2.0       |      | mg/L CaCO3 | 1  | 4/21/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: ks   |
| Specific Conductance                   | 430    | 0.010     |      | µmhos/cm   | 1  | 4/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 290    | 20        |      | mg/L       | 1  | 4/18/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory

Date: 28-Apr-06

CLIENT: San Juan Refining  
Lab Order: 0604132  
Project: River Sampling 2nd Qtr 2006  
Lab ID: 0604132-05

Client Sample ID: Trip Blank  
Collection Date:  
Date Received: 4/14/2006  
Matrix: TRIP BLANK

| Analyses                                | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-----------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: GASOLINE RANGE</b> |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L  | 1  | 4/22/2006 7:03:11 AM |
| Surr: BFB                               | 96.0   | 79.7-118 |      | %REC  | 1  | 4/22/2006 7:03:11 AM |
| <b>EPA METHOD 8021B: VOLATILES</b>      |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)          | ND     | 2.5      |      | µg/L  | 1  | 4/22/2006 7:03:11 AM |
| Benzene                                 | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 7:03:11 AM |
| Toluene                                 | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 7:03:11 AM |
| Ethylbenzene                            | ND     | 1.0      |      | µg/L  | 1  | 4/22/2006 7:03:11 AM |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L  | 1  | 4/22/2006 7:03:11 AM |
| Surr: 4-Bromofluorobenzene              | 104    | 82.2-119 |      | %REC  | 1  | 4/22/2006 7:03:11 AM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## CLIENT:

San Juan Refining

## Work Order:

0604132

## Project:

River Sampling 2nd Qtr 2006

## ANALYTICAL QC SUMMARY REPORT

TestCode: 300\_W

|                  |                  |                 |             |                          |                                                        |
|------------------|------------------|-----------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MBLK  | SampType: MBLK   | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18936                                           |
| Client ID: ZZZZZ | Batch ID: R18936 | TestNo: E300    |             | Analysis Date: 4/14/2006 | SeqNo: 470460                                          |
| Analyte          | Result           | PQL             | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

|                                   |    |      |  |  |  |
|-----------------------------------|----|------|--|--|--|
| Fluoride                          | ND | 0.10 |  |  |  |
| Chloride                          | ND | 0.10 |  |  |  |
| Nitrogen, Nitrite (As N)          | ND | 0.10 |  |  |  |
| Bromide                           | ND | 0.10 |  |  |  |
| Nitrogen, Nitrate (As N)          | ND | 0.10 |  |  |  |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 |  |  |  |
| Sulfate                           | ND | 0.50 |  |  |  |

|                  |                  |                 |             |                          |                                                        |
|------------------|------------------|-----------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MBLK  | SampType: MBLK   | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18953                                           |
| Client ID: ZZZZZ | Batch ID: R18953 | TestNo: E300    |             | Analysis Date: 4/17/2006 | SeqNo: 471011                                          |
| Analyte          | Result           | PQL             | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

|                                   |    |      |  |  |  |
|-----------------------------------|----|------|--|--|--|
| Fluoride                          | ND | 0.10 |  |  |  |
| Chloride                          | ND | 0.10 |  |  |  |
| Nitrogen, Nitrite (As N)          | ND | 0.10 |  |  |  |
| Bromide                           | ND | 0.10 |  |  |  |
| Nitrogen, Nitrate (As N)          | ND | 0.10 |  |  |  |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 |  |  |  |
| Sulfate                           | ND | 0.50 |  |  |  |

|                  |                  |                 |             |                          |                                                        |
|------------------|------------------|-----------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MBLK  | SampType: MBLK   | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18969                                           |
| Client ID: ZZZZZ | Batch ID: R18969 | TestNo: E300    |             | Analysis Date: 4/18/2006 | SeqNo: 471357                                          |
| Analyte          | Result           | PQL             | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

|                          |    |      |  |  |  |
|--------------------------|----|------|--|--|--|
| Fluoride                 | ND | 0.10 |  |  |  |
| Chloride                 | ND | 0.10 |  |  |  |
| Nitrogen, Nitrite (As N) | ND | 0.10 |  |  |  |
| Bromide                  | ND | 0.10 |  |  |  |
| Nitrogen, Nitrate (As N) | ND | 0.10 |  |  |  |

## Qualifiers:

|    |                                     |
|----|-------------------------------------|
| E  | Value above quantitation range      |
| ND | Not Detected at the Reporting Limit |

|   |                                                    |
|---|----------------------------------------------------|
| H | Holding times for preparation or analysis exceeded |
| R | RPD outside accepted recovery limits               |

|   |                                                 |
|---|-------------------------------------------------|
| J | Analyte detected below quantitation limits      |
| S | Spike Recovery outside accepted recovery limits |

CLIENT: San Juan Refining  
Work Order: 0604132

# ANALYTICAL QC SUMMARY REPORT

Project: River Sampling 2nd Qtr 2006

TestCode: 300\_W

|                  |                  |                 |             |                          |                                                        |
|------------------|------------------|-----------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MBLK  | SampType: MBLK   | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18969                                           |
| Client ID: ZZZZZ | Batch ID: R18969 | TestNo: E300    |             | Analysis Date: 4/18/2006 | SeqNo: 471357                                          |
| Analyte          | Result           | PQL             | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Phosphorus, Orthophosphate (As P)  
Sulfate

|                  |                  |                 |             |                          |                                                        |
|------------------|------------------|-----------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MBLK  | SampType: MBLK   | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18969                                           |
| Client ID: ZZZZZ | Batch ID: R18969 | TestNo: E300    |             | Analysis Date: 4/18/2006 | SeqNo: 471404                                          |
| Analyte          | Result           | PQL             | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Fluoride  
Chloride  
Nitrogen, Nitrite (As N)  
Bromide  
Nitrogen, Nitrate (As N)  
Phosphorus, Orthophosphate (As P)  
Sulfate

|                            |                  |                 |             |                          |                                                        |
|----------------------------|------------------|-----------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCS ST300-06006 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18936                                           |
| Client ID: ZZZZZ           | Batch ID: R18936 | TestNo: E300    |             | Analysis Date: 4/14/2006 | SeqNo: 470461                                          |
| Analyte                    | Result           | PQL             | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Fluoride  
Chloride  
Nitrogen, Nitrite (As N)  
Bromide  
Nitrogen, Nitrate (As N)  
Phosphorus, Orthophosphate (As P)  
Sulfate

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604132

Project: River Sampling 2nd Qtr 2006

TestCode: 300\_W

|                            |                  |                 |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS ST300-06006 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18953  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18953 | TestNo: E300    |             | Analysis Date: 4/17/2006 | SeqNo: 471012 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                   |        |      |     |   |      |    |     |  |  |  |  |
|-----------------------------------|--------|------|-----|---|------|----|-----|--|--|--|--|
| Fluoride                          | 0.4883 | 0.10 | 0.5 | 0 | 97.7 | 90 | 110 |  |  |  |  |
| Chloride                          | 4.729  | 0.10 | 5   | 0 | 94.6 | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrite (As N)          | 0.9412 | 0.10 | 1   | 0 | 94.1 | 90 | 110 |  |  |  |  |
| Bromide                           | 2.477  | 0.10 | 2.5 | 0 | 99.1 | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.424  | 0.10 | 2.5 | 0 | 97.0 | 90 | 110 |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | 4.751  | 0.50 | 5   | 0 | 95.0 | 90 | 110 |  |  |  |  |
| Sulfate                           | 9.623  | 0.50 | 10  | 0 | 96.2 | 90 | 110 |  |  |  |  |

|                            |                  |                 |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS ST300-06006 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18969  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18969 | TestNo: E300    |             | Analysis Date: 4/18/2006 | SeqNo: 471358 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                   |        |      |     |   |      |    |     |  |  |  |  |
|-----------------------------------|--------|------|-----|---|------|----|-----|--|--|--|--|
| Fluoride                          | 0.4963 | 0.10 | 0.5 | 0 | 99.3 | 90 | 110 |  |  |  |  |
| Chloride                          | 4.771  | 0.10 | 5   | 0 | 95.4 | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrite (As N)          | 0.9901 | 0.10 | 1   | 0 | 99.0 | 90 | 110 |  |  |  |  |
| Bromide                           | 2.479  | 0.10 | 2.5 | 0 | 99.2 | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.433  | 0.10 | 2.5 | 0 | 97.3 | 90 | 110 |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | 4.883  | 0.50 | 5   | 0 | 97.7 | 90 | 110 |  |  |  |  |
| Sulfate                           | 9.635  | 0.50 | 10  | 0 | 96.4 | 90 | 110 |  |  |  |  |

|                            |                  |                 |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS ST300-06006 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18969  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18969 | TestNo: E300    |             | Analysis Date: 4/18/2006 | SeqNo: 471405 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                   |        |      |     |   |      |    |     |  |  |  |  |
|-----------------------------------|--------|------|-----|---|------|----|-----|--|--|--|--|
| Fluoride                          | 0.4857 | 0.10 | 0.5 | 0 | 97.1 | 90 | 110 |  |  |  |  |
| Chloride                          | 4.822  | 0.10 | 5   | 0 | 96.4 | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrite (As N)          | 1.044  | 0.10 | 1   | 0 | 104  | 90 | 110 |  |  |  |  |
| Bromide                           | 2.527  | 0.10 | 2.5 | 0 | 101  | 90 | 110 |  |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.474  | 0.10 | 2.5 | 0 | 99.0 | 90 | 110 |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | 5.002  | 0.50 | 5   | 0 | 100  | 90 | 110 |  |  |  |  |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604132

Project: River Sampling 2nd Qtr 2006

TestCode: 300\_W

|                            |                  |                 |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS ST300-06006 | SampType: LCS    | TestCode: 300_W | Units: mg/L | Prep Date:               | RunNo: 18969  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: R18969 | TestNo: E300    |             | Analysis Date: 4/18/2006 | SeqNo: 471405 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Sulfate                    | 9.834            | 0.50            | 10          | 0                        | 98.3          | 90       | 110       |             |      |          |      |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

CLIENT: San Juan Refining

Work Order: 0604132

Project: River Sampling 2nd Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: 310.1\_W

|                  |                  |                   |                   |                          |               |          |           |             |      |          |      |
|------------------|------------------|-------------------|-------------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB    | SampleType: MBLK | TestCode: 310.1_W | Units: mg/L CaCO3 | Prep Date:               | RunNo: 19004  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R19004 | TestNo: E310.1    |                   | Analysis Date: 4/21/2006 | SeqNo: 472560 |          |           |             |      |          |      |
| Analyte          | Result           | PQL               | SPK value         | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Alkalinity, Total (As CaCO3)

Carbonate

Bicarbonate

2.000

ND

2.000

2.0

2.0

2.0

Qualifiers:

E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DRO\_W

CLIENT: San Juan Refining  
Work Order: 0604132  
Project: River Sampling 2nd Qtr 2006

|                     |                 |                     |             |                          |                                                        |
|---------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: MB-10192 | SampType: MBLK  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18955                                           |
| Client ID: ZZZZZ    | Batch ID: 10192 | TestNo: SW8015      |             | Analysis Date: 4/18/2006 | SeqNo: 471338                                          |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Diesel Range Organics (DRO) ND 1.0  
Motor Oil Range Organics (MRO) ND 5.0

|                      |                 |                     |             |                          |                                                        |
|----------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCS-10192 | SampType: LCS   | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18955                                           |
| Client ID: ZZZZZ     | Batch ID: 10192 | TestNo: SW8015      |             | Analysis Date: 4/18/2006 | SeqNo: 471339                                          |
| Analyte              | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Diesel Range Organics (DRO) 5.600 1.0 5 0 112 81.2 149

|                       |                 |                     |             |                          |                                                        |
|-----------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCSD-10192 | SampType: LCSD  | TestCode: 8015DRO_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18955                                           |
| Client ID: ZZZZZ      | Batch ID: 10192 | TestNo: SW8015      |             | Analysis Date: 4/18/2006 | SeqNo: 471340                                          |
| Analyte               | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Diesel Range Organics (DRO) 6.282 1.0 5 0 126 81.2 149 5.6 11.5 23

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604132

Project: River Sampling 2nd Qtr 2006

TestCode: 8015GRO\_W

|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|-------------------------------|------------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 5ML REAGENT BLA    | SampType: MBLK   | TestCode: 8015GRO_W | Units: mg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ              | Batch ID: R19011 | TestNo: SW8015      |             | Analysis Date: 4/21/2006 | SeqNo: 472823 |          |           |             |      |          |      |
| Analyte                       | Result           | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND               |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|                               |                  |                     |             |                          |               |          |           |             |      |          |      |

|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|-------------------------------|------------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 2.5UG GRO LCS      | SampType: LCS    | TestCode: 8015GRO_W | Units: mg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ              | Batch ID: R19011 | TestNo: SW8015      |             | Analysis Date: 4/22/2006 | SeqNo: 472824 |          |           |             |      |          |      |
| Analyte                       | Result           | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.4880           | 0.050               | 0.5         | 0                        | 97.6          | 82.6     | 114       |             |      |          |      |

|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|-------------------------------|------------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0604132-03A MS     | SampType: MS     | TestCode: 8015GRO_W | Units: mg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: N of MW #46        | Batch ID: R19011 | TestNo: SW8015      |             | Analysis Date: 4/22/2006 | SeqNo: 472838 |          |           |             |      |          |      |
| Analyte                       | Result           | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.4260           | 0.050               | 0.5         | 0                        | 85.2          | 82.6     | 114       |             |      |          |      |

|                               |                  |                     |             |                          |               |          |           |             |      |          |      |
|-------------------------------|------------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0604132-03A MSD    | SampType: MSD    | TestCode: 8015GRO_W | Units: mg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: N of MW #46        | Batch ID: R19011 | TestNo: SW8015      |             | Analysis Date: 4/22/2006 | SeqNo: 472839 |          |           |             |      |          |      |
| Analyte                       | Result           | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.4440           | 0.050               | 0.5         | 0                        | 88.8          | 82.6     | 114       | 0.426       | 4.14 | 8.39     |      |

Qualifiers: E Value above quantitation range ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits

R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits



# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0604132  
 Project: River Sampling 2nd Qtr 2006

TestCode: 8021BTEX\_W

|                            |                  |                      |             |                          |                                                        |
|----------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML REAGENT BLA | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ           | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472742                                          |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                      |                  |                      |             |                          |                                                        |
|----------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 5ML RB-II | SampType: MBLK   | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ     | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472803                                          |
| Analyte              | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                           |                  |                      |             |                          |                                                        |
|---------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ          | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/21/2006 | SeqNo: 472743                                          |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Methyl tert-butyl ether (MTBE)  
 Benzene  
 Toluene  
 Ethylbenzene  
 Xylenes, Total

|                              |                  |                      |             |                          |                                                        |
|------------------------------|------------------|----------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 100NG BTEX LCS-II | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011                                           |
| Client ID: ZZZZZ             | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472804                                          |
| Analyte                      | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604132

Project: River Sampling 2nd Qtr 2006

TestCode: 8021BTEX\_W

|                              |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 100NG BTEX LCS-II | SampType: LCS    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: ZZZZZ             | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472804 |          |           |             |      |          |      |
| Analyte                      | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |   |     |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|---|-----|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 20.50 | 2.5 | 20 | 0 | 102 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 21.40 | 1.0 | 20 | 0 | 107 | 88.5 | 114 |  |  |  |  |
| Toluene                        | 22.09 | 1.0 | 20 | 0 | 110 | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 21.67 | 1.0 | 20 | 0 | 108 | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 44.41 | 3.0 | 40 | 0 | 111 | 83.3 | 114 |  |  |  |  |

|                           |                  |                      |             |                          |               |          |           |             |      |          |      |
|---------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0604132-02A MS | SampType: MS     | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: N of MW #45    | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472820 |          |           |             |      |          |      |
| Analyte                   | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |       |     |      |     |  |  |  |  |
|--------------------------------|-------|-----|----|-------|-----|------|-----|--|--|--|--|
| Methyl tert-butyl ether (MTBE) | 22.37 | 2.5 | 20 | 0     | 112 | 64.5 | 133 |  |  |  |  |
| Benzene                        | 22.30 | 1.0 | 20 | 0     | 111 | 88.5 | 114 |  |  |  |  |
| Toluene                        | 22.73 | 1.0 | 20 | 0.714 | 110 | 87.2 | 114 |  |  |  |  |
| Ethylbenzene                   | 22.17 | 1.0 | 20 | 0     | 111 | 88.6 | 113 |  |  |  |  |
| Xylenes, Total                 | 45.13 | 3.0 | 40 | 0.712 | 111 | 83.3 | 114 |  |  |  |  |

|                            |                  |                      |             |                          |               |          |           |             |      |          |      |
|----------------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 0604132-02A MSD | SampType: MSD    | TestCode: 8021BTEX_W | Units: µg/L | Prep Date:               | RunNo: 19011  |          |           |             |      |          |      |
| Client ID: N of MW #45     | Batch ID: R19011 | TestNo: SW8021       |             | Analysis Date: 4/22/2006 | SeqNo: 472821 |          |           |             |      |          |      |
| Analyte                    | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                |       |     |    |       |     |      |     |       |      |    |  |
|--------------------------------|-------|-----|----|-------|-----|------|-----|-------|------|----|--|
| Methyl tert-butyl ether (MTBE) | 20.97 | 2.5 | 20 | 0     | 105 | 64.5 | 133 | 22.37 | 6.46 | 28 |  |
| Benzene                        | 20.82 | 1.0 | 20 | 0     | 104 | 88.5 | 114 | 22.3  | 6.84 | 27 |  |
| Toluene                        | 21.60 | 1.0 | 20 | 0.714 | 104 | 87.2 | 114 | 22.73 | 5.09 | 19 |  |
| Ethylbenzene                   | 20.92 | 1.0 | 20 | 0     | 105 | 88.6 | 113 | 22.17 | 5.82 | 10 |  |
| Xylenes, Total                 | 42.67 | 3.0 | 40 | 0.712 | 105 | 83.3 | 114 | 45.13 | 5.60 | 13 |  |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0604132  
 Project: River Sampling 2nd Qtr 2006

TestCode: 8270\_W

| Sample ID: MB-10220         | SampType: MBLK  | TestCode: 8270_W | Units: µg/L | Prep Date:     | RunNo: 19046  |          |           |             |      |          |      |
|-----------------------------|-----------------|------------------|-------------|----------------|---------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZ            | Batch ID: 10220 | TestNo: SW8270C  | (SW3510)    | Analysis Date: | SeqNo: 473592 |          |           |             |      |          |      |
| Analyte                     | Result          | PQL              | SPK value   | SPK Ref Val    | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Acenaphthene                | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Acenaphthylene              | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Aniline                     | ND              | 20               |             |                |               |          |           |             |      |          |      |
| Anthracene                  | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Azobenzene                  | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Benz(a)anthracene           | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Benzo(a)pyrene              | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Benzo(b)fluoranthene        | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Benzo(g,h,i)perylene        | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Benzo(k)fluoranthene        | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Benzoic acid                | ND              | 50               |             |                |               |          |           |             |      |          |      |
| Benzyl alcohol              | ND              | 20               |             |                |               |          |           |             |      |          |      |
| Bis(2-chloroethoxy)methane  | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Bis(2-chloroethyl)ether     | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Bis(2-chloroisopropyl)ether | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Bis(2-ethylhexyl)phthalate  | ND              | 15               |             |                |               |          |           |             |      |          |      |
| 4-Bromophenyl phenyl ether  | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Butyl benzyl phthalate      | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Carbazole                   | ND              | 10               |             |                |               |          |           |             |      |          |      |
| 4-Chloro-3-methylphenol     | ND              | 20               |             |                |               |          |           |             |      |          |      |
| 4-Chloroaniline             | ND              | 20               |             |                |               |          |           |             |      |          |      |
| 2-Chloronaphthalene         | ND              | 10               |             |                |               |          |           |             |      |          |      |
| 2-Chlorophenol              | ND              | 10               |             |                |               |          |           |             |      |          |      |
| 4-Chlorophenyl phenyl ether | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Chrysene                    | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Di-n-butyl phthalate        | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Di-n-octyl phthalate        | ND              | 15               |             |                |               |          |           |             |      |          |      |
| Dibenz(a,h)anthracene       | ND              | 10               |             |                |               |          |           |             |      |          |      |
| Dibenzofuran                | ND              | 10               |             |                |               |          |           |             |      |          |      |
| 1,2-Dichlorobenzene         | ND              | 10               |             |                |               |          |           |             |      |          |      |
| 1,3-Dichlorobenzene         | ND              | 10               |             |                |               |          |           |             |      |          |      |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
Work Order: 0604132  
Project: River Sampling 2nd Qtr 2006

TestCode: 8270\_W

|                            |                 |                  |             |                          |               |          |           |             |      |          |      |
|----------------------------|-----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10220        | SampType: MBLK  | TestCode: 8270_W | Units: µg/L | Prep Date: 4/20/2006     | RunNo: 19046  |          |           |             |      |          |      |
| Client ID: ZZZZZ           | Batch ID: 10220 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 4/25/2006 | SeqNo: 473592 |          |           |             |      |          |      |
| Analyte                    | Result          | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene        | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 3,3'-Dichlorobenzidine     | ND              | 15               |             |                          |               |          |           |             |      |          |      |
| Diethyl phthalate          | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Dimethyl phthalate         | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 2,4-Dichlorophenol         | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 2,4-Dimethylphenol         | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 4,6-Dinitro-2-methylphenol | ND              | 50               |             |                          |               |          |           |             |      |          |      |
| 2,4-Dinitrophenol          | ND              | 50               |             |                          |               |          |           |             |      |          |      |
| 2,4-Dinitrotoluene         | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 2,6-Dinitrotoluene         | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Fluoranthene               | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Fluorene                   | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Hexachlorobenzene          | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Hexachlorobutadiene        | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Hexachlorocyclopentadiene  | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Hexachloroethane           | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Indeno(1,2,3-cd)pyrene     | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Isophorone                 | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 2-Methylnaphthalene        | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 2-Methylphenol             | ND              | 15               |             |                          |               |          |           |             |      |          |      |
| 3+4-Methylphenol           | ND              | 20               |             |                          |               |          |           |             |      |          |      |
| N-Nitrosodi-n-propylamine  | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| N-Nitrosodimethylamine     | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| N-Nitrosodiphenylamine     | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| Naphthalene                | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 2-Nitroaniline             | ND              | 50               |             |                          |               |          |           |             |      |          |      |
| 3-Nitroaniline             | ND              | 50               |             |                          |               |          |           |             |      |          |      |
| 4-Nitroaniline             | ND              | 20               |             |                          |               |          |           |             |      |          |      |
| Nitrobenzene               | ND              | 10               |             |                          |               |          |           |             |      |          |      |
| 2-Nitrophenol              | ND              | 15               |             |                          |               |          |           |             |      |          |      |
| 4-Nitrophenol              | ND              | 50               |             |                          |               |          |           |             |      |          |      |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0604132  
 Project: River Sampling 2nd Qtr 2006

TestCode: 8270\_W

|                     |                 |                  |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10220 | SampType: MBLK  | TestCode: 8270_W | Units: µg/L | Prep Date: 4/20/2006     | RunNo: 19046  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10220 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 4/25/2006 | SeqNo: 473592 |          |           |             |      |          |      |
| Analyte             | Result          | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                        |    |    |  |  |  |  |  |  |  |  |  |
|------------------------|----|----|--|--|--|--|--|--|--|--|--|
| Pentachlorophenol      | ND | 50 |  |  |  |  |  |  |  |  |  |
| Phenanthrene           | ND | 10 |  |  |  |  |  |  |  |  |  |
| Phenol                 | ND | 10 |  |  |  |  |  |  |  |  |  |
| Pyrene                 | ND | 15 |  |  |  |  |  |  |  |  |  |
| Pyridine               | ND | 30 |  |  |  |  |  |  |  |  |  |
| 1,2,4-Trichlorobenzene | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2,4,5-Trichlorophenol  | ND | 10 |  |  |  |  |  |  |  |  |  |
| 2,4,6-Trichlorophenol  | ND | 15 |  |  |  |  |  |  |  |  |  |

|                      |                 |                  |             |                          |               |          |           |             |      |          |      |
|----------------------|-----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10220 | SampType: LCS   | TestCode: 8270_W | Units: µg/L | Prep Date: 4/20/2006     | RunNo: 19046  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 10220 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 4/25/2006 | SeqNo: 473593 |          |           |             |      |          |      |
| Analyte              | Result          | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                           |       |    |     |   |      |      |      |  |  |  |  |
|---------------------------|-------|----|-----|---|------|------|------|--|--|--|--|
| Acenaphthene              | 56.98 | 10 | 100 | 0 | 57.0 | 11   | 123  |  |  |  |  |
| 4-Chloro-3-methylphenol   | 124.1 | 20 | 200 | 0 | 62.0 | 15.4 | 119  |  |  |  |  |
| 2-Chlorophenol            | 108.5 | 10 | 200 | 0 | 54.2 | 12.2 | 122  |  |  |  |  |
| 1,4-Dichlorobenzene       | 46.96 | 10 | 100 | 0 | 47.0 | 16.9 | 100  |  |  |  |  |
| 2,4-Dinitrotoluene        | 49.66 | 10 | 100 | 0 | 49.7 | 13   | 138  |  |  |  |  |
| N-Nitrosodi-n-propylamine | 56.92 | 10 | 100 | 0 | 56.9 | 9.93 | 122  |  |  |  |  |
| 4-Nitrophenol             | 58.28 | 50 | 200 | 0 | 29.1 | 12.5 | 87.4 |  |  |  |  |
| Pentachlorophenol         | 123.4 | 50 | 200 | 0 | 61.7 | 3.55 | 114  |  |  |  |  |
| Phenol                    | 62.28 | 10 | 200 | 0 | 31.1 | 7.53 | 73.1 |  |  |  |  |
| Pyrene                    | 58.52 | 15 | 100 | 0 | 58.5 | 12.6 | 140  |  |  |  |  |
| 1,2,4-Trichlorobenzene    | 51.52 | 10 | 100 | 0 | 51.5 | 17.4 | 98.7 |  |  |  |  |

|                       |                 |                  |             |                          |               |          |           |             |      |          |      |
|-----------------------|-----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCSD-10220 | SampType: LCSD  | TestCode: 8270_W | Units: µg/L | Prep Date: 4/20/2006     | RunNo: 19046  |          |           |             |      |          |      |
| Client ID: ZZZZZ      | Batch ID: 10220 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 4/25/2006 | SeqNo: 473594 |          |           |             |      |          |      |
| Analyte               | Result          | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|              |       |    |     |   |      |    |     |       |      |      |  |
|--------------|-------|----|-----|---|------|----|-----|-------|------|------|--|
| Acenaphthene | 60.96 | 10 | 100 | 0 | 61.0 | 11 | 123 | 56.98 | 6.75 | 30.5 |  |
|--------------|-------|----|-----|---|------|----|-----|-------|------|------|--|

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604132

Project: River Sampling 2nd Qtr 2006

TestCode: 8270\_W

|                           |                 |                  |             |                          |               |          |           |             |       |          |      |
|---------------------------|-----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|-------|----------|------|
| Sample ID: LCSD-10220     | SampType: LCSD  | TestCode: 8270_W | Units: µg/L | Prep Date: 4/20/2006     | RunNo: 19046  |          |           |             |       |          |      |
| Client ID: ZZZZZ          | Batch ID: 10220 | TestNo: SW8270C  | (SW3510)    | Analysis Date: 4/25/2006 | SeqNo: 473594 |          |           |             |       |          |      |
| Analyte                   | Result          | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD  | RPDLimit | Qual |
| 4-Chloro-3-methylphenol   | 129.3           | 20               | 200         | 0                        | 64.6          | 15.4     | 119       | 124.1       | 4.12  | 28.6     |      |
| 2-Chlorophenol            | 103.3           | 10               | 200         | 0                        | 51.6          | 12.2     | 122       | 108.5       | 4.89  | 107      |      |
| 1,4-Dichlorobenzene       | 45.46           | 10               | 100         | 0                        | 45.5          | 16.9     | 100       | 46.96       | 3.25  | 62.1     |      |
| 2,4-Dinitrotoluene        | 52.60           | 10               | 100         | 0                        | 52.6          | 13       | 138       | 49.66       | 5.75  | 14.7     |      |
| N-Nitrosodi-n-propylamine | 59.54           | 10               | 100         | 0                        | 59.5          | 9.93     | 122       | 56.92       | 4.50  | 30.3     |      |
| 4-Nitrophenol             | 62.84           | 50               | 200         | 0                        | 31.4          | 12.5     | 87.4      | 58.28       | 7.53  | 36.3     |      |
| Pentachlorophenol         | 137.6           | 50               | 200         | 0                        | 68.8          | 3.55     | 114       | 123.4       | 10.9  | 49       |      |
| Phenol                    | 58.84           | 10               | 200         | 0                        | 29.4          | 7.53     | 73.1      | 62.28       | 5.68  | 52.4     |      |
| Pyrene                    | 62.70           | 15               | 100         | 0                        | 62.7          | 12.6     | 140       | 58.52       | 6.90  | 16.3     |      |
| 1,2,4-Trichlorobenzene    | 51.78           | 10               | 100         | 0                        | 51.8          | 17.4     | 98.7      | 51.52       | 0.503 | 36.4     |      |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

**CLIENT:** San Juan Refining  
**Work Order:** 0604132  
**Project:** River Sampling-2nd Qtr 2006

**ANALYTICAL QC SUMMARY REPORT**  
**TestCode:** HG\_CTW

|                     |                 |                  |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10201 | SampType: MBLK  | TestCode: HG_CTW | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18964  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10201 | TestNo: SW7470   | (SW7470)    | Analysis Date: 4/18/2006 | SeqNo: 471277 |          |           |             |      |          |      |
| Analyte             | Result          | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Mercury             | ND              | 0.00020          |             |                          |               |          |           |             |      |          |      |

|                      |                 |                  |             |                          |               |          |           |             |      |          |      |
|----------------------|-----------------|------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10201 | SampType: LCS   | TestCode: HG_CTW | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18964  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 10201 | TestNo: SW7470   | (SW7470)    | Analysis Date: 4/18/2006 | SeqNo: 471278 |          |           |             |      |          |      |
| Analyte              | Result          | PQL              | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Mercury              | 0.004935        | 0.00020          | 0.005       | 0                        | 98.7          | 80       | 120       |             |      |          |      |

CLIENT: San Juan Refining  
 Work Order: 0604132  
 Project: River Sampling 2nd Qtr 2006

# ANALYTICAL QC SUMMARY REPORT

TestCode: METALS DISS

|                  |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB    | SampType: MBLK   | TestCode: METALS_DIS | Units: mg/L | Prep Date:               | RunNo: 19055  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R19055 | TestNo: SW6010A      |             | Analysis Date: 4/26/2006 | SeqNo: 473667 |          |           |             |      |          |      |
| Analyte          | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|           |    |        |  |  |  |  |  |  |  |  |  |
|-----------|----|--------|--|--|--|--|--|--|--|--|--|
| Arsenic   | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Barium    | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Cadmium   | ND | 0.0020 |  |  |  |  |  |  |  |  |  |
| Calcium   | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Chromium  | ND | 0.0060 |  |  |  |  |  |  |  |  |  |
| Copper    | ND | 0.0060 |  |  |  |  |  |  |  |  |  |
| Iron      | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Lead      | ND | 0.0050 |  |  |  |  |  |  |  |  |  |
| Magnesium | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Manganese | ND | 0.0020 |  |  |  |  |  |  |  |  |  |
| Potassium | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Selenium  | ND | 0.050  |  |  |  |  |  |  |  |  |  |
| Silver    | ND | 0.0050 |  |  |  |  |  |  |  |  |  |
| Sodium    | ND | 1.0    |  |  |  |  |  |  |  |  |  |
| Uranium   | ND | 0.10   |  |  |  |  |  |  |  |  |  |
| Zinc      | ND | 0.050  |  |  |  |  |  |  |  |  |  |

|                  |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS   | SampType: LCS    | TestCode: METALS_DIS | Units: mg/L | Prep Date:               | RunNo: 19055  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R19055 | TestNo: SW6010A      |             | Analysis Date: 4/26/2006 | SeqNo: 473668 |          |           |             |      |          |      |
| Analyte          | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|           |        |        |      |   |     |    |     |  |  |  |  |
|-----------|--------|--------|------|---|-----|----|-----|--|--|--|--|
| Arsenic   | 0.5192 | 0.020  | 0.5  | 0 | 104 | 80 | 120 |  |  |  |  |
| Barium    | 0.5025 | 0.020  | 0.5  | 0 | 101 | 80 | 120 |  |  |  |  |
| Cadmium   | 0.5204 | 0.0020 | 0.5  | 0 | 104 | 80 | 120 |  |  |  |  |
| Calcium   | 51.65  | 1.0    | 50.5 | 0 | 102 | 80 | 120 |  |  |  |  |
| Chromium  | 0.5075 | 0.0060 | 0.5  | 0 | 101 | 80 | 120 |  |  |  |  |
| Copper    | 0.5131 | 0.0060 | 0.5  | 0 | 103 | 80 | 120 |  |  |  |  |
| Iron      | 0.5293 | 0.020  | 0.5  | 0 | 106 | 80 | 120 |  |  |  |  |
| Lead      | 0.5028 | 0.0050 | 0.5  | 0 | 101 | 80 | 120 |  |  |  |  |
| Magnesium | 51.89  | 1.0    | 50.5 | 0 | 103 | 80 | 120 |  |  |  |  |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits



|                  |                  |                      |             |                          |               |          |           |             |      |          |      |
|------------------|------------------|----------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS   | SampType: LCS    | TestCode: METALS_DIS | Units: mg/L | Prep Date:               | RunNo: 19055  |          |           |             |      |          |      |
| Client ID: ZZZZZ | Batch ID: R19055 | TestNo: SW6010A      |             | Analysis Date: 4/26/2006 | SeqNo: 473668 |          |           |             |      |          |      |
| Analyte          | Result           | PQL                  | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Manganese        | 0.5045           | 0.0020               | 0.5         | 0                        | 101           | 80       | 120       |             |      |          |      |
| Potassium        | 55.04            | 1.0                  | 55          | 0                        | 100           | 80       | 120       |             |      |          |      |
| Selenium         | 0.5007           | 0.050                | 0.5         | 0                        | 100           | 80       | 120       |             |      |          |      |
| Silver           | 0.5162           | 0.0050               | 0.5         | 0                        | 103           | 80       | 120       |             |      |          |      |
| Sodium           | 55.75            | 1.0                  | 50.5        | 0                        | 110           | 80       | 120       |             |      |          |      |
| Uranium          | 0.5331           | 0.10                 | 2.5         | 0                        | 21.3          | 80       | 120       |             |      |          | S    |
| Zinc             | 0.5134           | 0.050                | 0.5         | 0                        | 103           | 80       | 120       |             |      |          |      |

# ANALYTICAL QC SUMMARY REPORT

TestCode: METALS\_TOTAL

CLIENT: San Juan Refining  
Work Order: 0604132  
Project: River Sampling 2nd Qtr 2006

|                     |                 |                     |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10196 | SampType: MBLK  | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18974  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/19/2006 | SeqNo: 471572 |          |           |             |      |          |      |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|          |    |        |  |  |  |  |  |  |  |  |  |
|----------|----|--------|--|--|--|--|--|--|--|--|--|
| Arsenic  | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Barium   | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.0020 |  |  |  |  |  |  |  |  |  |
| Chromium | ND | 0.0060 |  |  |  |  |  |  |  |  |  |
| Lead     | ND | 0.0050 |  |  |  |  |  |  |  |  |  |
| Selenium | ND | 0.050  |  |  |  |  |  |  |  |  |  |
| Silver   | ND | 0.0050 |  |  |  |  |  |  |  |  |  |

|                     |                 |                     |             |                          |               |          |           |             |      |          |      |
|---------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10196 | SampType: MBLK  | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18986  |          |           |             |      |          |      |
| Client ID: ZZZZZ    | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/20/2006 | SeqNo: 472207 |          |           |             |      |          |      |
| Analyte             | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|          |    |        |  |  |  |  |  |  |  |  |  |
|----------|----|--------|--|--|--|--|--|--|--|--|--|
| Arsenic  | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Barium   | ND | 0.020  |  |  |  |  |  |  |  |  |  |
| Cadmium  | ND | 0.0020 |  |  |  |  |  |  |  |  |  |
| Chromium | ND | 0.0060 |  |  |  |  |  |  |  |  |  |
| Lead     | ND | 0.0050 |  |  |  |  |  |  |  |  |  |
| Selenium | ND | 0.050  |  |  |  |  |  |  |  |  |  |
| Silver   | ND | 0.0050 |  |  |  |  |  |  |  |  |  |

|                      |                 |                     |             |                          |               |          |           |             |      |          |      |
|----------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10196 | SampType: LCS   | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18974  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/19/2006 | SeqNo: 471573 |          |           |             |      |          |      |
| Analyte              | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|          |        |        |     |          |      |    |     |  |  |  |  |
|----------|--------|--------|-----|----------|------|----|-----|--|--|--|--|
| Arsenic  | 0.5392 | 0.020  | 0.5 | 0.009776 | 106  | 80 | 120 |  |  |  |  |
| Barium   | 0.5220 | 0.020  | 0.5 | 0        | 104  | 80 | 120 |  |  |  |  |
| Cadmium  | 0.5210 | 0.0020 | 0.5 | 0        | 104  | 80 | 120 |  |  |  |  |
| Chromium | 0.5274 | 0.0060 | 0.5 | 0        | 105  | 80 | 120 |  |  |  |  |
| Lead     | 0.5087 | 0.0050 | 0.5 | 0        | 102  | 80 | 120 |  |  |  |  |
| Selenium | 0.4787 | 0.050  | 0.5 | 0        | 95.7 | 80 | 120 |  |  |  |  |

Qualifiers: E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining  
 Work Order: 0604132  
 Project: River Sampling 2nd Qtr 2006

TestCode: METALS\_TOTAL

|                      |                 |                     |             |                          |                                                        |
|----------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCS-10196 | SampType: LCS   | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18974                                           |
| Client ID: ZZZZZ     | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/19/2006 | SeqNo: 471573                                          |
| Analyte              | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Silver               | 0.5276          | 0.0050              | 0.5         | 0.0005175                | 105 80 120                                             |

|                      |                 |                     |             |                          |                                                        |
|----------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: LCS-10196 | SampType: LCS   | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18986                                           |
| Client ID: ZZZZZ     | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/20/2006 | SeqNo: 472208                                          |
| Analyte              | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Arsenic              | 0.5007          | 0.020               | 0.5         | 0.006399                 | 98.9 80 120                                            |
| Barium               | 0.4746          | 0.020               | 0.5         | 0                        | 94.9 80 120                                            |
| Cadmium              | 0.4809          | 0.0020              | 0.5         | 0                        | 96.2 80 120                                            |
| Chromium             | 0.4813          | 0.0060              | 0.5         | 0                        | 96.3 80 120                                            |
| Lead                 | 0.4793          | 0.0050              | 0.5         | 0                        | 95.9 80 120                                            |
| Selenium             | 0.4562          | 0.050               | 0.5         | 0                        | 91.2 80 120                                            |
| Silver               | 0.4787          | 0.0050              | 0.5         | 0.0004982                | 95.6 80 120                                            |

|                          |                 |                     |             |                          |                                                        |
|--------------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 0604132-02DMS | SampType: MS    | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18986                                           |
| Client ID: N of MW #45   | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/20/2006 | SeqNo: 472203                                          |
| Analyte                  | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Arsenic                  | 0.5284          | 0.020               | 0.5         | 0                        | 106 75 125                                             |
| Barium                   | 0.5616          | 0.020               | 0.5         | 0.0683                   | 98.7 75 125                                            |
| Cadmium                  | 0.4933          | 0.0020              | 0.5         | 0                        | 98.7 75 125                                            |
| Chromium                 | 0.4916          | 0.0060              | 0.5         | 0                        | 98.3 75 125                                            |
| Lead                     | 0.4927          | 0.0050              | 0.5         | 0                        | 98.5 75 125                                            |
| Selenium                 | 0.4544          | 0.050               | 0.5         | 0                        | 90.9 75 125                                            |

|                           |                 |                     |             |                          |                                                        |
|---------------------------|-----------------|---------------------|-------------|--------------------------|--------------------------------------------------------|
| Sample ID: 0604132-02DMSD | SampType: MSD   | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18986                                           |
| Client ID: N of MW #45    | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/20/2006 | SeqNo: 472204                                          |
| Analyte                   | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual |
| Arsenic                   | 0.5388          | 0.020               | 0.5         | 0                        | 108 75 125 0.5284 1.94 20                              |

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

# ANALYTICAL QC SUMMARY REPORT

CLIENT: San Juan Refining

Work Order: 0604132

Project: River Sampling 2nd Qtr 2006

TestCode: METALS\_TOTAL

|                           |                 |                     |             |                          |               |          |           |             |        |          |      |
|---------------------------|-----------------|---------------------|-------------|--------------------------|---------------|----------|-----------|-------------|--------|----------|------|
| Sample ID: 0604132-02DMSD | SampType: MSD   | TestCode: METALS_TO | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18986  |          |           |             |        |          |      |
| Client ID: N of MW #45    | Batch ID: 10196 | TestNo: SW6010A     |             | Analysis Date: 4/20/2006 | SeqNo: 472204 |          |           |             |        |          |      |
| Analyte                   | Result          | PQL                 | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD   | RPDLimit | Qual |
| Barium                    | 0.5616          | 0.020               | 0.5         | 0.0683                   | 98.7          | 75       | 125       | 0.5616      | 0.0153 | 20       |      |
| Cadmium                   | 0.4986          | 0.0020              | 0.5         | 0                        | 99.7          | 75       | 125       | 0.4933      | 1.06   | 20       |      |
| Chromium                  | 0.4970          | 0.0060              | 0.5         | 0                        | 99.4          | 75       | 125       | 0.4916      | 1.09   | 20       |      |
| Lead                      | 0.4933          | 0.0050              | 0.5         | 0                        | 98.7          | 75       | 125       | 0.4927      | 0.118  | 20       |      |
| Selenium                  | 0.4643          | 0.050               | 0.5         | 0                        | 92.9          | 75       | 125       | 0.4544      | 2.16   | 20       |      |

Qualifiers: E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 R RPD outside accepted recovery limits  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

|                        |                 |                 |             |                          |               |          |           |             |      |          |      |
|------------------------|-----------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-10200    | SampType: MBLK  | TestCode: TDS_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18973  |          |           |             |      |          |      |
| Client ID: ZZZZZ       | Batch ID: 10200 | TestNo: E160.1  |             | Analysis Date: 4/18/2006 | SeqNo: 471557 |          |           |             |      |          |      |
| Analyte                | Result          | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Total Dissolved Solids |                 |                 |             |                          |               |          |           |             |      |          |      |
|                        | ND              | 20              |             |                          |               |          |           |             |      |          |      |

|                      |                 |                 |             |                          |               |          |           |             |      |          |      |
|----------------------|-----------------|-----------------|-------------|--------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-10200 | SampType: LCS   | TestCode: TDS_W | Units: mg/L | Prep Date: 4/18/2006     | RunNo: 18973  |          |           |             |      |          |      |
| Client ID: ZZZZZ     | Batch ID: 10200 | TestNo: E160.1  |             | Analysis Date: 4/18/2006 | SeqNo: 471558 |          |           |             |      |          |      |
| Analyte              | Result          | PQL             | SPK value   | SPK Ref Val              | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

## Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

4/14/2006

Work Order Number 0604132

Received by AT

Checklist completed by

Signature

Date

4/14/06

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒No ☐Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒No ☐Not Present ☐Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐No ☒N/A ☐

Chain of custody present?

Yes ☒No ☐

Chain of custody signed when relinquished and received?

Yes ☒No ☐

Chain of custody agrees with sample labels?

Yes ☒No ☐

Samples in proper container/bottle?

Yes ☒No ☐

Sample containers intact?

Yes ☒No ☐

Sufficient sample volume for indicated test?

Yes ☒No ☐

All samples received within holding time?

Yes ☒No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐Yes ☒No ☐

Water - pH acceptable upon receipt?

Yes ☒No ☐N/A ☐

Container/Temp Blank temperature?

2°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: per CTH collection date for River Upstream is 4/13/06

4/17/06

Corrective Action \_\_\_\_\_

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**  
4901 Hawkins NE, Suite D  
Albuquerque, New Mexico 87109  
Tel. 505.345.3975 Fax 505.345.4900  
[www.hallenvironmental.com](http://www.hallenvironmental.com)

Project Name: River Sample 2nd QTR-2006

Project #:

Project Manager: Cindy Hurtado  
 Sample: Cindy Hurtado / Shelly Louder  
 Sample Temperature: 12

Sample: Cheyenne / Shelly / outdoor  
Sample Temperature: 16

| Date     | Time | Matrix           | Sample I.D. No. | Number/Volume | Preservative      |                  |                                | HEAL No.  |
|----------|------|------------------|-----------------|---------------|-------------------|------------------|--------------------------------|-----------|
|          |      |                  |                 |               | HgCl <sub>2</sub> | HNO <sub>3</sub> |                                |           |
| 12/10/06 | 945  | H <sub>2</sub> O | River-Uplatham  | 3-VOA         |                   |                  | HCL                            | 1004132-1 |
| /        | /    | /                | /               | 2-VOA         |                   |                  | HCL                            |           |
| /        | /    | /                | /               | 1-500ml       |                   | X                |                                |           |
| /        | /    | /                | /               | 1-250ml       |                   | X                | filtered                       |           |
| /        | /    | /                | /               | 1-500ml       |                   |                  | H <sub>2</sub> SO <sub>4</sub> |           |
| /        | /    | /                | /               | 1-500ml       |                   |                  |                                |           |
| /        | /    | /                | /               | 1-filter      |                   |                  | Amber                          |           |

|                |           |                                           |
|----------------|-----------|-------------------------------------------|
| Date: 11/12/00 | Time: 3pm | Relinquished By: (Signature) Cindy Antico |
| Date:          | Time:     | Relinquished By: (Signature)              |

Received By: (Signature)  4/14/00

Received By: (Signature) 

Remarks:

1010









## COVER LETTER

Tuesday, August 01, 2006

Cindy Hurtado  
San Juan Refining  
#50 CR 4990  
Bloomfield, NM 87413  
TEL: (505) 632-4161  
FAX (505) 632-3911

RE: River Sampling 3rd Qtr 2006

Order No.: 0607190

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 7/18/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

AZ license # AZ0682  
ORELAP Lab # NM100001



**CLIENT:** San Juan Refining  
**Project:** River Sampling 3rd Qtr 2006  
**Lab Order:** 0607190

**CASE NARRATIVE**

See Corrective Action: [219] DNOP high on 0607190(1-4).

## Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining  
 Lab Order: 0607190  
 Project: River Sampling 3rd Qtr 2006  
 Lab ID: 0607190-01

Client Sample ID: N of MW #45  
 Collection Date: 7/17/2006 9:45:00 AM  
 Date Received: 7/18/2006  
 Matrix: AQUEOUS

| Analyses                                 | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>    |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)              | ND     | 1.0      |      | mg/L  | 1  | 7/20/2006 7:08:34 PM |
| Motor Oil Range Organics (MRO)           | ND     | 5.0      |      | mg/L  | 1  | 7/20/2006 7:08:34 PM |
| Surr: DNOP                               | 148    | 58-140   | S    | %REC  | 1  | 7/20/2006 7:08:34 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>  |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)            | ND     | 0.050    |      | mg/L  | 1  | 7/25/2006 3:02:12 PM |
| Surr: BFB                                | 115    | 80-123   |      | %REC  | 1  | 7/25/2006 3:02:12 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>       |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)           | ND     | 2.5      |      | µg/L  | 1  | 7/25/2006 3:02:12 PM |
| Benzene                                  | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 3:02:12 PM |
| Toluene                                  | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 3:02:12 PM |
| Ethylbenzene                             | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 3:02:12 PM |
| Xylenes, Total                           | ND     | 3.0      |      | µg/L  | 1  | 7/25/2006 3:02:12 PM |
| Surr: 4-Bromofluorobenzene               | 98.9   | 72.2-125 |      | %REC  | 1  | 7/25/2006 3:02:12 PM |
| <b>EPA METHOD 300.0: ANIONS</b>          |        |          |      |       |    | Analyst: TES         |
| Fluoride                                 | 0.11   | 0.10     |      | mg/L  | 1  | 7/18/2006 2:39:14 PM |
| Chloride                                 | 2.4    | 0.10     |      | mg/L  | 1  | 7/18/2006 2:39:14 PM |
| Nitrogen, Nitrite (As N)                 | ND     | 0.10     |      | mg/L  | 1  | 7/18/2006 2:39:14 PM |
| Bromide                                  | ND     | 0.50     |      | mg/L  | 1  | 7/18/2006 2:39:14 PM |
| Nitrogen, Nitrate (As N)                 | ND     | 0.10     |      | mg/L  | 1  | 7/18/2006 2:39:14 PM |
| Phosphorus, Orthophosphate (As P)        | ND     | 0.50     |      | mg/L  | 1  | 7/18/2006 2:39:14 PM |
| Sulfate                                  | 46     | 0.50     |      | mg/L  | 1  | 7/18/2006 2:39:14 PM |
| <b>EPA METHOD 7470: MERCURY</b>          |        |          |      |       |    | Analyst: MAP         |
| Mercury                                  | ND     | 0.00020  |      | mg/L  | 1  | 7/21/2006            |
| <b>EPA METHOD 6010: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: CMC         |
| Arsenic                                  | ND     | 0.020    |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Barium                                   | 0.064  | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Cadmium                                  | ND     | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Calcium                                  | 30     | 1.0      |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Chromium                                 | ND     | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Copper                                   | ND     | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Iron                                     | ND     | 0.020    |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Lead                                     | ND     | 0.0050   |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |
| Magnesium                                | 5.2    | 1.0      |      | mg/L  | 1  | 7/28/2006 2:16:40 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #45

Lab Order: 0607190

Collection Date: 7/17/2006 9:45:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-01

Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|--------|------|-------|----|-----------------------|
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |        |      |       |    | Analyst: CMC          |
| Manganese                                 | 0.011  | 0.0020 |      | mg/L  | 1  | 7/28/2006 2:16:40 PM  |
| Potassium                                 | 1.4    | 1.0    |      | mg/L  | 1  | 7/28/2006 2:16:40 PM  |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 7/28/2006 2:16:40 PM  |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 7/31/2006 11:39:53 AM |
| Sodium                                    | 15     | 1.0    |      | mg/L  | 1  | 7/28/2006 2:16:40 PM  |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 7/28/2006 2:16:40 PM  |
| Zinc                                      | 0.11   | 0.0050 |      | mg/L  | 1  | 7/28/2006 2:16:40 PM  |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 7/20/2006 10:14:21 AM |
| Barium                                    | 0.081  | 0.020  |      | mg/L  | 1  | 7/20/2006 10:14:21 AM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 7/20/2006 10:14:21 AM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 7/20/2006 10:14:21 AM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 7/20/2006 10:14:21 AM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 7/20/2006 10:14:21 AM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 7/20/2006 10:14:21 AM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL           |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Aniline                                   | ND     | 20     |      | µg/L  | 1  | 7/21/2006             |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Azobenzene                                | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 7/21/2006             |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 7/21/2006             |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 7/21/2006             |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 7/21/2006             |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 7/21/2006             |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 7/21/2006             |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 7/21/2006             |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 7/21/2006             |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 7/21/2006             |
| Carbazole                                 | ND     | 10     |      | µg/L  | 1  | 7/21/2006             |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 7/21/2006             |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 7/21/2006             |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining  
 Lab Order: 0607190  
 Project: River Sampling 3rd Qtr 2006  
 Lab ID: 0607190-01

Client Sample ID: N of MW #45  
 Collection Date: 7/17/2006 9:45:00 AM  
 Date Received: 7/18/2006  
 Matrix: AQUEOUS

| Analyses                               | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |       |    | Analyst: BL   |
| 2-Chloronaphthalene                    | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2-Chlorophenol                         | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 4-Chlorophenyl phenyl ether            | ND     | 15  |      | µg/L  | 1  | 7/21/2006     |
| Chrysene                               | ND     | 15  |      | µg/L  | 1  | 7/21/2006     |
| Di-n-butyl phthalate                   | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Di-n-octyl phthalate                   | ND     | 15  |      | µg/L  | 1  | 7/21/2006     |
| Dibenz(a,h)anthracene                  | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Dibenzofuran                           | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 1,2-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 1,3-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 1,4-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 3,3'-Dichlorobenzidine                 | ND     | 15  |      | µg/L  | 1  | 7/21/2006     |
| Diethyl phthalate                      | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Dimethyl phthalate                     | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2,4-Dichlorophenol                     | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2,4-Dimethylphenol                     | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 4,6-Dinitro-2-methylphenol             | ND     | 50  |      | µg/L  | 1  | 7/21/2006     |
| 2,4-Dinitrophenol                      | ND     | 50  |      | µg/L  | 1  | 7/21/2006     |
| 2,4-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2,6-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Fluoranthene                           | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Fluorene                               | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Hexachlorobenzene                      | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Hexachlorobutadiene                    | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Hexachlorocyclopentadiene              | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Hexachloroethane                       | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Isophorone                             | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2-Methylnaphthalene                    | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2-Methylphenol                         | ND     | 15  |      | µg/L  | 1  | 7/21/2006     |
| 3+4-Methylphenol                       | ND     | 20  |      | µg/L  | 1  | 7/21/2006     |
| N-Nitrosodi-n-propylamine              | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| N-Nitrosodimethylamine                 | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| N-Nitrosodiphenylamine                 | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| Naphthalene                            | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 7/21/2006     |
| 3-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 7/21/2006     |
| 4-Nitroaniline                         | ND     | 20  |      | µg/L  | 1  | 7/21/2006     |
| Nitrobenzene                           | ND     | 10  |      | µg/L  | 1  | 7/21/2006     |
| 2-Nitrophenol                          | ND     | 15  |      | µg/L  | 1  | 7/21/2006     |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Aug-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0607190  
**Project:** River Sampling 3rd Qtr 2006  
**Lab ID:** 0607190-01

**Client Sample ID:** N of MW #45  
**Collection Date:** 7/17/2006 9:45:00 AM  
**Date Received:** 7/18/2006  
**Matrix:** AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 7/21/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 7/21/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 7/21/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 7/21/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 7/21/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 7/21/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 7/21/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 7/21/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 7/21/2006     |
| Surr: 2,4,6-Tribromophenol             | 61.4   | 16.6-150  |      | %REC       | 1  | 7/21/2006     |
| Surr: 2-Fluorobiphenyl                 | 67.3   | 19.6-134  |      | %REC       | 1  | 7/21/2006     |
| Surr: 2-Fluorophenol                   | 52.4   | 9.54-113  |      | %REC       | 1  | 7/21/2006     |
| Surr: 4-Terphenyl-d14                  | 64.2   | 22.7-145  |      | %REC       | 1  | 7/21/2006     |
| Surr: Nitrobenzene-d5                  | 62.8   | 14.6-134  |      | %REC       | 1  | 7/21/2006     |
| Surr: Phenol-d5                        | 35.4   | 10.7-80.3 |      | %REC       | 1  | 7/21/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)           | 77     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Bicarbonate                            | 77     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: CMC  |
| Specific Conductance                   | 270    | 0.010     |      | µmhos/cm   | 1  | 7/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 150    | 20        |      | mg/L       | 1  | 7/19/2006     |

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining  
Lab Order: 0607190  
Project: River Sampling 3rd Qtr 2006  
Lab ID: 0607190-02

Client Sample ID: N of MW #46  
Collection Date: 7/17/2006 10:00:00 AM  
Date Received: 7/18/2006  
Matrix: AQUEOUS

| Analyses                                 | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>    |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)              | ND     | 1.0      |      | mg/L  | 1  | 7/20/2006 7:41:56 PM |
| Motor Oil Range Organics (MRO)           | ND     | 5.0      |      | mg/L  | 1  | 7/20/2006 7:41:56 PM |
| Surr: DNOP                               | 157    | 58-140   | S    | %REC  | 1  | 7/20/2006 7:41:56 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>  |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)            | ND     | 0.050    |      | mg/L  | 1  | 7/25/2006 3:31:11 PM |
| Surr: BFB                                | 111    | 80-123   |      | %REC  | 1  | 7/25/2006 3:31:11 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>       |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)           | ND     | 2.5      |      | µg/L  | 1  | 7/25/2006 3:31:11 PM |
| Benzene                                  | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 3:31:11 PM |
| Toluene                                  | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 3:31:11 PM |
| Ethylbenzene                             | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 3:31:11 PM |
| Xylenes, Total                           | ND     | 3.0      |      | µg/L  | 1  | 7/25/2006 3:31:11 PM |
| Surr: 4-Bromofluorobenzene               | 97.2   | 72.2-125 |      | %REC  | 1  | 7/25/2006 3:31:11 PM |
| <b>EPA METHOD 300.0: ANIONS</b>          |        |          |      |       |    | Analyst: TES         |
| Fluoride                                 | 0.10   | 0.10     |      | mg/L  | 1  | 7/18/2006 2:56:38 PM |
| Chloride                                 | 2.5    | 0.10     |      | mg/L  | 1  | 7/18/2006 2:56:38 PM |
| Nitrogen, Nitrite (As N)                 | ND     | 0.10     |      | mg/L  | 1  | 7/18/2006 2:56:38 PM |
| Bromide                                  | ND     | 0.50     |      | mg/L  | 1  | 7/18/2006 2:56:38 PM |
| Nitrogen, Nitrate (As N)                 | ND     | 0.10     |      | mg/L  | 1  | 7/18/2006 2:56:38 PM |
| Phosphorus, Orthophosphate (As P)        | ND     | 0.50     |      | mg/L  | 1  | 7/18/2006 2:56:38 PM |
| Sulfate                                  | 47     | 0.50     |      | mg/L  | 1  | 7/18/2006 2:56:38 PM |
| <b>EPA METHOD 7470: MERCURY</b>          |        |          |      |       |    | Analyst: MAP         |
| Mercury                                  | ND     | 0.00020  |      | mg/L  | 1  | 7/21/2006            |
| <b>EPA METHOD 6010: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: CMC         |
| Arsenic                                  | ND     | 0.020    |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Barium                                   | 0.063  | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Cadmium                                  | ND     | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Calcium                                  | 30     | 1.0      |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Chromium                                 | ND     | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Copper                                   | ND     | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Iron                                     | 0.021  | 0.020    |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Lead                                     | ND     | 0.0050   |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |
| Magnesium                                | 5.2    | 1.0      |      | mg/L  | 1  | 7/28/2006 2:19:41 PM |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #46

Lab Order: 0607190

Collection Date: 7/17/2006 10:00:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-02

Matrix: AQUEOUS

| Analyses                                 | Result | PQL    | Qual | Units | DF | Date Analyzed         |
|------------------------------------------|--------|--------|------|-------|----|-----------------------|
| <b>EPA METHOD 6010: DISSOLVED METALS</b> |        |        |      |       |    | Analyst: CMC          |
| Manganese                                | 0.011  | 0.0020 |      | mg/L  | 1  | 7/28/2006 2:19:41 PM  |
| Potassium                                | 1.6    | 1.0    |      | mg/L  | 1  | 7/28/2006 2:19:41 PM  |
| Selenium                                 | ND     | 0.050  |      | mg/L  | 1  | 7/28/2006 2:19:41 PM  |
| Silver                                   | ND     | 0.0050 |      | mg/L  | 1  | 7/31/2006 11:42:53 AM |
| Sodium                                   | 15     | 1.0    |      | mg/L  | 1  | 7/28/2006 2:19:41 PM  |
| Uranium                                  | ND     | 0.10   |      | mg/L  | 1  | 7/28/2006 2:19:41 PM  |
| Zinc                                     | 0.16   | 0.0050 |      | mg/L  | 1  | 7/28/2006 2:19:41 PM  |

**EPA 6010: TOTAL RECOVERABLE METALS**

Analyst: NMO

|          |       |        |  |      |   |                       |
|----------|-------|--------|--|------|---|-----------------------|
| Arsenic  | ND    | 0.020  |  | mg/L | 1 | 7/20/2006 10:17:25 AM |
| Barium   | 0.078 | 0.020  |  | mg/L | 1 | 7/20/2006 10:17:25 AM |
| Cadmium  | ND    | 0.0020 |  | mg/L | 1 | 7/20/2006 10:17:25 AM |
| Chromium | ND    | 0.0060 |  | mg/L | 1 | 7/20/2006 10:17:25 AM |
| Lead     | ND    | 0.0050 |  | mg/L | 1 | 7/20/2006 10:17:25 AM |
| Selenium | ND    | 0.050  |  | mg/L | 1 | 7/20/2006 10:17:25 AM |
| Silver   | ND    | 0.0050 |  | mg/L | 1 | 7/20/2006 10:17:25 AM |

**EPA METHOD 8270C: SEMIVOLATILES**

Analyst: BL

|                             |    |    |  |      |   |           |
|-----------------------------|----|----|--|------|---|-----------|
| Acenaphthene                | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Acenaphthylene              | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Aniline                     | ND | 20 |  | µg/L | 1 | 7/20/2006 |
| Anthracene                  | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Azobenzene                  | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Benz(a)anthracene           | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Benzo(a)pyrene              | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Benzo(b)fluoranthene        | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Benzo(g,h,i)perylene        | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Benzo(k)fluoranthene        | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Benzoic acid                | ND | 50 |  | µg/L | 1 | 7/20/2006 |
| Benzyl alcohol              | ND | 20 |  | µg/L | 1 | 7/20/2006 |
| Bis(2-chloroethoxy)methane  | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Bis(2-chloroethyl)ether     | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Bis(2-chloroisopropyl)ether | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Bis(2-ethylhexyl)phthalate  | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| 4-Bromophenyl phenyl ether  | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Butyl benzyl phthalate      | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Carbazole                   | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 4-Chloro-3-methylphenol     | ND | 20 |  | µg/L | 1 | 7/20/2006 |
| 4-Chloroaniline             | ND | 20 |  | µg/L | 1 | 7/20/2006 |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #46

Lab Order: 0607190

Collection Date: 7/17/2006 10:00:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-02

Matrix: AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|------|-------|----|---------------|
|----------|--------|-----|------|-------|----|---------------|

**EPA METHOD 8270C: SEMIVOLATILES**

Analyst: BL

|                             |    |    |  |      |   |           |
|-----------------------------|----|----|--|------|---|-----------|
| 2-Chloronaphthalene         | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2-Chlorophenol              | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 4-Chlorophenyl phenyl ether | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Chrysene                    | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Di-n-butyl phthalate        | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Di-n-octyl phthalate        | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Dibenz(a,h)anthracene       | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Dibenzofuran                | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 1,2-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 1,3-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 1,4-Dichlorobenzene         | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 3,3'-Dichlorobenzidine      | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| Diethyl phthalate           | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Dimethyl phthalate          | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2,4-Dichlorophenol          | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2,4-Dimethylphenol          | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 4,6-Dinitro-2-methylphenol  | ND | 50 |  | µg/L | 1 | 7/20/2006 |
| 2,4-Dinitrophenol           | ND | 50 |  | µg/L | 1 | 7/20/2006 |
| 2,4-Dinitrotoluene          | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2,6-Dinitrotoluene          | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Fluoranthene                | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Fluorene                    | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Hexachlorobenzene           | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Hexachlorobutadiene         | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Hexachlorocyclopentadiene   | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Hexachloroethane            | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Indeno(1,2,3-cd)pyrene      | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Isophorone                  | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2-Methylnaphthalene         | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2-Methylphenol              | ND | 15 |  | µg/L | 1 | 7/20/2006 |
| 3+4-Methylphenol            | ND | 20 |  | µg/L | 1 | 7/20/2006 |
| N-Nitrosodi-n-propylamine   | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| N-Nitrosodimethylamine      | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| N-Nitrosodiphenylamine      | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| Naphthalene                 | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2-Nitroaniline              | ND | 50 |  | µg/L | 1 | 7/20/2006 |
| 3-Nitroaniline              | ND | 50 |  | µg/L | 1 | 7/20/2006 |
| 4-Nitroaniline              | ND | 20 |  | µg/L | 1 | 7/20/2006 |
| Nitrobenzene                | ND | 10 |  | µg/L | 1 | 7/20/2006 |
| 2-Nitrophenol               | ND | 15 |  | µg/L | 1 | 7/20/2006 |

Qualifiers:

|   |                                                 |
|---|-------------------------------------------------|
| * | Value exceeds Maximum Contaminant Level         |
| E | Value above quantitation range                  |
| J | Analyte detected below quantitation limits      |
| S | Spike Recovery outside accepted recovery limits |

|    |                                                    |
|----|----------------------------------------------------|
| B  | Analyte detected in the associated Method Blank    |
| H  | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit                |

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: N of MW #46

Lab Order: 0607190

Collection Date: 7/17/2006 10:00:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-02

Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 7/20/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 7/20/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 7/20/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 7/20/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 7/20/2006     |
| Surr: 2,4,6-Tribromophenol             | 55.0   | 16.6-150  |      | %REC       | 1  | 7/20/2006     |
| Surr: 2-Fluorobiphenyl                 | 64.8   | 19.6-134  |      | %REC       | 1  | 7/20/2006     |
| Surr: 2-Fluorophenol                   | 49.2   | 9.54-113  |      | %REC       | 1  | 7/20/2006     |
| Surr: 4-Terphenyl-d14                  | 63.5   | 22.7-145  |      | %REC       | 1  | 7/20/2006     |
| Surr: Nitrobenzene-d5                  | 61.2   | 14.6-134  |      | %REC       | 1  | 7/20/2006     |
| Surr: Phenol-d5                        | 32.6   | 10.7-80.3 |      | %REC       | 1  | 7/20/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)           | 78     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Bicarbonate                            | 78     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: CMC  |
| Specific Conductance                   | 270    | 0.010     |      | µmhos/cm   | 1  | 7/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 140    | 20        |      | mg/L       | 1  | 7/19/2006     |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

## Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: River - Upstream

Lab Order: 0607190

Collection Date: 7/17/2006 10:35:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-03

Matrix: AQUEOUS

| Analyses                                 | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>    |        |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)              | ND     | 1.0      |      | mg/L  | 1  | 7/20/2006 8:15:00 PM |
| Motor Oil Range Organics (MRO)           | ND     | 5.0      |      | mg/L  | 1  | 7/20/2006 8:15:00 PM |
| Surr: DNOP                               | 157    | 58-140   | S    | %REC  | 1  | 7/20/2006 8:15:00 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>  |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)            | ND     | 0.050    |      | mg/L  | 1  | 7/25/2006 4:00:05 PM |
| Surr: BFB                                | 113    | 80-123   |      | %REC  | 1  | 7/25/2006 4:00:05 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>       |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)           | ND     | 2.5      |      | µg/L  | 1  | 7/25/2006 4:00:05 PM |
| Benzene                                  | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 4:00:05 PM |
| Toluene                                  | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 4:00:05 PM |
| Ethylbenzene                             | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 4:00:05 PM |
| Xylenes, Total                           | ND     | 3.0      |      | µg/L  | 1  | 7/25/2006 4:00:05 PM |
| Surr: 4-Bromofluorobenzene               | 97.6   | 72.2-125 |      | %REC  | 1  | 7/25/2006 4:00:05 PM |
| <b>EPA METHOD 300.0: ANIONS</b>          |        |          |      |       |    | Analyst: TES         |
| Fluoride                                 | ND     | 0.10     |      | mg/L  | 1  | 7/18/2006 3:14:03 PM |
| Chloride                                 | 2.3    | 0.10     |      | mg/L  | 1  | 7/18/2006 3:14:03 PM |
| Nitrogen, Nitrite (As N)                 | ND     | 0.10     |      | mg/L  | 1  | 7/18/2006 3:14:03 PM |
| Bromide                                  | ND     | 0.50     |      | mg/L  | 1  | 7/18/2006 3:14:03 PM |
| Nitrogen, Nitrate (As N)                 | ND     | 0.10     |      | mg/L  | 1  | 7/18/2006 3:14:03 PM |
| Phosphorus, Orthophosphate (As P)        | ND     | 0.50     |      | mg/L  | 1  | 7/18/2006 3:14:03 PM |
| Sulfate                                  | 45     | 0.50     |      | mg/L  | 1  | 7/18/2006 3:14:03 PM |
| <b>EPA METHOD 7470: MERCURY</b>          |        |          |      |       |    | Analyst: MAP         |
| Mercury                                  | ND     | 0.00020  |      | mg/L  | 1  | 7/21/2006            |
| <b>EPA METHOD 6010: DISSOLVED METALS</b> |        |          |      |       |    | Analyst: CMC         |
| Arsenic                                  | ND     | 0.020    |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Barium                                   | 0.065  | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Cadmium                                  | ND     | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Calcium                                  | 32     | 1.0      |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Chromium                                 | ND     | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Copper                                   | ND     | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Iron                                     | ND     | 0.020    |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Lead                                     | ND     | 0.0050   |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |
| Magnesium                                | 5.5    | 1.0      |      | mg/L  | 1  | 7/28/2006 2:21:52 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Aug-06

**CLIENT:** San Juan Refining**Client Sample ID:** River - Upstream**Lab Order:** 0607190**Collection Date:** 7/17/2006 10:35:00 AM**Project:** River Sampling 3rd Qtr 2006**Date Received:** 7/18/2006**Lab ID:** 0607190-03**Matrix:** AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|--------|------|-------|----|-----------------------|
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |        |      |       |    | Analyst: CMC          |
| Manganese                                 | 0.010  | 0.0020 |      | mg/L  | 1  | 7/28/2006 2:21:52 PM  |
| Potassium                                 | 1.5    | 1.0    |      | mg/L  | 1  | 7/28/2006 2:21:52 PM  |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 7/28/2006 2:21:52 PM  |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 7/31/2006 11:45:56 AM |
| Sodium                                    | 15     | 1.0    |      | mg/L  | 1  | 7/28/2006 2:21:52 PM  |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 7/28/2006 2:21:52 PM  |
| Zinc                                      | 0.089  | 0.0050 |      | mg/L  | 1  | 7/28/2006 2:21:52 PM  |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 7/20/2006 10:20:28 AM |
| Barium                                    | 0.076  | 0.020  |      | mg/L  | 1  | 7/20/2006 10:20:28 AM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 7/20/2006 10:20:28 AM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 7/20/2006 10:20:28 AM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 7/20/2006 10:20:28 AM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 7/20/2006 10:20:28 AM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 7/20/2006 10:20:28 AM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL           |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Aniline                                   | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Azobenzene                                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 7/20/2006             |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Carbazole                                 | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: River - Upstream

Lab Order: 0607190

Collection Date: 7/17/2006 10:35:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-03

Matrix: AQUEOUS

| Analyses                               | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |       |    | Analyst: BL   |
| 2-Chloronaphthalene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Chlorophenol                         | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 4-Chlorophenyl phenyl ether            | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Chrysene                               | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Di-n-butyl phthalate                   | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Di-n-octyl phthalate                   | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Dibenz(a,h)anthracene                  | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Dibenzofuran                           | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 1,2-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 1,3-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 1,4-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 3,3'-Dichlorobenzidine                 | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Diethyl phthalate                      | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Dimethyl phthalate                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dichlorophenol                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dimethylphenol                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 4,6-Dinitro-2-methylphenol             | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dinitrophenol                      | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2,6-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Fluoranthene                           | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Fluorene                               | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachlorobenzene                      | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachlorobutadiene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachlorocyclopentadiene              | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachloroethane                       | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Isophorone                             | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Methylnaphthalene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Methylphenol                         | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| 3+4-Methylphenol                       | ND     | 20  |      | µg/L  | 1  | 7/20/2006     |
| N-Nitrosodi-n-propylamine              | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| N-Nitrosodimethylamine                 | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| N-Nitrosodiphenylamine                 | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Naphthalene                            | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 3-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 4-Nitroaniline                         | ND     | 20  |      | µg/L  | 1  | 7/20/2006     |
| Nitrobenzene                           | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Nitrophenol                          | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: River - Upstream

Lab Order: 0607190

Collection Date: 7/17/2006 10:35:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-03

Matrix: AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 7/20/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 7/20/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 7/20/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 7/20/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 7/20/2006     |
| Surr: 2,4,6-Tribromophenol             | 47.9   | 16.6-150  |      | %REC       | 1  | 7/20/2006     |
| Surr: 2-Fluorobiphenyl                 | 43.0   | 19.6-134  |      | %REC       | 1  | 7/20/2006     |
| Surr: 2-Fluorophenol                   | 27.2   | 9.54-113  |      | %REC       | 1  | 7/20/2006     |
| Surr: 4-Terphenyl-d14                  | 51.1   | 22.7-145  |      | %REC       | 1  | 7/20/2006     |
| Surr: Nitrobenzene-d5                  | 37.1   | 14.6-134  |      | %REC       | 1  | 7/20/2006     |
| Surr: Phenol-d5                        | 19.0   | 10.7-80.3 |      | %REC       | 1  | 7/20/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)           | 78     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Bicarbonate                            | 78     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: CMC  |
| Specific Conductance                   | 260    | 0.010     |      | µmhos/cm   | 1  | 7/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 140    | 20        |      | mg/L       | 1  | 7/19/2006     |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



## Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining  
 Lab Order: 0607190  
 Project: River Sampling 3rd Qtr 2006  
 Lab ID: 0607190-04

Client Sample ID: River - Downstream  
 Collection Date: 7/17/2006 11:10:00 AM  
 Date Received: 7/18/2006  
 Matrix: AQUEOUS

| Analyses                                 | Result  | PQL      | Qual | Units | DF | Date Analyzed        |
|------------------------------------------|---------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: DIESEL RANGE</b>    |         |          |      |       |    | Analyst: SCC         |
| Diesel Range Organics (DRO)              | ND      | 1.0      |      | mg/L  | 1  | 7/20/2006 8:48:07 PM |
| Motor Oil Range Organics (MRO)           | ND      | 5.0      |      | mg/L  | 1  | 7/20/2006 8:48:07 PM |
| Surr: DNOP                               | 158     | 58-140   | S    | %REC  | 1  | 7/20/2006 8:48:07 PM |
| <b>EPA METHOD 8015B: GASOLINE RANGE</b>  |         |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)            | ND      | 0.050    |      | mg/L  | 1  | 7/25/2006 4:29:02 PM |
| Surr: BFB                                | 109     | 80-123   |      | %REC  | 1  | 7/25/2006 4:29:02 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>       |         |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)           | ND      | 2.5      |      | µg/L  | 1  | 7/25/2006 4:29:02 PM |
| Benzene                                  | ND      | 1.0      |      | µg/L  | 1  | 7/25/2006 4:29:02 PM |
| Toluene                                  | ND      | 1.0      |      | µg/L  | 1  | 7/25/2006 4:29:02 PM |
| Ethylbenzene                             | ND      | 1.0      |      | µg/L  | 1  | 7/25/2006 4:29:02 PM |
| Xylenes, Total                           | ND      | 3.0      |      | µg/L  | 1  | 7/25/2006 4:29:02 PM |
| Surr: 4-Bromofluorobenzene               | 95.7    | 72.2-125 |      | %REC  | 1  | 7/25/2006 4:29:02 PM |
| <b>EPA METHOD 300.0: ANIONS</b>          |         |          |      |       |    | Analyst: TES         |
| Fluoride                                 | 0.11    | 0.10     |      | mg/L  | 1  | 7/18/2006 3:31:28 PM |
| Chloride                                 | 2.4     | 0.10     |      | mg/L  | 1  | 7/18/2006 3:31:28 PM |
| Nitrogen, Nitrite (As N)                 | ND      | 0.10     |      | mg/L  | 1  | 7/18/2006 3:31:28 PM |
| Bromide                                  | ND      | 0.50     |      | mg/L  | 1  | 7/18/2006 3:31:28 PM |
| Nitrogen, Nitrate (As N)                 | ND      | 0.10     |      | mg/L  | 1  | 7/18/2006 3:31:28 PM |
| Phosphorus, Orthophosphate (As P)        | ND      | 0.50     |      | mg/L  | 1  | 7/18/2006 3:31:28 PM |
| Sulfate                                  | 49      | 0.50     |      | mg/L  | 1  | 7/18/2006 3:31:28 PM |
| <b>EPA METHOD 7470: MERCURY</b>          |         |          |      |       |    | Analyst: MAP         |
| Mercury                                  | 0.00078 | 0.00020  |      | mg/L  | 1  | 7/21/2006            |
| <b>EPA METHOD 6010: DISSOLVED METALS</b> |         |          |      |       |    | Analyst: CMC         |
| Arsenic                                  | ND      | 0.020    |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Barium                                   | 0.065   | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Cadmium                                  | ND      | 0.0020   |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Calcium                                  | 31      | 1.0      |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Chromium                                 | ND      | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Copper                                   | ND      | 0.0060   |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Iron                                     | ND      | 0.020    |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Lead                                     | ND      | 0.0050   |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |
| Magnesium                                | 5.3     | 1.0      |      | mg/L  | 1  | 7/28/2006 2:24:37 PM |

Qualifiers: \* Value exceeds Maximum Contaminant Level  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: River - Downstream

Lab Order: 0607190

Collection Date: 7/17/2006 11:10:00 AM

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-04

Matrix: AQUEOUS

| Analyses                                  | Result | PQL    | Qual | Units | DF | Date Analyzed         |
|-------------------------------------------|--------|--------|------|-------|----|-----------------------|
| <b>EPA METHOD 6010: DISSOLVED METALS</b>  |        |        |      |       |    | Analyst: CMC          |
| Manganese                                 | 0.017  | 0.0020 |      | mg/L  | 1  | 7/28/2006 2:24:37 PM  |
| Potassium                                 | 1.4    | 1.0    |      | mg/L  | 1  | 7/28/2006 2:24:37 PM  |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 7/28/2006 2:24:37 PM  |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 7/31/2006 11:48:57 AM |
| Sodium                                    | 15     | 1.0    |      | mg/L  | 1  | 7/28/2006 2:24:37 PM  |
| Uranium                                   | ND     | 0.10   |      | mg/L  | 1  | 7/28/2006 2:24:37 PM  |
| Zinc                                      | 0.14   | 0.0050 |      | mg/L  | 1  | 7/28/2006 2:24:37 PM  |
| <b>EPA 6010: TOTAL RECOVERABLE METALS</b> |        |        |      |       |    | Analyst: NMO          |
| Arsenic                                   | ND     | 0.020  |      | mg/L  | 1  | 7/20/2006 10:23:37 AM |
| Barium                                    | 0.076  | 0.020  |      | mg/L  | 1  | 7/20/2006 10:23:37 AM |
| Cadmium                                   | ND     | 0.0020 |      | mg/L  | 1  | 7/20/2006 10:23:37 AM |
| Chromium                                  | ND     | 0.0060 |      | mg/L  | 1  | 7/20/2006 10:23:37 AM |
| Lead                                      | ND     | 0.0050 |      | mg/L  | 1  | 7/20/2006 10:23:37 AM |
| Selenium                                  | ND     | 0.050  |      | mg/L  | 1  | 7/20/2006 10:23:37 AM |
| Silver                                    | ND     | 0.0050 |      | mg/L  | 1  | 7/20/2006 10:23:37 AM |
| <b>EPA METHOD 8270C: SEMIVOLATILES</b>    |        |        |      |       |    | Analyst: BL           |
| Acenaphthene                              | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Acenaphthylene                            | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Aniline                                   | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |
| Anthracene                                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Azobenzene                                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Benz(a)anthracene                         | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(a)pyrene                            | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(b)fluoranthene                      | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(g,h,i)perylene                      | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Benzo(k)fluoranthene                      | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Benzoic acid                              | ND     | 50     |      | µg/L  | 1  | 7/20/2006             |
| Benzyl alcohol                            | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-chloroethoxy)methane                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-chloroethyl)ether                   | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-chloroisopropyl)ether               | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Bis(2-ethylhexyl)phthalate                | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| 4-Bromophenyl phenyl ether                | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| Butyl benzyl phthalate                    | ND     | 15     |      | µg/L  | 1  | 7/20/2006             |
| Carbazole                                 | ND     | 10     |      | µg/L  | 1  | 7/20/2006             |
| 4-Chloro-3-methylphenol                   | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |
| 4-Chloroaniline                           | ND     | 20     |      | µg/L  | 1  | 7/20/2006             |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

# Hall Environmental Analysis Laboratory, Inc.

Date: 01-Aug-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0607190  
**Project:** River Sampling 3rd Qtr 2006  
**Lab ID:** 0607190-04

**Client Sample ID:** River - Downstream  
**Collection Date:** 7/17/2006 11:10:00 AM  
**Date Received:** 7/18/2006  
**Matrix:** AQUEOUS

| Analyses                               | Result | PQL | Qual | Units | DF | Date Analyzed |
|----------------------------------------|--------|-----|------|-------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |     |      |       |    | Analyst: BL   |
| 2-Chloronaphthalene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Chlorophenol                         | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 4-Chlorophenyl phenyl ether            | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Chrysene                               | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Di-n-butyl phthalate                   | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Di-n-octyl phthalate                   | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Dibenz(a,h)anthracene                  | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Dibenzofuran                           | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 1,2-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 1,3-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 1,4-Dichlorobenzene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 3,3'-Dichlorobenzidine                 | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| Diethyl phthalate                      | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Dimethyl phthalate                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dichlorophenol                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dimethylphenol                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 4,6-Dinitro-2-methylphenol             | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dinitrophenol                      | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 2,4-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2,6-Dinitrotoluene                     | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Fluoranthene                           | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Fluorene                               | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachlorobenzene                      | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachlorobutadiene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachlorocyclopentadiene              | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Hexachloroethane                       | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Indeno(1,2,3-cd)pyrene                 | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Isophorone                             | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Methylnaphthalene                    | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Methylphenol                         | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |
| 3+4-Methylphenol                       | ND     | 20  |      | µg/L  | 1  | 7/20/2006     |
| N-Nitrosodi-n-propylamine              | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| N-Nitrosodimethylamine                 | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| N-Nitrosodiphenylamine                 | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| Naphthalene                            | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 3-Nitroaniline                         | ND     | 50  |      | µg/L  | 1  | 7/20/2006     |
| 4-Nitroaniline                         | ND     | 20  |      | µg/L  | 1  | 7/20/2006     |
| Nitrobenzene                           | ND     | 10  |      | µg/L  | 1  | 7/20/2006     |
| 2-Nitrophenol                          | ND     | 15  |      | µg/L  | 1  | 7/20/2006     |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Aug-06

**CLIENT:** San Juan Refining  
**Lab Order:** 0607190  
**Project:** River Sampling 3rd Qtr 2006  
**Lab ID:** 0607190-04

**Client Sample ID:** River - Downstream  
**Collection Date:** 7/17/2006 11:10:00 AM  
**Date Received:** 7/18/2006  
**Matrix:** AQUEOUS

| Analyses                               | Result | PQL       | Qual | Units      | DF | Date Analyzed |
|----------------------------------------|--------|-----------|------|------------|----|---------------|
| <b>EPA METHOD 8270C: SEMIVOLATILES</b> |        |           |      |            |    | Analyst: BL   |
| 4-Nitrophenol                          | ND     | 50        |      | µg/L       | 1  | 7/20/2006     |
| Pentachlorophenol                      | ND     | 50        |      | µg/L       | 1  | 7/20/2006     |
| Phenanthrene                           | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| Phenol                                 | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| Pyrene                                 | ND     | 15        |      | µg/L       | 1  | 7/20/2006     |
| Pyridine                               | ND     | 30        |      | µg/L       | 1  | 7/20/2006     |
| 1,2,4-Trichlorobenzene                 | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| 2,4,5-Trichlorophenol                  | ND     | 10        |      | µg/L       | 1  | 7/20/2006     |
| 2,4,6-Trichlorophenol                  | ND     | 15        |      | µg/L       | 1  | 7/20/2006     |
| Surr: 2,4,6-Tribromophenol             | 63.9   | 16.6-150  |      | %REC       | 1  | 7/20/2006     |
| Surr: 2-Fluorobiphenyl                 | 66.9   | 19.6-134  |      | %REC       | 1  | 7/20/2006     |
| Surr: 2-Fluorophenol                   | 47.4   | 9.54-113  |      | %REC       | 1  | 7/20/2006     |
| Surr: 4-Terphenyl-d14                  | 64.5   | 22.7-145  |      | %REC       | 1  | 7/20/2006     |
| Surr: Nitrobenzene-d5                  | 62.3   | 14.6-134  |      | %REC       | 1  | 7/20/2006     |
| Surr: Phenol-d5                        | 31.9   | 10.7-80.3 |      | %REC       | 1  | 7/20/2006     |
| <b>EPA METHOD 310.1: ALKALINITY</b>    |        |           |      |            |    | Analyst: CMC  |
| Alkalinity, Total (As CaCO3)           | 78     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Carbonate                              | ND     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| Bicarbonate                            | 78     | 2.0       |      | mg/L CaCO3 | 1  | 7/18/2006     |
| <b>EPA 120.1: SPECIFIC CONDUCTANCE</b> |        |           |      |            |    | Analyst: CMC  |
| Specific Conductance                   | 280    | 0.010     |      | µmhos/cm   | 1  | 7/18/2006     |
| <b>EPA METHOD 160.1: TDS</b>           |        |           |      |            |    | Analyst: ks   |
| Total Dissolved Solids                 | 150    | 20        |      | mg/L       | 1  | 7/19/2006     |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 01-Aug-06

CLIENT: San Juan Refining

Client Sample ID: Trip Blank

Lab Order: 0607190

Collection Date:

Project: River Sampling 3rd Qtr 2006

Date Received: 7/18/2006

Lab ID: 0607190-05

Matrix: TRIP BLANK

| Analyses                                | Result | PQL      | Qual | Units | DF | Date Analyzed        |
|-----------------------------------------|--------|----------|------|-------|----|----------------------|
| <b>EPA METHOD 8015B: GASOLINE RANGE</b> |        |          |      |       |    | Analyst: NSB         |
| Gasoline Range Organics (GRO)           | ND     | 0.050    |      | mg/L  | 1  | 7/25/2006 4:57:56 PM |
| Surr: BFB                               | 106    | 80-123   |      | %REC  | 1  | 7/25/2006 4:57:56 PM |
| <b>EPA METHOD 8021B: VOLATILES</b>      |        |          |      |       |    | Analyst: NSB         |
| Methyl tert-butyl ether (MTBE)          | ND     | 2.5      |      | µg/L  | 1  | 7/25/2006 4:57:56 PM |
| Benzene                                 | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 4:57:56 PM |
| Toluene                                 | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 4:57:56 PM |
| Ethylbenzene                            | ND     | 1.0      |      | µg/L  | 1  | 7/25/2006 4:57:56 PM |
| Xylenes, Total                          | ND     | 3.0      |      | µg/L  | 1  | 7/25/2006 4:57:56 PM |
| Surr: 4-Bromofluorobenzene              | 100    | 72.2-125 |      | %REC  | 1  | 7/25/2006 4:57:56 PM |

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: River Sampling 3rd Qtr 2006

Work Order: 0607190

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: E300

Sample ID: MBLK

MBLK

Batch ID: R19952 Analysis Date: 7/18/2006 10:34:35 AM

|                                   |    |      |      |  |  |  |  |  |  |
|-----------------------------------|----|------|------|--|--|--|--|--|--|
| Fluoride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Chloride                          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrite (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Bromide                           | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Nitrogen, Nitrate (As N)          | ND | mg/L | 0.10 |  |  |  |  |  |  |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 |  |  |  |  |  |  |
| Sulfate                           | ND | mg/L | 0.50 |  |  |  |  |  |  |

Sample ID: LCS ST300-06008

LCS

Batch ID: R19952 Analysis Date: 7/18/2006 10:52:00 AM

|                                   |        |      |      |      |    |     |  |  |  |
|-----------------------------------|--------|------|------|------|----|-----|--|--|--|
| Fluoride                          | 0.5047 | mg/L | 0.10 | 101  | 90 | 110 |  |  |  |
| Chloride                          | 4.924  | mg/L | 0.10 | 98.5 | 90 | 110 |  |  |  |
| Nitrogen, Nitrite (As N)          | 1.034  | mg/L | 0.10 | 103  | 90 | 110 |  |  |  |
| Bromide                           | 2.568  | mg/L | 0.10 | 103  | 90 | 110 |  |  |  |
| Nitrogen, Nitrate (As N)          | 2.484  | mg/L | 0.10 | 99.3 | 90 | 110 |  |  |  |
| Phosphorus, Orthophosphate (As P) | 4.970  | mg/L | 0.50 | 99.4 | 90 | 110 |  |  |  |
| Sulfate                           | 10.06  | mg/L | 0.50 | 101  | 90 | 110 |  |  |  |

Method: E310.1

Sample ID: MB

MBLK

Batch ID: R19944 Analysis Date: 7/18/2006

|                              |    |          |     |  |  |  |  |  |  |
|------------------------------|----|----------|-----|--|--|--|--|--|--|
| Alkalinity, Total (As CaCO3) | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Carbonate                    | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |
| Bicarbonate                  | ND | mg/L CaC | 2.0 |  |  |  |  |  |  |

Method: SW8015

Sample ID: MB-10823

MBLK

Batch ID: 10823 Analysis Date: 7/19/2006 8:58:44 PM

|                                |    |      |     |  |  |  |  |  |  |
|--------------------------------|----|------|-----|--|--|--|--|--|--|
| Diesel Range Organics (DRO)    | ND | mg/L | 1.0 |  |  |  |  |  |  |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 |  |  |  |  |  |  |

Sample ID: LCS-10823

LCS

Batch ID: 10823 Analysis Date: 7/19/2006 9:31:45 PM

|                             |       |      |     |     |    |     |  |  |  |
|-----------------------------|-------|------|-----|-----|----|-----|--|--|--|
| Diesel Range Organics (DRO) | 6.061 | mg/L | 1.0 | 121 | 74 | 157 |  |  |  |
|-----------------------------|-------|------|-----|-----|----|-----|--|--|--|

Sample ID: LCSD-10823

LCSD

Batch ID: 10823 Analysis Date: 7/19/2006 10:03:04 PM

|                             |       |      |     |     |    |     |      |    |  |
|-----------------------------|-------|------|-----|-----|----|-----|------|----|--|
| Diesel Range Organics (DRO) | 6.292 | mg/L | 1.0 | 126 | 74 | 157 | 3.73 | 23 |  |
|-----------------------------|-------|------|-----|-----|----|-----|------|----|--|

Method: SW8015

Sample ID: 0607190-01A MSD

MSD

Batch ID: R20028 Analysis Date: 7/25/2006 8:49:55 PM

|                               |        |      |       |      |      |     |   |      |  |
|-------------------------------|--------|------|-------|------|------|-----|---|------|--|
| Gasoline Range Organics (GRO) | 0.4900 | mg/L | 0.050 | 94.0 | 73.3 | 119 | 0 | 8.39 |  |
|-------------------------------|--------|------|-------|------|------|-----|---|------|--|

Sample ID: 5ML RB-II

MBLK

Batch ID: R20028 Analysis Date: 7/25/2006 11:36:36 AM

|                               |    |      |       |  |  |  |  |  |  |
|-------------------------------|----|------|-------|--|--|--|--|--|--|
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 |  |  |  |  |  |  |
|-------------------------------|----|------|-------|--|--|--|--|--|--|

Sample ID: 2.5UG GRO LCS

LCS

Batch ID: R20028 Analysis Date: 7/25/2006 9:18:46 PM

|                               |        |      |       |      |      |     |  |  |  |
|-------------------------------|--------|------|-------|------|------|-----|--|--|--|
| Gasoline Range Organics (GRO) | 0.4820 | mg/L | 0.050 | 96.4 | 73.3 | 119 |  |  |  |
|-------------------------------|--------|------|-------|------|------|-----|--|--|--|

Sample ID: 0607190-01A MS

MS

Batch ID: R20028 Analysis Date: 7/25/2006 8:20:59 PM

|                               |        |      |       |      |      |     |  |  |  |
|-------------------------------|--------|------|-------|------|------|-----|--|--|--|
| Gasoline Range Organics (GRO) | 0.4900 | mg/L | 0.050 | 94.0 | 73.3 | 119 |  |  |  |
|-------------------------------|--------|------|-------|------|------|-----|--|--|--|

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: River Sampling 3rd Qtr 2006

Work Order: 0607190

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8021

Sample ID: 5ML RB-II

MBLK

Batch ID: R20028 Analysis Date: 7/25/2006 11:36:36 AM

|                                |    |      |     |
|--------------------------------|----|------|-----|
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 2.5 |
| Benzene                        | ND | µg/L | 1.0 |
| Toluene                        | ND | µg/L | 1.0 |
| Ethylbenzene                   | ND | µg/L | 1.0 |
| Xylenes, Total                 | ND | µg/L | 3.0 |

Sample ID: 100NG BTEX LCS

LCS

Batch ID: R20028 Analysis Date: 7/25/2006 6:54:04 PM

|                                |       |      |     |      |      |     |
|--------------------------------|-------|------|-----|------|------|-----|
| Methyl tert-butyl ether (MTBE) | 34.02 | µg/L | 2.5 | 85.1 | 51.2 | 138 |
| Benzene                        | 18.39 | µg/L | 1.0 | 92.0 | 85   | 115 |
| Toluene                        | 18.61 | µg/L | 1.0 | 89.0 | 85   | 118 |
| Ethylbenzene                   | 18.21 | µg/L | 1.0 | 91.0 | 85   | 116 |
| Xylenes, Total                 | 55.85 | µg/L | 3.0 | 91.7 | 85   | 119 |

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 3rd Qtr 2006

Work Order: 0607190

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8270C

Sample ID: MB-10834

MBLK

Batch ID: 10834

Analysis Date:

7/20/2006

|                             |    |      |    |
|-----------------------------|----|------|----|
| Acenaphthene                | ND | µg/L | 10 |
| Acenaphthylene              | ND | µg/L | 10 |
| Aniline                     | ND | µg/L | 20 |
| Anthracene                  | ND | µg/L | 10 |
| Azobenzene                  | ND | µg/L | 10 |
| Benz(a)anthracene           | ND | µg/L | 15 |
| Benzo(a)pyrene              | ND | µg/L | 15 |
| Benzo(b)fluoranthene        | ND | µg/L | 15 |
| Benzo(g,h,i)perylene        | ND | µg/L | 10 |
| Benzo(k)fluoranthene        | ND | µg/L | 10 |
| Benzoic acid                | ND | µg/L | 50 |
| Benzyl alcohol              | ND | µg/L | 20 |
| Bis(2-chloroethoxy)methane  | ND | µg/L | 10 |
| Bis(2-chloroethyl)ether     | ND | µg/L | 15 |
| Bis(2-chloroisopropyl)ether | ND | µg/L | 15 |
| Bis(2-ethylhexyl)phthalate  | ND | µg/L | 15 |
| 4-Bromophenyl phenyl ether  | ND | µg/L | 10 |
| Butyl benzyl phthalate      | ND | µg/L | 15 |
| Carbazole                   | ND | µg/L | 10 |
| 4-Chloro-3-methylphenol     | ND | µg/L | 20 |
| 4-Chloroaniline             | ND | µg/L | 20 |
| 2-Chloronaphthalene         | ND | µg/L | 10 |
| 2-Chlorophenol              | ND | µg/L | 10 |
| 4-Chlorophenyl phenyl ether | ND | µg/L | 15 |
| Chrysene                    | ND | µg/L | 15 |
| Di-n-butyl phthalate        | ND | µg/L | 10 |
| Di-n-octyl phthalate        | ND | µg/L | 15 |
| Dibenz(a,h)anthracene       | ND | µg/L | 10 |
| Dibenzofuran                | ND | µg/L | 10 |
| 1,2-Dichlorobenzene         | ND | µg/L | 10 |
| 1,3-Dichlorobenzene         | ND | µg/L | 10 |
| 1,4-Dichlorobenzene         | ND | µg/L | 10 |
| 3,3'-Dichlorobenzidine      | ND | µg/L | 15 |
| Diethyl phthalate           | ND | µg/L | 10 |
| Dimethyl phthalate          | ND | µg/L | 10 |
| 2,4-Dichlorophenol          | ND | µg/L | 10 |
| 2,4-Dimethylphenol          | ND | µg/L | 10 |
| 4,6-Dinitro-2-methylphenol  | ND | µg/L | 50 |
| 2,4-Dinitrophenol           | ND | µg/L | 50 |
| 2,4-Dinitrotoluene          | ND | µg/L | 10 |
| 2,6-Dinitrotoluene          | ND | µg/L | 10 |
| Fluoranthene                | ND | µg/L | 10 |
| Fluorene                    | ND | µg/L | 10 |
| Hexachlorobenzene           | ND | µg/L | 10 |

## Qualifiers:

E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: River Sampling 3rd Qtr 2006

Work Order: 0607190

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8270C

Sample ID: MB-10834

MBLK

Batch ID: 10834 Analysis Date: 7/20/2006

|                           |    |      |    |
|---------------------------|----|------|----|
| Hexachlorobutadiene       | ND | µg/L | 10 |
| Hexachlorocyclopentadiene | ND | µg/L | 10 |
| Hexachloroethane          | ND | µg/L | 10 |
| Indeno(1,2,3-cd)pyrene    | ND | µg/L | 10 |
| Isophorone                | ND | µg/L | 10 |
| 2-Methylnaphthalene       | ND | µg/L | 10 |
| 2-Methylphenol            | ND | µg/L | 15 |
| 3+4-Methylphenol          | ND | µg/L | 20 |
| N-Nitrosodi-n-propylamine | ND | µg/L | 10 |
| N-Nitrosodimethylamine    | ND | µg/L | 10 |
| N-Nitrosodiphenylamine    | ND | µg/L | 10 |
| Naphthalene               | ND | µg/L | 10 |
| 2-Nitroaniline            | ND | µg/L | 50 |
| 3-Nitroaniline            | ND | µg/L | 50 |
| 4-Nitroaniline            | ND | µg/L | 20 |
| Nitrobenzene              | ND | µg/L | 10 |
| 2-Nitrophenol             | ND | µg/L | 15 |
| 4-Nitrophenol             | ND | µg/L | 50 |
| Pentachlorophenol         | ND | µg/L | 50 |
| Phenanthrene              | ND | µg/L | 10 |
| Phenol                    | ND | µg/L | 10 |
| Pyrene                    | ND | µg/L | 15 |
| Pyridine                  | ND | µg/L | 30 |
| 1,2,4-Trichlorobenzene    | ND | µg/L | 10 |
| 2,4,5-Trichlorophenol     | ND | µg/L | 10 |
| 2,4,6-Trichlorophenol     | ND | µg/L | 15 |

Sample ID: LCS-10834

LCS

Batch ID: 10834 Analysis Date: 7/20/2006

|                           |       |      |    |      |      |      |
|---------------------------|-------|------|----|------|------|------|
| Acenaphthene              | 74.16 | µg/L | 10 | 74.2 | 11   | 123  |
| 4-Chloro-3-methylphenol   | 134.0 | µg/L | 20 | 67.0 | 15.4 | 119  |
| 2-Chlorophenol            | 117.3 | µg/L | 10 | 58.6 | 12.2 | 122  |
| 1,4-Dichlorobenzene       | 46.54 | µg/L | 10 | 46.5 | 16.9 | 100  |
| 2,4-Dinitrotoluene        | 63.76 | µg/L | 10 | 63.8 | 13   | 138  |
| N-Nitrosodi-n-propylamine | 55.94 | µg/L | 10 | 55.9 | 9.93 | 122  |
| 4-Nitrophenol             | 62.16 | µg/L | 50 | 31.1 | 12.5 | 87.4 |
| Pentachlorophenol         | 115.9 | µg/L | 50 | 58.0 | 3.55 | 114  |
| Phenol                    | 63.94 | µg/L | 10 | 32.0 | 7.53 | 73.1 |
| Pyrene                    | 74.78 | µg/L | 15 | 74.8 | 12.6 | 140  |
| 1,2,4-Trichlorobenzene    | 55.78 | µg/L | 10 | 55.8 | 17.4 | 98.7 |

Sample ID: LCSD-10834

LCSD

Batch ID: 10834 Analysis Date: 7/21/2006

|                         |       |      |    |      |      |     |       |      |
|-------------------------|-------|------|----|------|------|-----|-------|------|
| Acenaphthene            | 74.30 | µg/L | 10 | 74.3 | 11   | 123 | 0.189 | 30.5 |
| 4-Chloro-3-methylphenol | 126.4 | µg/L | 20 | 63.2 | 15.4 | 119 | 5.78  | 28.6 |
| 2-Chlorophenol          | 119.5 | µg/L | 10 | 59.7 | 12.2 | 122 | 1.84  | 107  |
| 1,4-Dichlorobenzene     | 48.12 | µg/L | 10 | 48.1 | 16.9 | 100 | 3.34  | 62.1 |
| 2,4-Dinitrotoluene      | 61.28 | µg/L | 10 | 61.3 | 13   | 138 | 3.97  | 14.7 |

## Qualifiers:

- E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 3rd Qtr 2006

Work Order: 0607190

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW8270C

Sample ID: LCSD-10834

LCSD

Batch ID: 10834

Analysis Date:

7/21/2006

|                           |       |      |    |      |      |      |      |      |  |
|---------------------------|-------|------|----|------|------|------|------|------|--|
| N-Nitrosodi-n-propylamine | 57.66 | µg/L | 10 | 57.7 | 9.93 | 122  | 3.03 | 30.3 |  |
| 4-Nitrophenol             | 57.72 | µg/L | 50 | 28.9 | 12.5 | 87.4 | 7.41 | 36.3 |  |
| Pentachlorophenol         | 129.4 | µg/L | 50 | 64.7 | 3.55 | 114  | 11.0 | 49   |  |
| Phenol                    | 65.04 | µg/L | 10 | 32.5 | 7.53 | 73.1 | 1.71 | 52.4 |  |
| Pyrene                    | 70.16 | µg/L | 15 | 70.2 | 12.6 | 140  | 6.38 | 16.3 |  |
| 1,2,4-Trichlorobenzene    | 57.48 | µg/L | 10 | 57.5 | 17.4 | 98.7 | 3.00 | 36.4 |  |

Method: SW7470

Sample ID: MB-10845

MBLK

Batch ID: 10845

Analysis Date:

7/21/2006

Mercury ND mg/L 0.00020

Sample ID: LCS-10845

LCS

Batch ID: 10845

Analysis Date:

7/21/2006

Mercury 0.005175 mg/L 0.00020 104 80 120

## Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 3rd Qtr 2006

Work Order: 0607190

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|
|---------|--------|-------|-----|------|----------|-----------|------|----------|------|

Method: SW6010A

Sample ID: MB

MBLK

Batch ID: R20091 Analysis Date: 7/28/2006 2:02:17 PM

|           |    |      |        |
|-----------|----|------|--------|
| Arsenic   | ND | mg/L | 0.020  |
| Barium    | ND | mg/L | 0.020  |
| Cadmium   | ND | mg/L | 0.0020 |
| Calcium   | ND | mg/L | 1.0    |
| Chromium  | ND | mg/L | 0.0060 |
| Copper    | ND | mg/L | 0.0060 |
| Iron      | ND | mg/L | 0.020  |
| Lead      | ND | mg/L | 0.0050 |
| Magnesium | ND | mg/L | 1.0    |
| Manganese | ND | mg/L | 0.0020 |
| Potassium | ND | mg/L | 1.0    |
| Selenium  | ND | mg/L | 0.050  |
| Sodium    | ND | mg/L | 1.0    |
| Uranium   | ND | mg/L | 0.10   |
| Zinc      | ND | mg/L | 0.050  |

Sample ID: MB

MBLK

Batch ID: R20091 Analysis Date: 7/31/2006 11:27:43 AM

|           |    |      |        |
|-----------|----|------|--------|
| Arsenic   | ND | mg/L | 0.020  |
| Barium    | ND | mg/L | 0.020  |
| Cadmium   | ND | mg/L | 0.0020 |
| Calcium   | ND | mg/L | 1.0    |
| Chromium  | ND | mg/L | 0.0060 |
| Copper    | ND | mg/L | 0.0060 |
| Iron      | ND | mg/L | 0.020  |
| Lead      | ND | mg/L | 0.0050 |
| Magnesium | ND | mg/L | 1.0    |
| Manganese | ND | mg/L | 0.0020 |
| Potassium | ND | mg/L | 1.0    |
| Selenium  | ND | mg/L | 0.050  |
| Silver    | ND | mg/L | 0.0050 |
| Sodium    | ND | mg/L | 1.0    |
| Uranium   | ND | mg/L | 0.10   |
| Zinc      | ND | mg/L | 0.050  |

Sample ID: LCS

LCS

Batch ID: R20091 Analysis Date: 7/28/2006 2:05:01 PM

|           |        |      |        |      |    |     |
|-----------|--------|------|--------|------|----|-----|
| Arsenic   | 0.5053 | mg/L | 0.020  | 98.0 | 80 | 120 |
| Barium    | 0.4735 | mg/L | 0.020  | 94.7 | 80 | 120 |
| Cadmium   | 0.4983 | mg/L | 0.0020 | 99.7 | 80 | 120 |
| Calcium   | 50.39  | mg/L | 1.0    | 99.8 | 80 | 120 |
| Chromium  | 0.5054 | mg/L | 0.0060 | 101  | 80 | 120 |
| Copper    | 0.4739 | mg/L | 0.0060 | 94.8 | 80 | 120 |
| Iron      | 0.5573 | mg/L | 0.020  | 111  | 80 | 120 |
| Lead      | 0.4918 | mg/L | 0.0050 | 98.4 | 80 | 120 |
| Magnesium | 50.26  | mg/L | 1.0    | 99.5 | 80 | 120 |
| Manganese | 0.4773 | mg/L | 0.0020 | 95.5 | 80 | 120 |
| Potassium | 53.17  | mg/L | 1.0    | 96.7 | 80 | 120 |

## Qualifiers:

E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
Project: River Sampling 3rd Qtr 2006

Work Order: 060719

| Analyte                | Result | Units | PQL    | %Rec | LowLimit         | HighLimit                            | %RPD | RPDLimit | Qual |
|------------------------|--------|-------|--------|------|------------------|--------------------------------------|------|----------|------|
| <b>Method: SW6010A</b> |        |       |        |      |                  |                                      |      |          |      |
| <b>Sample ID: LCS</b>  |        |       |        |      |                  |                                      |      |          |      |
|                        |        | LCS   |        |      | Batch ID: R20091 | Analysis Date: 7/28/2006 2:05:01 PM  |      |          |      |
| Selenium               | 0.5062 | mg/L  | 0.050  | 98.0 | 80               | 120                                  |      |          |      |
| Sodium                 | 53.41  | mg/L  | 1.0    | 106  | 80               | 120                                  |      |          |      |
| Uranium                | 0.5160 | mg/L  | 0.10   | 103  | 80               | 120                                  |      |          |      |
| Zinc                   | 0.5054 | mg/L  | 0.050  | 101  | 80               | 120                                  |      |          |      |
| <b>Sample ID: LCS</b>  |        |       |        |      |                  |                                      |      |          |      |
|                        |        | LCS   |        |      | Batch ID: R20091 | Analysis Date: 7/31/2006 11:30:47 AM |      |          |      |
| Arsenic                | 0.5153 | mg/L  | 0.020  | 103  | 80               | 120                                  |      |          |      |
| Barium                 | 0.5032 | mg/L  | 0.020  | 101  | 80               | 120                                  |      |          |      |
| Cadmium                | 0.5169 | mg/L  | 0.0020 | 103  | 80               | 120                                  |      |          |      |
| Calcium                | 47.51  | mg/L  | 1.0    | 94.1 | 80               | 120                                  |      |          |      |
| Chromium               | 0.5267 | mg/L  | 0.0060 | 105  | 80               | 120                                  |      |          |      |
| Copper                 | 0.5122 | mg/L  | 0.0060 | 102  | 80               | 120                                  |      |          |      |
| Iron                   | 0.5753 | mg/L  | 0.020  | 115  | 80               | 120                                  |      |          |      |
| Lead                   | 0.5035 | mg/L  | 0.0050 | 101  | 80               | 120                                  |      |          |      |
| Magnesium              | 47.51  | mg/L  | 1.0    | 94.1 | 80               | 120                                  |      |          |      |
| Manganese              | 0.5082 | mg/L  | 0.0020 | 102  | 80               | 120                                  |      |          |      |
| Potassium              | 50.98  | mg/L  | 1.0    | 92.7 | 80               | 120                                  |      |          |      |
| Selenium               | 0.5326 | mg/L  | 0.050  | 107  | 80               | 120                                  |      |          |      |
| Silver                 | 0.5050 | mg/L  | 0.0050 | 101  | 80               | 120                                  |      |          |      |
| Sodium                 | 50.64  | mg/L  | 1.0    | 100  | 80               | 120                                  |      |          |      |
| Uranium                | 0.5514 | mg/L  | 0.10   | 22.1 | 80               | 120                                  |      |          | S    |
| Zinc                   | 0.5242 | mg/L  | 0.050  | 105  | 80               | 120                                  |      |          |      |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

## QA/QC SUMMARY REPORT

Client: San Juan Refining  
 Project: River Sampling 3rd Qtr 2006

Work Order: 0607190

| Analyte                          | Result | Units       | PQL    | %Rec | LowLimit               | HighLimit | %RPD                                        | RPDLimit | Qual |
|----------------------------------|--------|-------------|--------|------|------------------------|-----------|---------------------------------------------|----------|------|
| <b>Method: SW6010A</b>           |        |             |        |      |                        |           |                                             |          |      |
| <b>Sample ID: 0607190-04DMSD</b> |        | <i>MSD</i>  |        |      | <b>Batch ID: 10838</b> |           | <b>Analysis Date: 7/20/2006 10:29:45 AM</b> |          |      |
| Arsenic                          | 0.5448 | mg/L        | 0.020  | 109  | 75                     | 125       | 0.927                                       | 20       |      |
| Barium                           | 0.5908 | mg/L        | 0.020  | 103  | 75                     | 125       | 1.05                                        | 20       |      |
| Cadmium                          | 0.5326 | mg/L        | 0.0020 | 107  | 75                     | 125       | 1.09                                        | 20       |      |
| Chromium                         | 0.5244 | mg/L        | 0.0060 | 105  | 75                     | 125       | 1.10                                        | 20       |      |
| Lead                             | 0.5159 | mg/L        | 0.0050 | 103  | 75                     | 125       | 1.88                                        | 20       |      |
| Selenium                         | 0.5558 | mg/L        | 0.050  | 111  | 75                     | 125       | 3.22                                        | 20       |      |
| <b>Sample ID: MB-10838</b>       |        | <i>MBLK</i> |        |      | <b>Batch ID: 10838</b> |           | <b>Analysis Date: 7/20/2006 9:22:35 AM</b>  |          |      |
| Arsenic                          | ND     | mg/L        | 0.020  |      |                        |           |                                             |          |      |
| Barium                           | ND     | mg/L        | 0.020  |      |                        |           |                                             |          |      |
| Cadmium                          | ND     | mg/L        | 0.0020 |      |                        |           |                                             |          |      |
| Chromium                         | ND     | mg/L        | 0.0060 |      |                        |           |                                             |          |      |
| Lead                             | ND     | mg/L        | 0.0050 |      |                        |           |                                             |          |      |
| Selenium                         | ND     | mg/L        | 0.050  |      |                        |           |                                             |          |      |
| Silver                           | ND     | mg/L        | 0.0050 |      |                        |           |                                             |          |      |
| <b>Sample ID: LCS-10838</b>      |        | <i>LCS</i>  |        |      | <b>Batch ID: 10838</b> |           | <b>Analysis Date: 7/20/2006 9:26:27 AM</b>  |          |      |
| Arsenic                          | 0.5300 | mg/L        | 0.020  | 104  | 80                     | 120       |                                             |          |      |
| Barium                           | 0.5127 | mg/L        | 0.020  | 102  | 80                     | 120       |                                             |          |      |
| Cadmium                          | 0.5092 | mg/L        | 0.0020 | 102  | 80                     | 120       |                                             |          |      |
| Chromium                         | 0.4990 | mg/L        | 0.0060 | 99.8 | 80                     | 120       |                                             |          |      |
| Lead                             | 0.4966 | mg/L        | 0.0050 | 99.3 | 80                     | 120       |                                             |          |      |
| Selenium                         | 0.5116 | mg/L        | 0.050  | 102  | 80                     | 120       |                                             |          |      |
| Silver                           | 0.5191 | mg/L        | 0.0050 | 104  | 80                     | 120       |                                             |          |      |
| <b>Sample ID: 0607190-04DMS</b>  |        | <i>MS</i>   |        |      | <b>Batch ID: 10838</b> |           | <b>Analysis Date: 7/20/2006 10:26:42 AM</b> |          |      |
| Arsenic                          | 0.5398 | mg/L        | 0.020  | 108  | 75                     | 125       |                                             |          |      |
| Barium                           | 0.5846 | mg/L        | 0.020  | 102  | 75                     | 125       |                                             |          |      |
| Cadmium                          | 0.5268 | mg/L        | 0.0020 | 105  | 75                     | 125       |                                             |          |      |
| Chromium                         | 0.5187 | mg/L        | 0.0060 | 104  | 75                     | 125       |                                             |          |      |
| Lead                             | 0.5062 | mg/L        | 0.0050 | 101  | 75                     | 125       |                                             |          |      |
| Selenium                         | 0.5382 | mg/L        | 0.050  | 108  | 75                     | 125       |                                             |          |      |
| <b>Method: E160.1</b>            |        |             |        |      |                        |           |                                             |          |      |
| <b>Sample ID: MB-10828</b>       |        | <i>MBLK</i> |        |      | <b>Batch ID: 10828</b> |           | <b>Analysis Date: 7/19/2006</b>             |          |      |
| Total Dissolved Solids           | ND     | mg/L        | 20     |      |                        |           |                                             |          |      |
| <b>Sample ID: LCS-10828</b>      |        | <i>LCS</i>  |        |      | <b>Batch ID: 10828</b> |           | <b>Analysis Date: 7/19/2006</b>             |          |      |
| Total Dissolved Solids           | 978.0  | mg/L        | 20     | 97.8 | 80                     | 120       |                                             |          |      |

## Qualifiers:

|   |                                            |    |                                                    |
|---|--------------------------------------------|----|----------------------------------------------------|
| E | Value above quantitation range             | H  | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit                |
| R | RPD outside accepted recovery limits       | S  | Spike Recovery outside accepted recovery limits    |

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name SJR

Date and Time Received:

7/18/2006

Work Order Number 0607190

Received by AT

Checklist completed by

Signature

Date

7/18/06

Matrix

Carrier name UPS

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☒

N/A ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

Client: San Juan Robbing

QA/QC Package:

Std  Level 4 

Other:

Project Name:

Address # 50 Rd 4990

Boonfield, NM 87113 River Shop 507-1006  
Project Manager:

Project Manager:

Phone #: 595-622-4161

Fax #: 505-632-3911

Date \_\_\_\_\_ Time \_\_\_\_\_

Time  
Matrix

Sample I.D. No.:

Number/Volume

HEAL No.

|         |     |     |              |
|---------|-----|-----|--------------|
| 7/17/66 | 945 | H2O | N of NW #215 |
|---------|-----|-----|--------------|

2-02

1-55-1

105

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 |
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Date: \_\_\_\_\_

Time:

Relinquished By: (Signature)

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| Received By (Signature) | 7/18/06 |
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Date: \_\_\_\_\_

Time:

Relinquished By: (Signature)

Received By: (Signature) 

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

[www.hallenvironmental.com](http://www.hallenvironmental.com)

# ANALYSIS REQUEST

|                                                                  | Air Bubbles or Headspace (Y or N) |
|------------------------------------------------------------------|-----------------------------------|
| BTEX + MTBE + <del>TPH</del> (8021)                              | X                                 |
| BTEX + MTBE + TPH (Gasoline Only)                                |                                   |
| TPH Method 8015B (Gas/Diesel)                                    | X                                 |
| TPH (Method 418.1)                                               |                                   |
| EDB (Method 504.1)                                               |                                   |
| EDC (Method 8021)                                                |                                   |
| 8310 (PNA or PAH)                                                |                                   |
| RCPA 8 Metals                                                    | X                                 |
| Anions ( $F^-$ , $Cl^-$ , $NO_2^-$ , $PO_4^{3-}$ , $SO_4^{2-}$ ) |                                   |
| 8081 Pesticides / PCB's (8082)                                   |                                   |
| 8260B (VOA)                                                      |                                   |
| 8270 (Semi-VOA)                                                  | X                                 |
| WGC Dissolved Phase                                              | X                                 |
| MS Back-up                                                       | X                                 |
| (Seiche)                                                         | X                                 |

Remarks:





## Air Bubbles or Headspace (Y or N)

# CHAIN-OF-CUSTODY RECORD

Client: San Juan Redding

Address: #50 Rd 4990

Bloomfield NM 87113

Phone #: 505-632-4110

Fax #: 505-632-3911

Date

Time

Matrix

Sample I.D. No.

Number/Volume

HEAL No.

Preservative

HgCl<sub>2</sub> HNO<sub>3</sub>

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

EDC (Method 8021)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / PCB's (8082)

8260B (VOA)

8270 (Semi-VOA)

Water Related Metals

NO<sub>3</sub> Back-Up

Green Chem

Air Bubbles or Headspace (Y or N)

Remarks:

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