GW-32

2005 AGMR

Date: 8/31/2006

1217

OIL CONSERVATION DIVISION 2005 ANNUAL GROUNDWATER REPORT (AND OCD ADDENDUM)

Binder 1: Annual Groundwater Report

Giant Refining Company - Ciniza Refinery
McKinley County, New Mexico



August 31, 2006

EPA ID No. NMD000333211

HWB-GRCC-04-001

Discharge Permit No. GW-032

Prepared By: Jim Lieb, Environmental Engineer, Giant Refining – Ciniza Refinery

Signature: _____, Date: 8/31/06

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Executive Summary

The purpose of groundwater sampling performed in 2005 at Ciniza Refinery is to determine whether contamination resulting from refinery related activities has entered groundwater at the facility. Twenty monitoring wells are distributed within the boundaries of the refinery and 9 monitoring wells are located along the perimeter of the lagoons and ponds. The ground water monitoring is conducted at the Ciniza Refinery located approximately 17 miles east of Gallup and approximately 1 mile north of Interstate I-40 at Exit 39. The facility is owned and operated by Giant Industries, Arizona, Inc. U.S. EPA ID No. NMD000333211 and HWB-GRCC-04-001 apply to the facility.

The monitoring in 2005 has shown that although contamination has entered the shallow perched groundwater at one location (OW-14), the contamination is limited in extent and has not migrated to the wells that were placed nearby OW-14 (OW-12, OW-13, OW-29, and OW-30). The monitoring performed in 2005 has shown that, at the OW-14 location where contamination exists, the contamination has remained relatively constant in concentration in comparison to sampling conducted in past years and the concentrations have not appreciably increased.

Monitoring of well GWM-1 in 2005 has shown benzene in concentrations (June 2005 = 0.010 mg/l and September 2005 = 0.081 mg/l) exceeding the NM Water Quality Control Commission standard (0.01 mg/l) and the U.S. EPA MCL (0.005 mg/l). Giant conducted annual sampling of GWM-1 on August 4, 2006. The benzene concentration in this sample was 0.012 mg/l.

Elevated levels of fluoride and TDS have shown up in some of the boundary wells in 2005 and 2004 but these are likely due to naturally occurring concentrations of fluoride and TDS in these particular wells. Chloride was detected in elevated concentration in GWM-1 in 2005 but once again this is likely due to naturally occurring conditions in this well.

In October 2005, closure work was completed to close the railroad rack lagoon solid waste management unit (SWMU No. 8). Representative samples taken from the excavated area of the lagoon showed that all the existing contamination was removed. A remedy completion report on the cleanup was completed and submitted to the New Mexico Environment Department's (NMED's) Hazardous Waste Bureau in February 2006 for review.

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I. Annual Groundwater Report (Binder 1)

Section 1 Introduction

1.1 Facility Description

This annual groundwater report pertains to the Giant Refining Company refinery located at Exit 39 on Interstate I-40. This refinery is known as the Ciniza Refinery and is located at Jamestown New Mexico, approximately 17 miles east of Gallup. Figure 1 shows the location of the Ciniza Refinery.

The owner is:

	Giant Industries Arizona, Inc. 23733 North Scottsdale Road Scottsdale, Arizona 85255	(parent corporation)
Operator:	Giant Refining Company Route 3, Box 7 Gallup, New Mexico 87301	(postal address)
	Giant Refining Company I-40, Exit 39 Jamestown, New Mexico 87347	(physical address)

SIC code 2911 (petroleum refining) pertains to the Ciniza Refinery.

The following permits pertain to the Ciniza Refinery:

- U.S. EPA ID Number NMD000333211
- HWB-GRCC-04-001
- Discharge Permit No. GW-032

The facility status is corrective action/compliance. Annual and quarterly groundwater sampling is conducted at the facility to evaluate present contamination.

The refinery is situated on an 810 acre irregular shaped tract of land that is substantially located within the lower one quarter of Section 28 and throughout Section 33 of Township 15 North, Range 15 West of the New Mexico Prime Meridian. A small component of the property lies within the northeastern one quarter of Section 4 of Township 14 North, Range 15 West. Figure 2 is a topographic map showing the general layout of the refinery in comparison to the local topography.

1.2 Background Information

The Ciniza Refinery is located within a rural and sparsely populated section of McKinley County in western New Mexico. The setting is a high desert plain on the western slope of the continental divide. The nearest population centers are the Pilot (formerly Giant) Travel Center refueling plaza, the Interstate 40 highway corridor, and a small cluster of residential homes located on the south side of Interstate 40 approximately 2 miles southwest of the refinery (Jamestown). The surrounding land is comprised primarily of public lands and is used for cattle and sheep grazing at a density of less than six cattle or 30 sheep per section. Except for Gallup, McKinley County is predominantly rural, as are the adjoining portions of neighboring counties.

The refinery primarily receives crude oil via two 6 inch diameter pipelines; Bisti Pipeline comes down from the Four Corners Area and enters the refinery property from the north and Hospah Pipeline comes in from the northeast and is an interconnection with a main interstate pipeline. In addition, the refinery also receives natural gasoline feedstocks via a 4-inch diameter pipeline that comes in from the west along the Interstate 40 corridor from the Conoco gas plant. These feedstocks are then stored in tanks until refined into products. The refinery has an overall capacity to process up to 32,000 barrels per day of crude oil and natural gasoline feedstocks.

The refinery incorporates various processing units that convert crude oil and natural gasoline into finished products. These units are briefly described as follows.

- The crude distillation unit separates crude oil into various fractions; including gas, naphtha, light oil, heavy oil, and residual.
- The fluidized catalytic cracking unit (FCCU) breaks up (cracks) long-chain hydrocarbon molecules into smaller molecules, and essentially converts heavier oils into naphtha and lighter oils.
- The alkylation unit combines specific types of hydrocarbon molecules into a high octane gasoline blending component.
- The reforming unit combines low octane naphtha molecules to form high octane naphtha.
- The hydrotreating unit removes undesirable sulfur and nitrogen compounds from intermediate feedstocks, and also saturates the feedstocks with hydrogen.
- The isomerization unit converts low octane hydrocarbon molecules into high octane molecules.
- The treater units remove impurities from various intermediate and blending feedstocks in order to produce finished products that comply with sales specifications.

- The sulfur recovery unit converts and recovers various sulfur compounds from other processing units and then produces a solid elemental sulfur byproduct.

As a result of these processing steps, the refinery produces a wide range of petroleum products including propane, butane, unleaded gasoline, diesel, kerosene, and residual fuel.
In addition to the aforementioned processing units, various other equipment and systems support the operation of the refinery and are briefly described as follows.

Storage tanks are used throughout the refinery to hold and store crude oil, natural gasoline, intermediate feedstocks, finished products, chemicals, and water. These tanks are all located aboveground and range in size from 80,000 barrels to less than a 1,000 barrels. A grouping of tanks is commonly referred to as a "tank farm" such as the hot oil "tank farm".

Pumps, valves, and piping systems are used throughout the refinery to transfer various liquids among storage tanks and processing units.

A railroad spur track and a railcar loading rack are used to transfer feed-stocks and products from refinery storage tanks into and out of railcars.

Several tank truck loading racks are used at the refinery to load out finished products and also may receive crude oil, other feedstocks, additives, and chemicals.

A pipeline from the refinery carries diesel fuel to the Pilot (formerly Giant) Travel Center. Gasoline is delivered to the Pilot Center via tanker truck.

A firefighting training facility is used to conduct employee firefighting training. Waste water from the facility, when training is conducted, is pumped into a tank which is then pumped out by a vac truck. The vac truck pumps the oily water into a process sewer leading to the New API Separator (NAPIS).

The process wastewater system is a network of curbing, paving, catch basins, and underground piping that collects waste water effluent from various processing areas within the refinery and then conveys this wastewater to the new API separator. A separate storm water collection system routes storm water to the old API separator (OAPIS). Water from the OAPIS is pumped to the NAPIS for processing and benzene stripping.

The NAPIS is a two compartment oil water separator. Oil is separated from water based on the principle that, given a quiet surface, oil will float to the water surface where it can be skimmed off. The skimmed slop oil is passed to a collection chamber where it is pumped back into the refinery process. The clarified water is piped to the top of dual stripping columns where benzene is removed. The stripped water flows into the first aeration lagoon. Sludge sinks to the bottom of the separator which is periodically vacuumed out by a vac truck and disposed as hazardous waste at an approved landfill.

At the stripping columns, ambient air is blown upwards through the falling cascade of clarified wastewater as it passes through distillation column packing. Countercurrent desorption of

benzene from the water occurs due to the high volume of air passing over the relatively large surface area provided by the packing. The desorbed benzene is absorbed into the air stream and vented to the atmosphere. Effluent from the stripper columns gravity flows through piping into the first aeration lagoon.

At the aeration basins, the treated wastewater is mixed with air in order to oxidize any remaining organic constituents and increase the dissolved oxygen concentration available in the water for growth of bacteria and other microbial organisms. The microbes degrade hydrocarbons into carbon dioxide and water. Three 15-hp mechanical aerators provide aeration in the first aeration lagoon with two 15-hp aerators providing aeration in the second lagoon. Effluent from the second aeration lagoon flows onward into the first of several evaporation ponds of various sizes.

At the evaporation ponds, wastewater is converted into vapor via solar and mechanical wind-effect evaporation. No wastewater is discharged from the refinery to surface waters of the state because all of the waste water evaporates. Therefore, the refinery is not required to have a NPDES discharge permit for discharge of treated process water. However, the Ciniza refinery does have a NPDES permit for storm water discharge.

The storm water system is a network of valves, gates, berms, embankments, culverts, trenches, ditches, natural arroyos, and retention ponds that collect, convey, control, treat, and release storm water that falls within or passes through refinery property. Storm water discharge from the refinery is very infrequent due to the arid desert-like nature of the surrounding geographical area. The Ciniza Refinery maintains a storm water pollution prevention plan (SWPPP) that includes Best Management Practices (BMPs) for effective storm water pollution prevention. The refinery has recently constructed several new berms in the "grassy area" and improved outfalls (installed barrier dams equipped with gate valves) to minimize the possibility of contaminated runoff leaving the refinery property.

1.3 Site Characteristics

The Ciniza Refinery is located within a rural and sparsely populated section of McKinley County. It is situated in the high desert plain on the western flank of the continental divide approximately 17 miles east of Gallup. The surrounding land is comprised primarily of public lands and is used for cattle and sheep grazing at a density of less than six cattle or 30 sheep per section. Surface vegetation consists of native xerophytic vegetation including grasses, shrubs, small junipers, and some prickly pear cacti. Average rainfall is less than 7 inches per year.

Local topography consists of a gradually inclined down-slope from high ground in the southeast to a lowland fluvial plain in the northwest. The highest point on refinery property is located at the southeast corner boundary (elevation approximately 7,040 feet) and the lowest point is located at the northwest corner boundary (elevation approximately 6,860 feet). The refinery processing facility is located on a flat man-made terrace at an elevation of approximately 6,950 feet.

Surface water in this region consists of the man-made evaporation ponds and aeration basins located within the refinery, a cattle watering pond (Jon Myer's Pond) located east of the refinery, two small unnamed spring fed ponds located south of the refinery, and the South Fork of the Puerco River and its tributary arroyos. The various ponds and basins typically contain water consistently throughout the year. The South Fork of the Puerco River and its tributaries are intermittent and generally contain water only during, and immediately after, the occurrence of precipitation.

The 810 acre refinery property site is located on a layered geologic formation. Surface soils generally consist of fluvial and alluvial deposits; primarily clay and silt with minor inter-bedded sand layers. Below this surface layer is the Chinle Formation, which consists of very low permeability claystones and siltstones that comprise the shales of this formation. As such, the Chinle Formation effectively serves as an aquiclude. Inter-bedded within the Chinle Formation is the Sonsela Sandstone bed, which represents the uppermost potential aquifer in the region.

The Sonsela Sandstone bed lies within and parallels the dip of the Chinle Formation. As such, its high point is located southeast of the refinery and it slopes downward to the northwest as it passes under the refinery. Due to the confinement of the Chinle Formation aquiclude, the Sonsela Sandstone bed acts as a water-bearing reservoir and is artesian at its lower extremis. Artesian conditions exist throughout the central and western portions of the refinery property.

Groundwater flow within the Chinle Formation is extremely slow and typically averages less than 10^{-10} centimeters per second (less than 0.01 feet per year). Groundwater flow within the surface soil layer above the Chinle Formation is highly variable due to the presence of complex and irregular stratigraphy; including sand stringers, cobble beds, and dense clay layers. As such, hydraulic conductivity may range from less than 10^{-2} centimeters per second in the gravelly sands immediately overlying the Chinle Formation up to 10^{-8} centimeters per second in the clay soil layers located near the surface.

Shallow groundwater located under refinery property generally flows along the upper contact of the Chinle Formation. The prevailing flow direction is from the southeast and toward the northwest; however, a subsurface ridge has been identified and is thought to deflect some flow in a northeasterly direction in the vicinity of the refinery tank farm.

2. Scope of Activities

The annual monitoring of the ground water monitoring wells began on September 27, 2005 and lasted until October 20, 2005. Wells OW-11, OW-12, OW-13, OW-14, OW-29, and OW-30 were sampled from September 27, 2005 thru September 29, 2005. Well OW-11 was sampled on September 29, 2005 and analyzed for VOCs, SVOCs, BTEX, MTBE, RCRA metals, and general chemistry. Wells OW-12, OW-13, OW-14, OW-29, and OW-30 were sampled and analyzed for BTEX and MTBE. Wells MW-1, MW-4, MW-5, SMW-2, and SMW-4 were sampled from October 12, 2005 thru October 13, 2005. Samples from these wells were analyzed for VOCs, SVOCs, BTEX, MTBE, RCRA metals, and general chemistry. Boundary wells BW-1-C, BW-2-A, BW-2-B, BW-2-C, BW-3-B, and BW-3-C were sampled from October 17, 2005 thru October 20, 2005. The boundary well samples were analyzed for VOCs, SVOCs, BTEX, MTBE, metals, and general chemistry. Field data (Section 8: "GW Well Depths to Water 2005" and "Purge Only" notes) show that well BW-1-A was dry and BW-1-B had only a couple inches of water and therefore could not be sampled. The results of the annual sampling event are summarized in tables provided in Section 4 (Groundwater Monitoring Events).

Quarterly visual checks for artesian flow conditions at OW-1 and level measurements at OW-10 were conducted on February 15, June 24, September 16, and December 6 of 2005. The visual checks are documented on the forms provided in Section 8 - Well Inspection Logs.

GWM-1 was sampled on February 15, June 28, and August 1 of 2005. The sample was tested for VOCs, SVOCs, BTEX, MTBE, Metals, and general chemistry. The test results are summarized in tables in Section 4. Wells GWM-2 and GWM-3 were installed in September 2005. Visual observations for presence of water were conducted at GMM-2 and GWM-3 on October 12, November 15, and December 6 of 2005. Both of these wells were dry in 2005, so no sampling could be performed on them in 2005.

The following table summarizes all the currently active monitoring wells and sampling frequencies:

The observation, measurement, sampling frequency, and type of analysis are as follows.

Well ID	Frequency	Measurement[1] / Analysis
OW-1	Quarterly	Visual check for artesian flow conditions
OW-10	Quarterly	Level measurement of the Sonsela Aquifer water table
GWM-1	Quarterly Annual	Q: Check for indication of aeration basin leakage. A: General chemistry/VOC/SVOC/BTEX/MTBE/metals
GWM-2	Quarterly	Check for indication of aeration basin leakage.
GWM-3	Quarterly	Check for indication of aeration basin leakage.
OW-11	Annual	General chemistry/VOC/SVOC /BTEX/MTBE/ metals
OW-12	Annual	BTEX / MTBE

Well ID	Frequency	Measurement[4] / Analysis
OW-13[2]	Annual	BTEX / MTBE
OW-14	SemiAnnual	BTEX / MTBE
OW-29	Annual	BTEX / MTBE
OW-30	Annual	BTEX / MTBE
BW-1-A[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
BW-1-B[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE /
BW-1-C[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
BW-2-A[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
BW-2-B[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
BW-2-C[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
BW-3-A[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
BW-3-B[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
BW-3-C[3]	Annual	General chemistry / VOC / SVOC / BTEX / MTBE / metals
MW-1	Annual	General chemistry / RCRA list constituents[5]
MW-4	Annual in 05,07,09	General chemistry / RCRA list constituents[5] Modified Skinner List and organics
MW-5	Annual in 05,07,09	General chemistry / RCRA list constituents[5] Modified Skinner List and organics
SMW-2	Annual in 05,07,09	General chemistry / RCRA list constituents[5] Modified Skinner List and organics
SMW-4	Annual	General chemistry / RCRA list constituents[5] Modified Skinner List and organics
RW-1	Annual	Measurement of product layer thickness, if present
RW-2	Annual	Measurement of product layer thickness, if present
RW-5	Annual	Measurement of product layer thickness, if present
RW-6	Annual	Measurement of product layer thickness, if present
PW-2 (Process)	2008, then every 3 yrs thereafter	SVOCs, VOCs, Heavy Metals, Cyanide, Nitrates

Well ID	Frequency	Measurement[4] / Analysis
PW-3 (Drinking/ Process)	Every 3 yrs starting with 2006	SVOCs, VOCs, Heavy Metals, Cyanide, Nitrates
PW-4 (Process)	Every 3 yrs starting with 2004	SVOCs, VOCs, Heavy Metals, Cyanide, Nitrates
Pond 1 Inlet (EP1-IN)	Semi-Annual	BTEX, SVOCs, RCRA metals

[1] This is the new well installed down gradient of the aeration basins.

[2] When OW-14 is cleaned up, then monitoring of OW-13 shall be discontinued.

[3] These are the new wells installed at the northwest corner boundary of the refinery. BW-1-A, BW-1-B, and BW-3-A were dry at the time of drilling.

[4] To the extent practicable, water table depth shall be measured at each well annually.

[5] Frequency of sampling shall be per RCRA post closure schedule.

In addition to groundwater monitoring, surface water monitoring shall also be conducted as follows.

- On an annual basis, a grab sample of the inlet water to Pond #2 shall be collected and analyzed for BOD, COD, TDS, BTEX, and MTBE.

On an annual basis, a grab sample of evaporation pond water shall be collected and analyzed for general chemistry parameters. The evaporation pond selected for sampling shall be the pond, considered by refinery personnel, to most likely contain the highest salinity or TDS. In addition, the selected pond shall be alternated from year-to-year in order to provide a broader indication of analysis.

Groundwater Monitoring Well Installations in 2005

Two new shallow ground water monitoring wells were installed in the early fall of 2005 near GWM-1 which is located at the south west corner of evaporation pond 1. GWM-2 was placed at the northwest corner of evaporation pond 2 and GWM-3 was placed at the northwest corner of evaporation pond 1. GWM-1, GWM-2, and GWM-3 were placed to determine whether any leakage from the lagoons and or evaporation ponds is occurring. GWM-2 is screened at 18.95 feet and GWM-3 is screened at 17.95 feet.

Remediation - RR Rack Lagoon

Clean up and closure work began on the railroad rack lagoon on November 11, 12, 15, and 16 of 2004. Fuh's Trucking removed contaminated soil from the lagoon and placed it on the OCD Non Hazardous LTA. Giant worked with NMED HWB on a sampling and analysis plan approved by both parties. Samples were taken in November 2004 and indicated that further

cleanup was needed at E-1-Wall S and W-1-Wall N. Winter weather set in and stopped work in 2004.

Giant commenced additional excavation work in August 2005 to remove the contaminated soil from the two sampled locations at the sides of the excavation (E-1-Wall S and W-1-Wall N) and to remove the inlet pipe. The results of the final post-excavation sampling conducted on soil samples from the E-1-Wall S and W-1-Wall-N sides of the excavation and along the length of the inlet pipe showed non-detectable level of VOCs remaining. Analysis of samples taken after the excavation showed that the cleanup resulted in soil meeting the regulatory criteria. In October 2005, the lagoon and pipe excavations were filled in with clean fill soil brought in by Fuh's Trucking. A remedy completion report was submitted to NMED HWB in February 2006 and is currently awaiting approval.

Ground water remediation activities are conducted at the Ciniza refinery included the pumping of 447.5 gallons of product from recovery well No.1 (RW-1).

Old API Oil Water Separator

The old API Separator (OAPIS) was removed from service on October 6, 2004 and the start up of the new API Separator (NAPIS) occurred on the same date. Work to remove the OAPIS from service as an oil water separator was described in the 2004 report. Once the OAPIS was removed from oil/water separator service, its use as a storm water catch basin commenced. Beginning in early 2005, Giant began pumping accumulated storm water from the OAPIS into the NAPIS so that the water would undergo treatment in the benzene stripping columns.

Field Data Collection

All facility monitoring wells and recovery wells were gauged in February, June, September, and December of 2005. Ciniza does not have any recovery well pumps that need to be shut off and removed prior to water elevation measurements.

All water/product levels were measured to an accuracy of nearest inch using an electrical conductance based meter. After determining water levels, well volumes were calculated.

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

Filed data and well elevations can be found in Section 8 – Well Data Summary Table.

All purged well water was collected in fifty five gallon drums. The water was treated in the refinery's waste water treatment system.

Giant conducts a perimeter search of the refinery property on a bimonthly basis starting in December 2004. The inspection focuses on hydrocarbon staining or any release that could result in contamination leaving the property boundary. Giant has prepared an inspection checklist to be completed and signed by the environmental employee conducting the inspection. Completed inspection sheets are maintained onsite.

3. Regulatory Criteria

No site-specific groundwater risk based screening levels have been established for the Ciniza refinery so the criteria that Ciniza groundwater samples are compared with are the New Mexico Water Quality Control Commission Standards 20.6.2.3103 and the U. S. EPA's National Primary Drinking Water Quality Standards (MCLs) and the NMED total petroleum hydrocarbon (TPH) screening guidelines. Tables comparing the results of sampling with the standards are provided in Section 4.

MCL's

EPA National Primary Drinking Water Standards

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Acrylamide	TT[8]	Nervous system or blood problems;	Added to water during sewage/wastewater increased risk of cancer treatment	zero
OC	Alachlor	0.002	Eye, liver, kidney or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops	zero
R	Alpha particles	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	zero
IOC	Antimony	0.006	Increase in blood cholesterol; decrease in blood sugar	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	0.006
IOC	Arsenic	0.010 as of 1/23/06	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards, runoff from glass & electronics production wastes	0
IOC	Asbestos (fibers >10 micrometers)	7 million fibers per Liter (MFL)	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits	7 MFL
OC	Atrazine	0.003	Cardiovascular system or reproductive problems	Runoff from herbicide used on row crops	0.003
IOC	Barium	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	2
OC	Benzene	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills	zero
OC	Benzo(a)pyrene (PAHs)	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines	zero
IOC	Beryllium	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	0.004
R	Beta particles and photon emitters	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation	zero
DBP	Bromate	0.010	Increased risk of cancer	Byproduct of drinking water disinfection	zero
IOC	Cadmium	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	0.005
OC	Carbofuran	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa	0.04
OC	Carbon tetrachloride	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities	zero
D	Chloramines (as Cl_2)	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort, anemia	Water additive used to control microbes	MRDLG=4[1]

LEGEND

D Dinsinfectant
DBP Disinfection Byproduct
IOC Inorganic Chemical
M Microorganism
OC Organic Chemical
R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Chlordane	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide	zero
D	Chlorine (as Cl_2)	MRDL=4.0[1]	Eye/nose irritation; stomach discomfort	Water additive used to control microbes	MRDLG=4[1]
D	Chlorine dioxide (as ClO_2)	MRDL=0.8[1]	Anemia; infants & young children: nervous system effects	Water additive used to control microbes	MRDLG=0.8[1]
DBP	Chlorite	1.0	Anemia; infants & young children: nervous system effects	Byproduct of drinking water disinfection	0.8
OC	Chlorobenzene	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories	0.1
IOC	Chromium (total)	0.1	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits	0.1
IOC	Copper	TT[7]; Action Level = 1.3	Short term exposure: Gastrointestinal distress. Long term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits	1.3
M	*Cryptosporidium*	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
IOC	Cyanide (as free cyanide)	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	0.2
OC	2,4-D	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops	0.07
OC	Dalapon	0.2	Minor kidney changes	Runoff from herbicide used on rights of way	0.2
OC	1,2-Dibromo-3-chloropropane (DBCP)	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	zero
OC	o-Dichlorobenzene	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories	0.6
OC	p-Dichlorobenzene	0.075	Anemia; liver, kidney or spleen damage; changes in blood	Discharge from industrial chemical factories	0.075
OC	1,2-Dichloroethane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero
OC	1,1-Dichloroethylene	0.007	Liver problems	Discharge from industrial chemical factories	0.007
OC	cis-1,2-Dichloroethylene	0.07	Liver problems	Discharge from industrial chemical factories	0.07
OC	trans-1,2-Dichloroethylene	0.1	Liver problems	Discharge from industrial chemical factories	0.1
OC	Dichloromethane	0.005	Liver problems; increased risk of cancer	Discharge from drug and chemical factories	zero
OC	1,2-Dichloropropane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero
OC	Di(2-ethylhexyl) adipate	0.4	Weight loss, live problems, or possible reproductive difficulties	Discharge from chemical factories	0.4
OC	Di(2-ethylhexyl) phthalate	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories	zero
OC	Dinoseb	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables	0.007
OC	Dioxin (2,3,7,8-TCDD)	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories	zero
OC	Diquat	0.02	Cataracts	Runoff from herbicide use	0.02
OC	Endothall	0.1	Stomach and intestinal problems	Runoff from herbicide use	0.1

LEGEND

D Disinfectant
DBP Disinfection Byproduct
IOC Inorganic Chemical
M Microorganism
OC Organic Chemical
R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Endrin	0.002	Liver problems	Residue of banned insecticide	0.002
OC	Epichlorohydrin	TT[8]	Increased cancer risk, and over a long period of time, stomach problems	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	zero
OC	Ethylbenzene	0.7	Liver or kidneys problems	Discharge from petroleum refineries	0.7
OC	Ethylene dibromide	0.00005	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	Discharge from petroleum refineries	zero
IOC	Fluoride	4.0	Bone disease (pain and tenderness of the bones); Children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	4.0
M	*Giardia lamblia*	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
OC	Glyphosate	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use	0.7
DBP	Haloacetic acids (HAA5)	0.060	Increased risk of cancer	Byproduct of drinking water disinfection	n/a[6]
OC	Heptachlor	0.0004	Liver damage; increased risk of cancer	Residue of banned termiticide	zero
OC	Heptachlor epoxide	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor	zero
M	Heterotrophic plate count (HPC)	TT[3]	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment	n/a
OC	Hexachlorobenzene	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories	zero
OC	Hexachlorocyclopentadiene	0.05	Kidney or stomach problems	Discharge from chemical factories	0.05
IOC	Lead	TT[7]; Action Level = 0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits	zero
M	*Legionella*	TT[3]	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems	zero
OC	Lindane	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, gardens	0.0002
IOC	Mercury (inorganic)	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	0.002
OC	Methoxychlor	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	0.04
IOC	Nitrate (measured as Nitrogen)	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	10
IOC	Nitrite (measured as Nitrogen)	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	1

LEGEND

D Dinsinfectant
DBP Disinfection Byproduct
IOC Inorganic Chemical
M Microorganism
OC Organic Chemical
R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Oxamyl (Vydate)	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	0.2
OC	Pentachlorophenol	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood preserving factories	zero
OC	Picloram	0.5	Liver problems	Herbicide runoff	0.5
OC	Polychlorinated biphenyls (PCBs)	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals	zero
R	Radium 226 and Radium 228 (combined)	5 pCi/L	Increased risk of cancer	Erosion of natural deposits	zero
IOC	Selenium	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines	0.05
OC	Simazine	0.004	Problems with blood	Herbicide runoff	0.004
OC	Styrene	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills	0.1
OC	Tetrachloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners	zero
IOC	Thallium	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	0.0005
OC	Toluene	1	Nervous system, kidney, or liver problems	Discharge from petroleum factories	1
M	Total Coliforms (including fecal coliform and *E. coli*)	5.0%[4]	Not a health threat in itself; it is used to indicate whether other potentially harmful bacteria may be present[5]	Coliforms are naturally present in the environment as well as feces; fecal coliforms and *E. coli* only come from human and animal fecal waste.	zero
DBP	Total Trihalomethanes (TTHMs)	0.10 0.080 after 12/31/03	Liver, kidney or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection	n/a[6]
OC	Toxaphene	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle	zero
OC	2,4,5-TP (Silvex)	0.05	Liver problems	Residue of banned herbicide	0.05
OC	1,2,4-Trichlorobenzene	0.07	Changes in adrenal glands	Discharge from textile finishing factories	0.07
OC	1,1,1-Trichloroethane	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories	0.20
OC	1,1,2-Trichloroethane	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories	0.003
OC	Trichloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from metal degreasing sites and other factories	zero
M	Turbidity	TT[3]	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing micro-organisms such as viruses, parasites and some bacteria. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff	n/a
R	Uranium	30 ug/L as of 12/08/03	Increased risk of cancer, kidney toxicity	Erosion of natural deposits	zero

LEGEND

D Dinsinfectant
DBP Disinfection Byproduct
IOC Inorganic Chemical
M Microorganism
OC Organic Chemical
R Radionuclides

	Contaminant	MCL or TT[1] (mg/L)[2]	Potential health effects from exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal
OC	Vinyl chloride	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories	zero
M	Viruses (enteric)	TT[3]	Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
OC	Xylenes (total)	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories	10

NOTES

1 Definitions

- Maximum Contaminant Level Goal (MCLG)—The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
- Maximum Contaminant Level (MCL)—The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.
- Maximum Residual Disinfectant Level Goal (MRDLG)—The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL)—The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Treatment Technique (TT)—A required process intended to reduce the level of a contaminant in drinking water.

2 Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million (ppm).

3 EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- *Cryptosporidium* (as of 1/1/02 for systems serving >10,000 and 1/14/05 for systems serving <10,000) 99% removal.
- *Giardia lamblia*: 99.9% removal/inactivation
- Viruses: 99.99% removal/inactivation
- *Legionella*: No limit, but EPA believes that if *Giardia* and viruses are removed/inactivated, *Legionella* will also be controlled.
- Turbidity: At no time can turbidity (cloudiness of water) go above 5 nephelolometric turbidity units (NTU); systems that filter must ensure that the turbidity go no higher than 1 NTU (0.5 NTU for conventional or direct filtration) in at least 95% of the daily samples in any month. As of January 1, 2002, for systems servicing >10,000, and January 14, 2005, for systems servicing <10,000, turbidity may never exceed 1 NTU, and must not exceed 0.3 NTU in 95% of daily samples in any month.
- HPC: No more than 500 bacterial colonies per milliliter
- Long Term 1 Enhanced Surface Water Treatment (Effective Date: January 14, 2005); Surface water systems or (GWUDI) systems serving fewer than 10,000 people must comply with the applicable Long Term 1 Enhanced Surface Water Treatment Rule provisions (e.g. turbidity standards, individual filter monitoring, *Cryptosporidium* removal requirements, updated watershed control requirements for unfiltered systems).
- Filter Backwash Recycling: The Filter Backwash Recycling Rule requires systems that recycle to return specific recycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.

4 No more than 5.0% samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or *E. coli* if two consecutive TC-positive samples, and one is also positive for *E. coli* fecal coliforms, system has an acute MCL violation.

5 Fecal coliform and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Disease-causing microbes (pathogens) in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. These pathogens may pose a special health risk for infants, young children, and people with severely compromised immune systems.

6 Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

- Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)
- Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)

7 Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

8 Each water system must certify, in writing, to the state (using third-party or manufacturers certification) that when it uses acrylamide and/or epichlorohydrin to treat water, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows: Acrylamide = 0.05% dosed at 1 mg/L (or equivalent); Epichlorohydrin = 0.01% dosed at 20 mg/L (or equivalent).

LEGEND

D	Dinsinfectant	IOC	Inorganic Chemical	OC	Organic Chemical
DBP	Disinfection Byproduct	M	Microorganism	R	Radionuclides

National Secondary Drinking Water Standards

National Secondary Drinking Water Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, states may choose to adopt them as enforceable standards.

Contaminant	Secondary Standard
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 (color units)
Copper	1.0 mg/L
Corrosivity	noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.10 mg/L
Sulfate	250 mg/L
Total Dissolved Solids	500 mg/L
Zinc	5 mg/L

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C. The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations.
[2-18-77; 20.6.2.3101 NMAC - Rn, 20 NMAC 6.2.III.3101, 1-15-01]

20.6.2.3102: [RESERVED]
[12-1-95; 20.6.2.3102 NMAC - Rn, 20 NMAC 6.2.III.3102, 1-15-01]

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection D of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "*methods for chemical analysis of water and waste of the U.S. environmental protection agency*," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total unfiltered concentrations of the contaminants.

A. **Human Health Standards**-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

(1) Arsenic (As)……0.1 mg/l
(2) Barium (Ba)……1.0 mg/l
(3) Cadmium (Cd)……0.01 mg/l
(4) Chromium (Cr)……0.05 mg/l
(5) Cyanide (CN)……0.2 mg/l
(6) Fluoride (F)……1.6 mg/l
(7) Lead (Pb)……0.05 mg/l
(8) Total Mercury (Hg)……0.002 mg/l
(9) Nitrate (NO_3 as N)……10.0 mg/l
(10) Selenium (Se)……0.05 mg/l
(11) Silver (Ag)……0.05 mg/l
(12) Uranium (U)……0.03 mg/l
(13) Radioactivity: Combined Radium-226 & Radium-228……30 pCi/l
(14) Benzene……0.01 mg/l
(15) Polychlorinated biphenyls (PCB's)……0.001 mg/l
(16) Toluene……0.75 mg/l
(17) Carbon Tetrachloride……0.01 mg/l
(18) 1,2-dichloroethane (EDC) ……0.01 mg/l
(19) 1,1-dichloroethylene (1,1-DCE) ……0.005 mg/l
(20) 1,1,2,2-tetrachloroethylene (PCE) ……0.02 mg/l
(21) 1,1,2-trichloroethylene (TCE) ……0.1 mg/l
(22) ethylbenzene……0.75 mg/l
(23) total xylenes……0.62 mg/l
(24) methylene chloride……0.1 mg/l
(25) chloroform……0.1 mg/l
(26) 1,1-dichloroethane……0.025 mg/l
(27) ethylene dibromide (EDB) ……0.0001 mg/l
(28) 1,1,1-trichloroethane……0.06 mg/l
(29) 1,1,2-trichloroethane……0.01 mg/l
(30) 1,1,2,2-tetrachloroethane……0.01 mg/l
(31) vinyl chloride……0.001 mg/l

(32) PAHs: total naphthalene plus monomethylnaphthalenes.....0.03 mg/l
(33) benzo-a-pyrene.....0.0007 mg/l

B. Other Standards for Domestic Water Supply

(1) Chloride (Cl) .....250.0 mg/l
(2) Copper (Cu) .....1.0 mg/l
(3) Iron (Fe) .....1.0 mg/l
(4) Manganese (Mn) .....0.2 mg/l
(6) Phenols.....0.005 mg/l
(7) Sulfate (SO_4) .....600.0 mg/l
(8) Total Dissolved Solids (TDS) .....1000.0 mg/l
(9) Zinc (Zn) .....10.0 mg/l
(10) pH.....between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, and C of this section unless otherwise provided.

(1) Aluminum (Al)..... .....5.0 mg/l
(2) Boron (B) .....0.75 mg/l
(3) Cobalt (Co) .....0.05 mg/l
(4) Molybdenum (Mo) .....1.0 mg/l
(5) Nickel (Ni) .....0.2 mg/l

[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-04]

[Note: For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007. For any new water discharges, the uranium standard is effective 9-26-04.]

20.6.2.3104 DISCHARGE PERMIT REQUIRED: Unless otherwise provided by this Part, no person shall cause or allow effluent or leachate to discharge so that it may move directly of indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary. When a permit has been issued, discharges must be consistent with the terms and conditions of the permit. In the event of a transfer of the ownership, control, or possession of a facility for which a discharge permit is in effect, the transferee shall have authority to discharge under such permit, provided that the transferee has complied with Section 20.6.2.3111 NMAC, regarding transfers. [2-18-77, 12-24-87, 12-1-95; Rn & A, 20.6.2.3104 NMAC - 20 NMAC 6.2.III.3104, 1-15-01; A, 12-1-01]

20.6.2.3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20.6.2.3104 and 20.6.2.3106 NMAC do not apply to the following:

A. Effluent or leachate which conforms to all the listed numerical standards of Section 20.6.2.3103 NMAC and has a total nitrogen concentration of 10 mg/l or less, and does not contain any toxic pollutant. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is discharged from a sewerage system used only for disposal of household and other domestic waste which is designed to receive and which receives 2,000 gallons or less of liquid waste per day;

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system;

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided in this section;

F. Those constituents which are subject to effective and enforceable effluent limitations in a National Pollutant Discharge Elimination System (NPDES) permit, where discharge onto or below the surface of the ground so that water contaminants may move directly or indirectly into ground water occurs downstream from the outfall

NEW MEXICO ENVIRONMENT DEPARTMENT TPH SCREENING GUIDELINES
November 2005

In some instances, it may be practical to assess areas of soil contamination that are the result of releases of petroleum products such as jet fuel and diesel, using total petroleum hydrocarbon (TPH) analyses. TPH results may be used to delineate the extent of petroleum-related contamination at these sites and ascertain if the residual level of petroleum products in soil represents an unacceptable risk to future users of the site. Petroleum hydrocarbons represent complex mixtures of compounds, some of which are regulated constituents and some compounds that are not regulated. In addition, the amount and types of the constituent compounds in a petroleum hydrocarbon release differ widely depending on what type of product was spilled and how the spill has weathered. This variability makes it difficult to determine the toxicity of weathered petroleum products in soil solely from TPH results; however, these results can be used to approximate risk in some cases, depending upon the nature of the petroleum product, the release scenario, how well the site has been characterized, and anticipated potential future land uses. In some cases, site clean up cannot be based solely on results of TPH sampling. The New Mexico Environment Department (NMED) will make these determinations on a case by case basis. If NMED determines that additional data are necessary, these TPH guidelines must be used in conjunction with the screening guidelines for individual petroleum-related contaminants in Table 3 and other contaminants, as applicable.

The screening levels for each petroleum carbon range from the Massachusetts Department of Environmental Protection (MADEP) Volatile Petroleum Hydrocarbons/Extractable Petroleum Hydrocarbons (VPH/EPH) approach and the percent composition table below were used to generate screening levels corresponding to total TPH. Except for waste oil, the information in the compositional assumptions table was obtained from the Massachusetts Department of Environmental Protection guidance document *Implementation of the MADEP VPH/EPH Approach* (October 31, 2002). TPH toxicity was based only on the weighted sum of the toxicity of the hydrocarbon fractions listed in Table 1.

Table 1. TPH Compositional Assumptions in Soil

Petroleum Product	C11-C22 Aromatics	C9-C18 Aliphatics	C19-C36 Aliphatics
Diesel #2/ new crankcase oil	60%	40%	0%
#3 and #6 Fuel Oil	70%	30%	0%
Kerosene and jet fuel	30%	70%	0%
Mineral oil dielectric fluid	20%	40%	40%
Unknown oil[a]	100%	0%	0%
Waste Oil[b]	0%	0%	100%

[a] Sites with oil from unknown sources must be tested for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

[b] Compositional assumption for waste oil developed by NMED is based on review of chromatographs of several types of waste oil. Sites with waste oil must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

A TPH screening guideline was calculated for each of the types of petroleum product based on the assumed composition from Table 1 for petroleum products and the direct soil standards incorporating ceiling concentrations given in the MADEP VPH/EPH Excel spreadsheet for each of the carbon fractions. Groundwater concentrations are based on the weighted sum of the noncarcinogenic toxicity of the petroleum fractions.

Method 1 from the MADEP VPH/EPH document was applied, which represents generic cleanup standards for soil and groundwater. Method 1 applies if contamination exists in only soil and groundwater. The MADEP VPH/EPH further divides groundwater into standards. Standard GW-1 applies when groundwater may be used for drinking water purposes. GW-1 standards are based upon ingestion and use of groundwater as a potable water supply. The TPH screening guidelines for sites with potable groundwater are presented in Table 2a.

Table 2a. TPH Screening Guidelines for Potable Groundwater (GW-1)

TPH			Concentration in Groundwater (mg/L)
Petroleum Product	**Residential Direct Exposure (mg/kg)**	**Industrial Direct Exposure (mg/kg)**	
Diesel #2/crankcase oil	520	1120	1.72
#3 and #6 Fuel Oil	440	890	1.34
Kerosene and jet fuel	760	1810	2.86
Mineral oil dielectric fluid	1440	3040	3.64
Unknown oil [a]	200	200	0.2
Waste Oil [b]	2500	5000	Petroleum-Related Contaminants
Gasoline	Not applicable	Not applicable	Petroleum-Related Contaminants

[a] Sites with oil from unknown sources must be tested for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

[b] Compositional assumption for waste oil developed by NMED is based on review of chromatographs of several types of waste oil. Sites with waste oil must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

The second standard is GW-2, which is applicable for sites where the depth to groundwater is less than 15 feet from the ground surface and within 30 feet of an occupied structure. The structure may be either residential or industrial. GW-2 standards are based upon "inhalation exposures that could occur to occupants of the building impacted by volatile compounds, which partition from the groundwater" (MADEP 2001). The GW-2 screening guidelines ONLY apply for the evaluation of inhalation exposures. If potential ingestion or contact with contaminated soil and/or

groundwater could occur, then the screening guidelines provided in Table 2.a should be applied. Table 2.b lists the TPH screening guidelines for the inhalation scenario.

Table 2b. TPH Screening Guidelines – Vapor Migration and Inhalation of Groundwater (GW-2)

TPH			Concentration in Groundwater (mg/L)
Petroleum Product	**Residential Direct Exposure (mg/kg)**	**Industrial Direct Exposure (mg/kg)**	
Diesel #2/crankcase oil	880	2200	30.4
#3 and #6 Fuel Oil	860	2150	35.3
Kerosene and jet fuel	940	2350	15.7
Mineral oil dielectric fluid	1560	3400	10.4
Unknown oil [a]	800	2000	50.0
Waste Oil [b]	2500	5000	Petroleum-Related Contaminants
Gasoline	Not applicable	Not applicable	Petroleum-Related Contaminants

[a] Sites with oil from unknown sources must be tested for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

[b] Compositional assumption for waste oil developed by NMED is based on review of chromatographs of several types of waste oil. Sites with waste oil must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. The TPH guidelines in Table 2 are not designed to be protective of exposure to these constituents therefore they must be tested for, and compared to, their individual NMED soil screening guidelines.

Mineral oil based hydraulic fluids can be evaluated for petroleum fraction toxicity using the screening guidelines from Tables 2a and 2b specified for waste oil, because this type of hydraulic fluid is composed of approximately the same range of carbon fractions as waste oil. However, these hydraulic fluids often contain proprietary additives that may be significantly more toxic than the oil itself; these additives must be considered on a site- and product-specific basis (see ATSDR hydraulic fluids profile reference). **Use of alternate screening guideline values requires prior written approval from the New Mexico Environment Department.** TPH screening guidelines in Tables 2a and 2b must be used in conjunction with the screening levels for petroleum-related contaminants given in Table 3 because the TPH screening levels are NOT designed to be protective of exposure to these individual petroleum-related contaminants. Table 3 petroleum-related contaminants screening levels are based on the New Mexico Environment Department soil screening levels (SSLs) released in February 2004.

The list of petroleum-related contaminants does not include polyaromatic hydrocarbons (PAHs) with individual screening levels that would exceed the total TPH screening levels (acenaphthene, anthracene, flouranthene, flourene, and pyrene). In addition, these TPH screening guidelines are based solely on human health, not ecological risk considerations, protection of surface water, or

potential indoor air impacts from soil vapors. Potential soil vapor impacts to structures or utilities are not addressed by these guidelines. Site-specific investigations for potential soil vapor impacts to structures or utilities must be done to assure that screenings are consistently protective of human health, welfare or use of the property. NMED believes that use of these screening guidelines will allow more efficient screenings of petroleum release sites at sites while protecting human health and the environment. Copies of the references cited below are available on the MADEP website at http://www.state.ma.us/dep/bwsc/vph_eph.htm and the NMED website at http://www.nmenv.state.nm.us/HWB/guidance.html.

Table 3. Petroleum-Related Contaminants Screening Guidelines

Petroleum-Related Contaminants	Values for Direct Exposure to Soil		NMED DAF[a] 20 GW protection (mg/kg in soil)	NMED DAF[b] 1 GW protection (mg/kg in soil)
	NMED residential SSL (mg/kg)	NMED Industrial SSL (mg/kg)		
Benzene	2.70E+01	7.36E+01	2.83E-02	1.41E-03
Toluene	2.48E+02	2.48E+02	6.80E+00	3.40E-01
Ethyl benzene	1.06E+04	2.54E+04	1.05E+01	5.25E-01
Xylene[c]	1.32E+02	1.32E+02	1.01E+01	5.07E-01
Naphthalene	7.19E+01	9.83E+01	3.93E-01	1.97E-02
2-methyl naphthalene	1.00E+03[d]	2.50E+03[d]	---[d]	---[d]
Benzo(a)anthracene	6.21E+00	2.34E+01	1.10E+00	5.49E-02
Benzo(b)fluoranthene	6.21E+00	2.34E+01	3.40E+00	1.7E-01
Benzo(k)fluoranthene	6.21E+01	2.34E+02	3.40E+01	1.70E+00
Benzo(a)pyrene	6.21E-01	2.34E+00	6.12E+00	3.06E-01
Chrysene	6.21E+02	2.34E+03	1.10E+02	5.49E+00
Dibenz(a,h) anthracene	6.21E-01	2.34E+00	1.05E+00	5.24E-02
Indeno(1,2,3-c,d) pyrene	6.21E+00	2.34E+01	9.58E+00	4.79E-01

[a] DAF – Dilution Attenuation Factor
[b] For contaminated soil in contact with groundwater
[c] Based upon total xylenes
[d] No NMED value available, value taken from MADEP 2002

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1997. Toxicological Profile for Hydraulic fluids.

Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup and Office of Research and Standards. 1994. "Background Documentation for the Development of the MCP Numerical Standards."

Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup and Office of Research and Standards. 2002. "Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of the MADEP VPH/EPH Approach," Policy, October 31, 2002.

Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup and Office of Research and Standards. 2003. "Updated Petroleum Hydrocarbon Fraction Toxicity Values for the VPH/EPH/APH Methodology." November 2003.

New Mexico Environment Department, Hazardous Waste Bureau and Groundwater Quality Bureau Voluntary Remediation Program. 2004. "Technical Background Document for Development of Soil Screening Levels." February 2004. Revision 2.0.

4. Groundwater Monitoring Results

Results of the annual groundwater sampling are summarized in tables presented in this section.

	mg/L	DATE SAMPLED	PW Well #2	PW Well #4	WQCC 20 NMAC 6.2.3103	MCL'S	EPA sug. # MTBE
EPA METHOD 8260B VOLATILES	Benzene	Not sampled in 2005*			0.01	0.005	
		04-Aug-04		<0.001			
		09-Dec-04	<0.001				
	Toluene	Not sampled in 2005*			0.75	1	
		04-Aug-04		<0.001			
		09-Dec-04	<0.001				
	EthylBen	Not sampled in 2005*			0.75	0.7	
		04-Aug-04		<0.001			
		09-Dec-04	<0.001				
	Xylene	Not sampled in 2005*			0.62	10	
		04-Aug-04		<0.001			
		19-Nov-04	0.005				
		Not sampled in 2005*					

*The potable water supply wells were not required to be sampled in 2005.

EPA METHOD 8021B VOLATILES

VOLATILES 8021B											
mg/L	DATE SAMPLED	OW #12	OW 13	OW 14	OW 29	OW 30	POND #2	GWM 1	WQCC 20 NMAC 6.2.3103	EPA MCLs	EPA Sug. # MTBE
Benzene	27-Sep-05	<0.0005	<0.0005	0.017	<0.0005	<0.0005		0.081*	0.01	0.005	
	28-Jun-05							0.010			
	15-Feb-05							0.005			
	08-Dec-04	<0.0005	<0.0005		<0.0005	<0.0005					
	09-Dec-04			0.23				0.0044			
	19-Nov-04						0.024				
Toluene	27-Sep-05	<0.0005	<0.0005	0.0022	<0.0005	<0.0005		0.0046*	0.75	1	
	28-Jun-05							<.0025			
	15-Feb-05							0.0024			
	08-Dec-04	<0.0005	<0.0005	0.0025	<0.0005	<0.0005		0.0032			
	19-Nov-04						0.072				
EthylBen	27-Sep-05	<0.0005	<0.0005	0.0023	<0.0005	<0.0005		0.0028*	0.75	0.7	
	28-Jun-05							0.0035			
	15-Feb-05							0.0026			
	08-Dec-04	<0.0005	<0.0005	0.0029	<0.0005	<0.0005		0.0021			
	19-Nov-04						0.02				
Xylene	27-Sep-05	<0.0005	<0.0005	0.0014	<0.0005	<0.0005		0.010*	00.62	10	
	28-Jun-05							0.041			
	15-Feb-05							0.031			
	08-Dec-04	<0.0005	<0.0005	0.003	<0.0005	<0.0005		0.0024			
	19-Nov-04						0.11				
MTBE	27-Sep-05	<0.0025	<0.0025	0.077	<0.0025	<0.0025		0.170*			0.2
	08-Dec-04	<0.0025	<0.0025	0.065	0.0025	0.0025		0.048			
	19-Nov-04						0.11				

GWM-1 was sampled on August 1, 2005.
MTBE is required to be tested annually and was not tested for on the 2-15-05 and 6-28-05 samples from GWM-1.

VOLATILES 8260B														
	mg/L	DATE SAMPLED*	OW 11**	BW 1A	BW 1B	BW 2A	BW 2B	BW 3B	BW 1C	BW 2C	BW 3C	WQCC 20 NMAC 6.2.3103	MCL'S	EP. sug. #
EPA METHOD 8260B VOLATILES	Benzene	17/20-Oct-05	<0.001	DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.01	0.005	
		08-Dec-04	<0.001	DRY	DRY									
		04-Aug-04		DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.01	0.0052			
	Toluene	17/20-Oct-05	<0.001	DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.75	1	
		08-Dec-04	<0.001	DRY	DRY									
		04-Aug-04		DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.01	0.001			
	EthylBen	17/20-Oct-05	<0.001	DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.75	0.7	
		08-Dec-04	<0.001	DRY	DRY									
		04-Aug-04		DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001			
	Xylene	17/20-Oct-05	<0.001	DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.62	10	
		08-Dec-04	<0.001	DRY	DRY									
		04-Aug-04		DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.01	0.0015			
	MTBE	17/20-Oct-05	<0.001	DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			0.2
		08-Dec-04	<0.001	DRY	DRY									
		04-Aug-04		DRY	DRY	<0.001	<0.001	<0.001	<0.001	<0.01	0.001			

*Unless otherwise specified.

**OW-11 was sampled in 2005 on September 29, 2005.

VOLATILES 8260B										
	mg/L	DATE SAMPLED	MW-1	MW-4	MW-5	SMW-2	SMW-4	WQCC 20 NMAC 6.2.3103	MCLs	EPA sug. # MT
EPA METHOD 8260B VOLATILES	Benzene	12-Oct-05	<0.001	<0.001	<0.001	<0.001	<0.001	0.01	0.005	
	Toluene	12-Oct-05	<0.001	<0.001	<0.001	<0.001	<0.001	0.75	1	
	EthylBen	12-Oct-05	<0.001	<0.001	<0.001	<0.001	<0.001	0.75	0.7	
	Xylene	29-Sep-05	<0.001	<0.001	<0.001	<0.001	<0.001	0.62	10	
	MTBE	29-Sep-05	<0.001	<0.001	<0.001	0.0083	<0.001			0.2

GENERAL CHEMISTRY

EPA Method 300.0

mg/L	DATE SAMPLED*	OW 11**	BW 1A	BW 1B	BW 2A	BW 2B	BW 3B	BW 1C	BW 2C	BW 3C	POND #2	WELL #2	WELL #4	WQCC 20 NMAC 6.2.3103	MCL'S
Fluoride	17/20-Oct-05	2.3	DRY	DRY	1.1	1.7	1.4	2.2	1.5	1.6				1.6	4
	08-Dec-04	2.3	DRY	DRY											
	04-Aug-04		DRY	DRY	1.2	1.7	1.4	2	2.2	0.95		0.21			
	06-Nov-03	2.3													
	09-Dec-04												0.18		
Chloride	17/20-Oct-05	87	DRY	DRY	39	29	34	34	42	37				250	250
	08-Dec-04	80	DRY	DRY											
	04-Aug-04		DRY	DRY	40	32	35	38	46	25					
	06-Nov-03	88													
	09-Dec-04												16		
Nitrogen - Nitrite	17/20-Oct-05	<0.1	DRY	DRY	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10					1
	08-Dec-04	<.50	DRY	DRY											
	04-Aug-04		DRY	DRY	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10					
	06-Nov-03	<0.10													
	09-Dec-04												<0.10		
Bromide	17/20-Oct-05		DRY	DRY											
	08-Dec-04	<0.10	DRY	DRY											
	04-Aug-04		DRY	DRY	0.4	1.3	0.49	0.32	0.78	1.2					
	06-Nov-03	<0.10													
Nitrogen - Nitrate	17/20-Oct-05	0.72	DRY	DRY	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10				10	
	08-Dec-04	<0.50	DRY	DRY											
	04-Aug-04		DRY	DRY	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		0.12			
	06-Nov-03	0.65													
	09-Dec-04												<0.10		
P	17/20-Oct-05	<0.50	DRY	DRY	0.59	<0.50	1.0	<0.50	<0.50	<0.50					
	08-Dec-04	<0.50	DRY	DRY											
	04-Aug-04		DRY	DRY	0.57	<0.50	1.2	<0.50	<0.50	<0.50					

		06-Nov-03	<0.50														
		09-Dec-04													<0.50		
	Sulfate	17/20-Oct-05	990	DRY	DRY	6.9	130	56	240	270	350				600		
		08-Dec-04	1100	DRY	DRY												
		04-Aug-04		DRY	DRY	9.6	140	63	210	230	440						
		06-Nov-03	1000														
		09-Dec-04													170		

	TDS	17/20-Oct-05		DRY	DRY										1000	500	
		08-Dec-04	1900	DRY	DRY												
EPA METHOD 160.1		04-Aug-04		DRY	DRY	1100	1500	1000	970	970	940	3800					
		06-Nov-03	1800														
	pH	29-Sep-05	8.44	DRY	DRY										6.5 - 8.5	BETWEEN 6 AND 9	
		08-Dec-04	8.48	DRY	DRY												
		04-Aug-04		DRY	DRY	8.4	8.35	8.5	9.36	8.84	8.87						
		06-Nov-03	8.45														
	SP COND	17-Oct-05		DRY	DRY	1400	2500	1600	1400	1500	1400						
		04-Aug-04		DRY	DRY	1447	2280	1534	1280	1401	1380						
	Temp F			DRY	DRY	63	62	61	62	62	62						
	Depth to water			DRY	DRY	32.1'	29.7'	32.9	18.8"	27.5'	63.2'						

*Unless otherwise specified.

**OW-11 was sampled on September 29, 2005.

EPA METHOD 6010C

DISSOLVED METALS

mg/L	DATE SAMPLED	OW 11	BW 1A	BW 1B	BW 2A	BW 2B	BW 3B	BW 1C	BW 2C	BW 3C	POND #2	WELL #2	WELL #4	MC
Arsenic	29-Sep-05	<0.020												
	08-Dec-04	<0.020												0.05
	04-Aug-04		DRY	DRY	<0.020	<0..020	<0.020	<0.020	<0.020	<0.020			<0.020	
	19-Nov-04										<0.020			
Barium	29-Sep-05	<0.020												
	08-Dec-04	<0.020												
	04-Aug-04		DRY	DRY	0.12	0.066	0.13	<0.0020	0.047	0.051			0.014	2
	19-Nov-04										0.14			
Cadmium	29-Sep-05	0.002												
	08-Dec-04	0.002												
	04-Aug-04		DRY	DRY	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020			<0.0020	0.00
	19-Nov-04										<0.0020			
Calcium	17-Oct-05	10			10	23	9.9	3.1	140	6.1				
	08-Dec-04	9.6												
	04-Aug-04		DRY	DRY	6.7	14	11	3.8	5.6	45				
Cr	29-Sep-05	<0.0060												
	08-Dec-04	<0.0060												
	04-Aug-04		DRY	DRY	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060			<0.0060	0.1
	19-Nov-04										0.012			
Lead	29-Sep-05	<0.0050												
	08-Dec-04	<0.0050												
	04-Aug-04		DRY	DRY	0.0059	0.0064	0.006	<0.0050	<0.0050	<0.0050			<0.0050	0.01
	19-Nov-04										0.0075			
Mg	17-Oct-05	1.2			3.6	3.9	2.9	<1.0	7.7	1.1				
	08-Dec-04	1.1												
	04-Aug-04		DRY	DRY	2.5	3.2	3.1	<1.0	1.5	9.8				
	19-Nov-04													
K	17-Oct-05	1.7			1.1	2.1	1.4	1.5	2.5	1.8				
	08-Dec-04	1.9												
	04-Aug-04		DRY	DRY	<1.0	4.7	1.3	2	2	5.3				

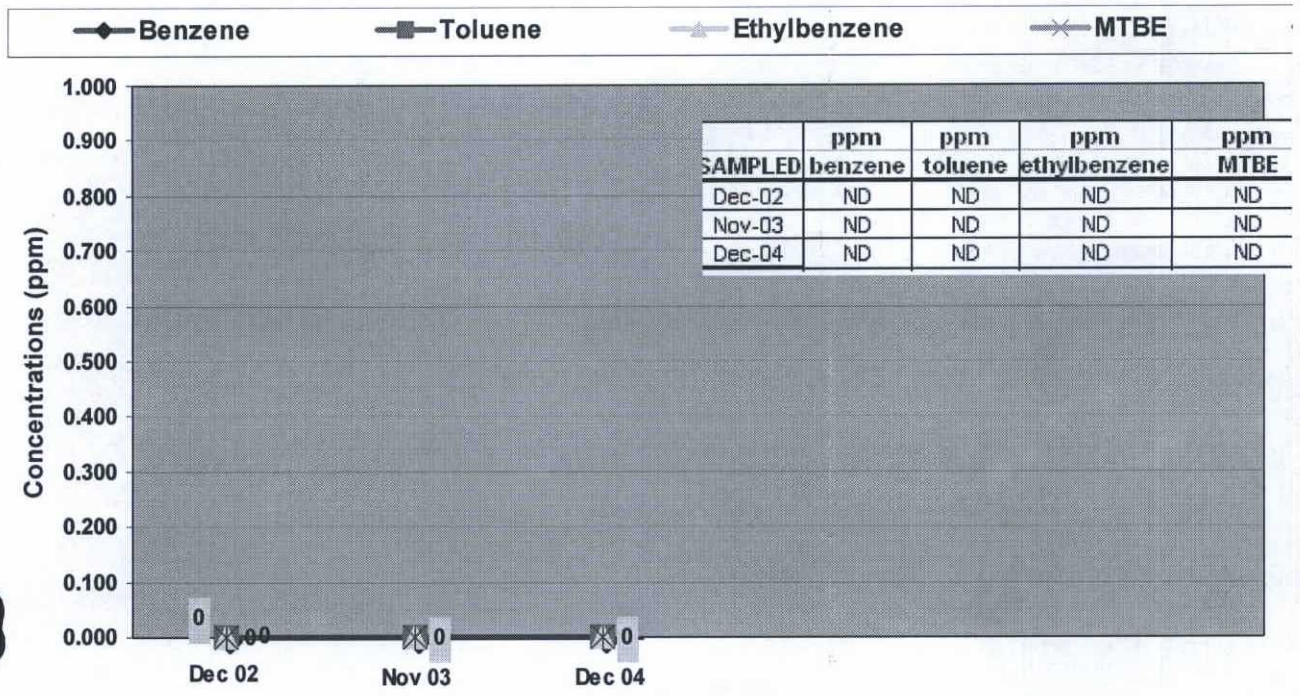
BOD PILOT TRAVEL CENTER AND TRUCK STOP			
EPA 405.1	Date of Analysis	Results	Detection Limit
	30-Dec-05	4100	5
	2-Dec-05	504	5
	11-Jun-05	2850	5

DISSOLVED METALS

EPA METHOD 60[illegible]

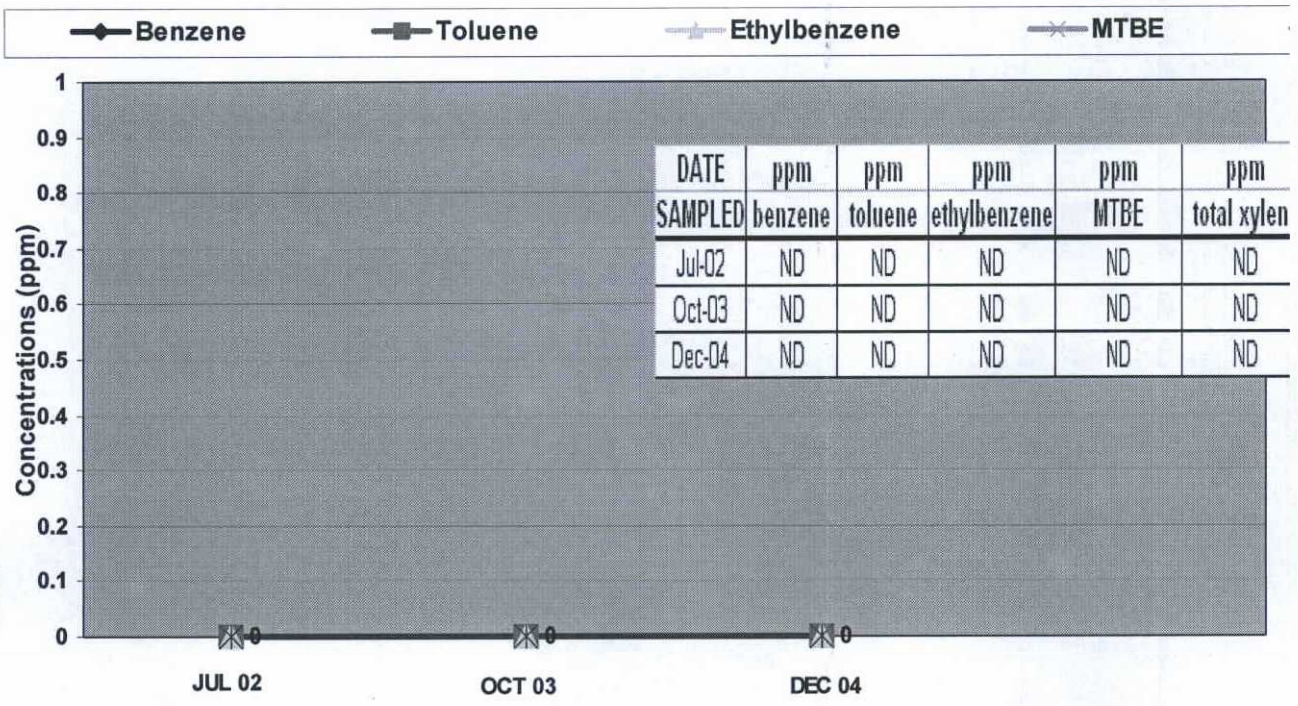
mg/L	Date Sampled	OW 11	BW1A	BW1B	BW2A	BW2B	BW3B	BW1C	BW2C	BW3C	POND 2	WELL #2	WELL #4	MCL's
Se	29-Sep-05	<0.050												
	08-Dec-04	0.005												0.05
	04-Aug-04		DRY	DRY	<0.050	0.069	<0.050	<0.050	<0.050	<0.050			<0.050	
	19-Nov-04										<0.050			
	09-Dec-04											<0.050		
Silver	29-Sep-05	<0.0050												
	08-Dec-04	<0.0050												0.05
	04-Aug-04		DRY	DRY	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	
	19-Nov-04										<0.0050			
	09-Dec-04											<0.0050		
Sodium	29-Sep-05	620												
	08-Dec-04	620												
	04-Aug-04		DRY	DRY	220	540	340	200	300	230				
	19-Nov-04													
	09-Dec-04													
Uranium	29-Sep-05													
	08-Dec-04													
	04-Aug-04		DRY	DRY	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10			<0.10	0.2
	09-Dec-04											<0.10		

OW-11



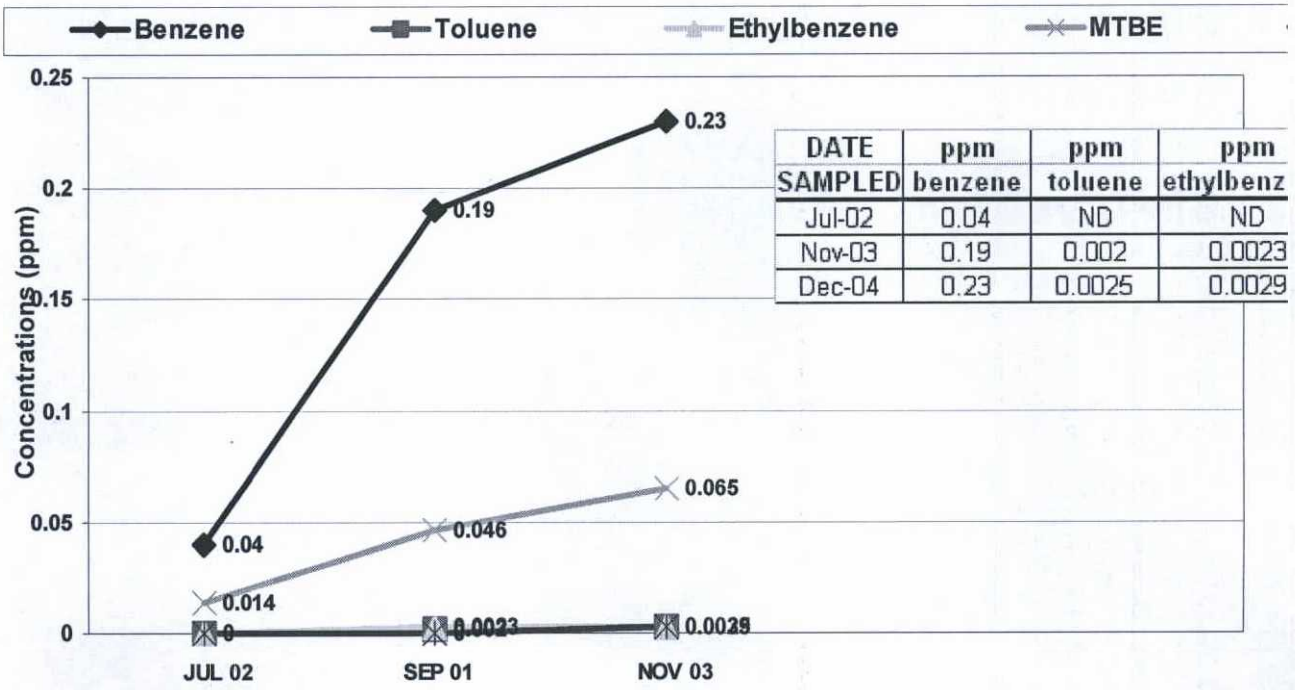
SAMPLED	ppm benzene	ppm toluene	ppm ethylbenzene	ppm MTBE
Dec-02	ND	ND	ND	ND
Nov-03	ND	ND	ND	ND
Dec-04	ND	ND	ND	ND

OW-12



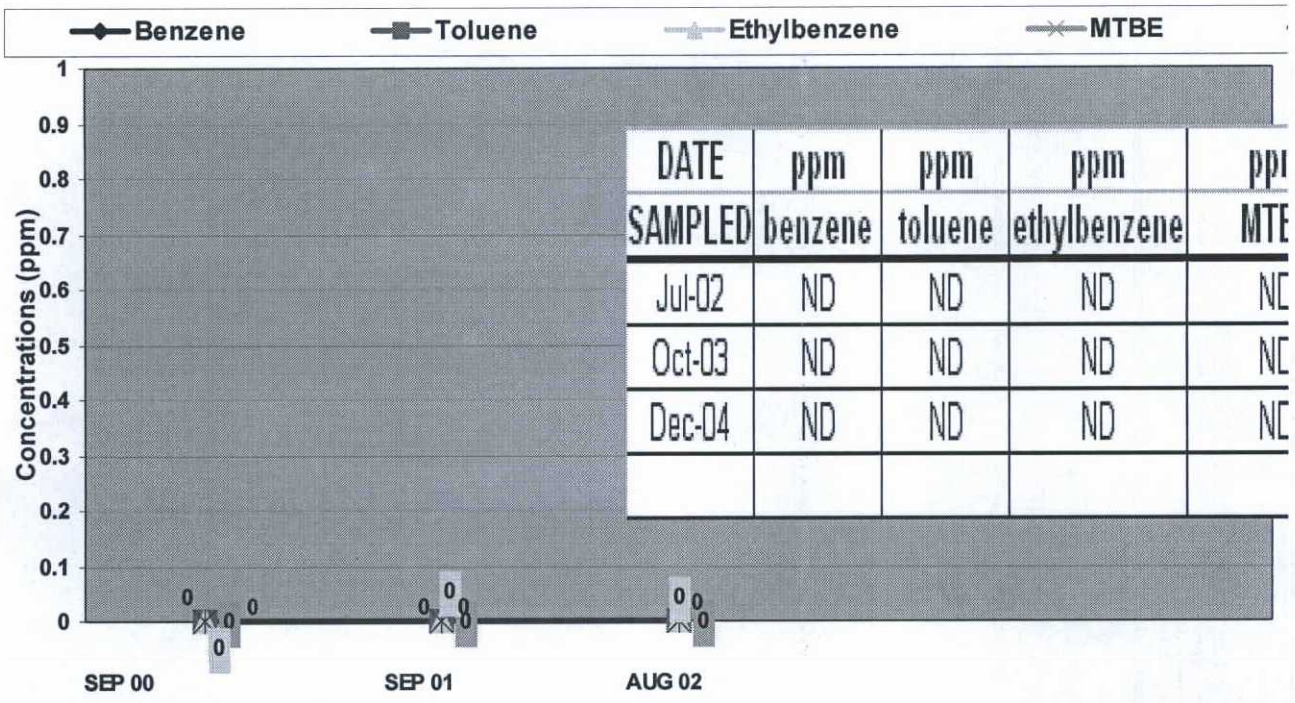
DATE SAMPLED	ppm benzene	ppm toluene	ppm ethylbenzene	ppm MTBE	ppm total xylen
Jul-02	ND	ND	ND	ND	ND
Oct-03	ND	ND	ND	ND	ND
Dec-04	ND	ND	ND	ND	ND

OW-14



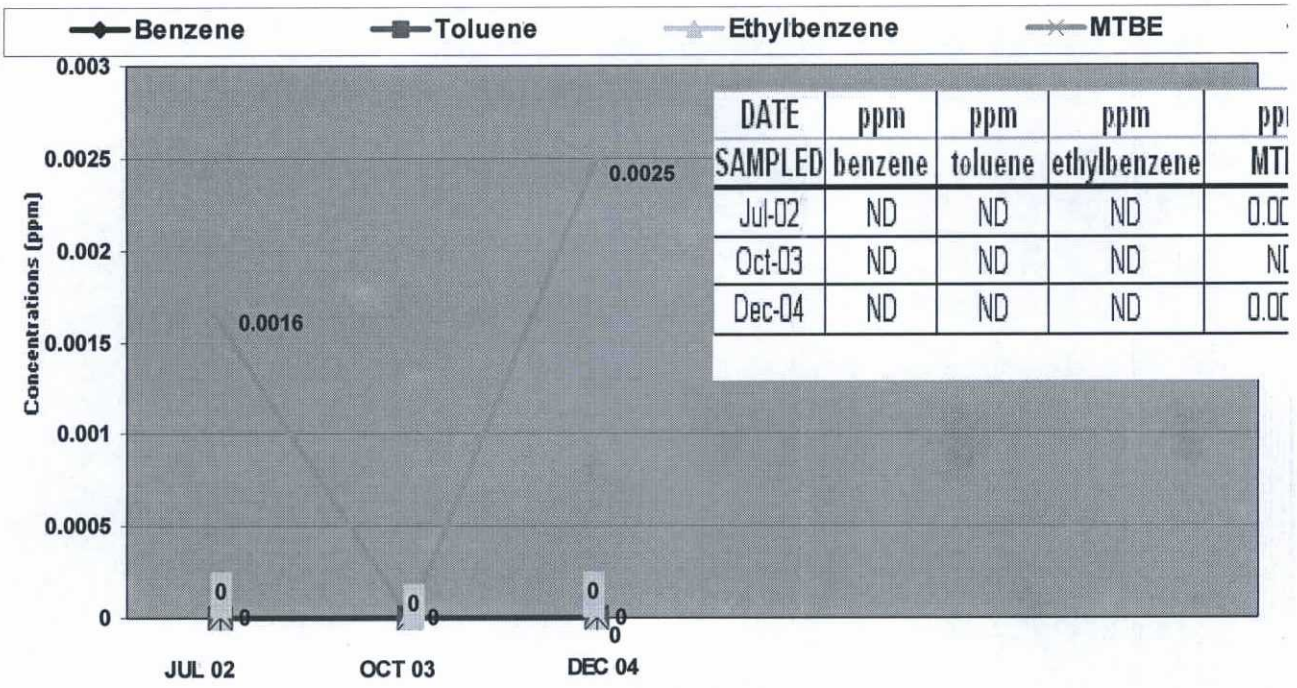
DATE SAMPLED	ppm benzene	ppm toluene	ppm ethylbenz
Jul-02	0.04	ND	ND
Nov-03	0.19	0.002	0.0023
Dec-04	0.23	0.0025	0.0029

OW-13



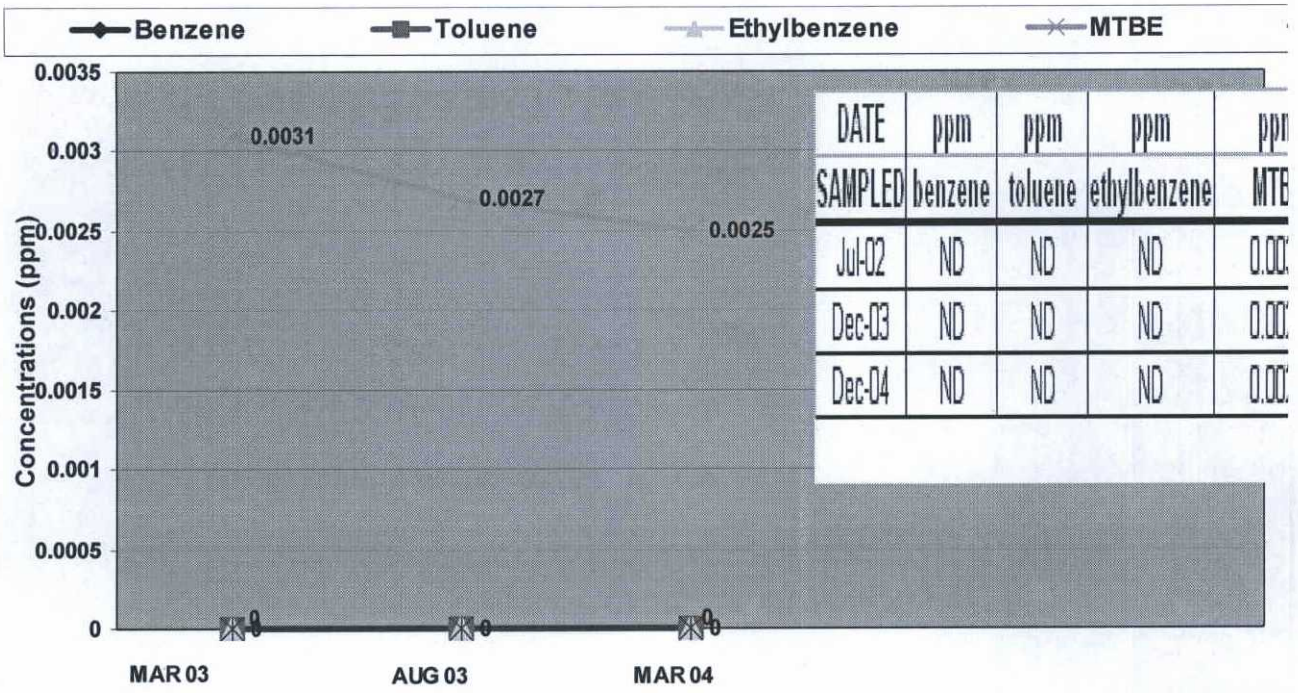
DATE SAMPLED	ppm benzene	ppm toluene	ppm ethylbenzene	ppm MTBE
Jul-02	ND	ND	ND	ND
Oct-03	ND	ND	ND	ND
Dec-04	ND	ND	ND	ND

OW-29



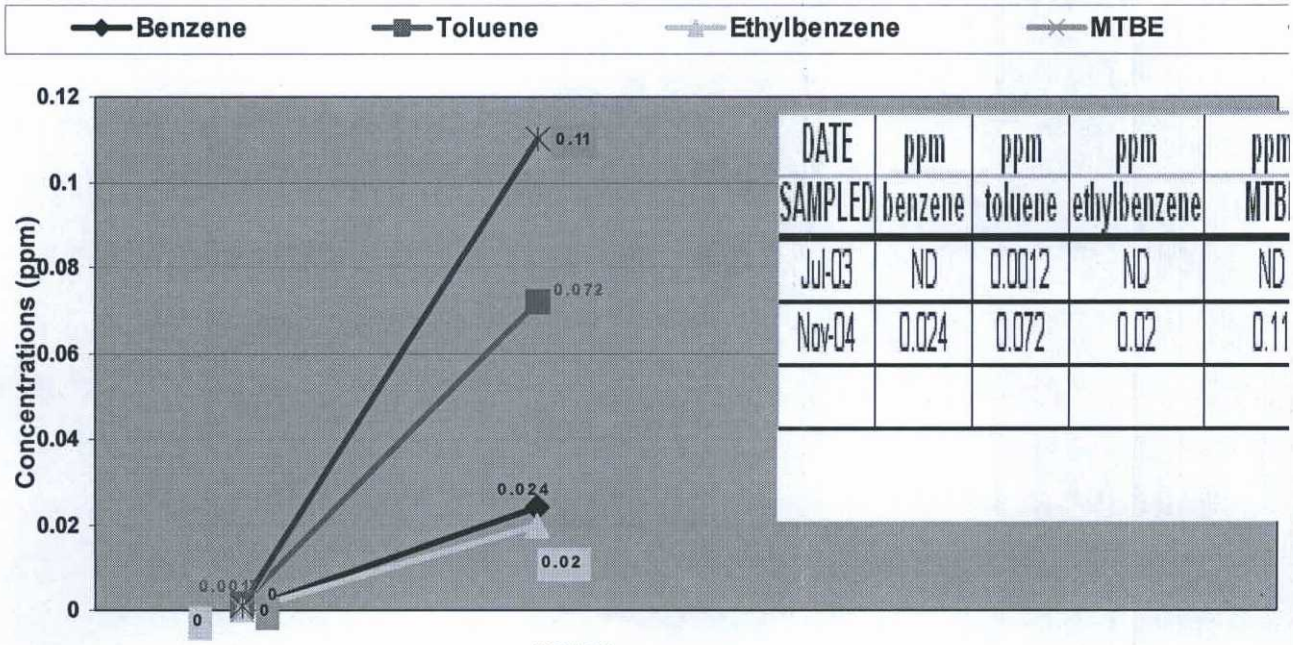
DATE SAMPLED	ppm benzene	ppm toluene	ppm ethylbenzene	pp MTI
Jul-02	ND	ND	ND	0.0C
Oct-03	ND	ND	ND	NI
Dec-04	ND	ND	ND	0.0C

OW-30



DATE SAMPLED	ppm benzene	ppm toluene	ppm ethylbenzene	ppm MTB
Jul-02	ND	ND	ND	0.00
Dec-03	ND	ND	ND	0.00
Dec-04	ND	ND	ND	0.00

POND #2



DATE SAMPLED	ppm benzene	ppm toluene	ppm ethylbenzene	ppm MTBE
Jul-03	ND	0.0012	ND	ND
Nov-04	0.024	0.072	0.02	0.11

5. Groundwater Chemical Analytical Data

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 03, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Ciniza Annual Groundwater Samples 2005 Order No.: 0510204

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 7 samples on 10/20/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

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Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Project: Ciniza Annual Groundwater Samples 2005
Lab Order: 0510204

CASE NARRATIVE

8270 sample BW-2-C was extracted at a x5 dilution due the heavy amount of sediment and turbidity of the sample.

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-1-C
Lab Order: 0510204
Collection Date: 10/17/2005 2:00:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	2.2	0.10		mg/L	1	10/22/2005
Chloride	34	0.10		mg/L	1	10/22/2005
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/22/2005
Sulfate	240	2.5		mg/L	5	11/1/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	11/1/2005
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/28/2005
Toluene	ND	1.0		µg/L	1	10/28/2005
Ethylbenzene	ND	1.0		µg/L	1	10/28/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/28/2005
Naphthalene	ND	2.0		µg/L	1	10/28/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
Acetone	ND	10		µg/L	1	10/28/2005
Bromobenzene	ND	1.0		µg/L	1	10/28/2005
Bromochloromethane	ND	1.0		µg/L	1	10/28/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/28/2005
Bromoform	ND	1.0		µg/L	1	10/28/2005
Bromomethane	ND	2.0		µg/L	1	10/28/2005
2-Butanone	ND	10		µg/L	1	10/28/2005
Carbon disulfide	ND	10		µg/L	1	10/28/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/28/2005
Chlorobenzene	ND	1.0		µg/L	1	10/28/2005
Chloroethane	ND	2.0		µg/L	1	10/28/2005
Chloroform	ND	1.0		µg/L	1	10/28/2005
Chloromethane	ND	1.0		µg/L	1	10/28/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/28/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/28/2005
Dibromomethane	ND	2.0		µg/L	1	10/28/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-1-C
Lab Order: 0510204
Collection Date: 10/17/2005 2:00:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/28/2005
2-Hexanone	ND	10		µg/L	1	10/28/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/28/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/28/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/28/2005
Methylene Chloride	ND	3.0		µg/L	1	10/28/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/28/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
Styrene	ND	1.0		µg/L	1	10/28/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/28/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/28/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/28/2005
Vinyl chloride	ND	1.0		µg/L	1	10/28/2005
Xylenes, Total	ND	1.0		µg/L	1	10/28/2005
Surr: 1,2-Dichloroethane-d4	97.5	69.9-130		%REC	1	10/28/2005
Surr: 4-Bromofluorobenzene	100	71.2-123		%REC	1	10/28/2005
Surr: Dibromofluoromethane	97.7	73.9-134		%REC	1	10/28/2005
Surr: Toluene-d8	95.5	81.9-122		%REC	1	10/28/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/26/2005
Acenaphthylene	ND	10		µg/L	1	10/26/2005
Aniline	ND	20		µg/L	1	10/26/2005
Anthracene	ND	10		µg/L	1	10/26/2005
Azobenzene	ND	10		µg/L	1	10/26/2005

Qualifiers:
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E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-1-C
Lab Order: 0510204
Collection Date: 10/17/2005 2:00:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benz(a)anthracene	ND	15		µg/L	1	10/26/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/26/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/26/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/26/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/26/2005
Benzoic acid	ND	50		µg/L	1	10/26/2005
Benzyl alcohol	ND	20		µg/L	1	10/26/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/26/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/26/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/26/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/26/2005
Carbazole	ND	10		µg/L	1	10/26/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/26/2005
4-Chloroaniline	ND	20		µg/L	1	10/26/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/26/2005
2-Chlorophenol	ND	10		µg/L	1	10/26/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/26/2005
Chrysene	ND	15		µg/L	1	10/26/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/26/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/26/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/26/2005
Dibenzofuran	ND	10		µg/L	1	10/26/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/26/2005
Diethyl phthalate	ND	10		µg/L	1	10/26/2005
Dimethyl phthalate	ND	10		µg/L	1	10/26/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/26/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/26/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
Fluoranthene	ND	10		µg/L	1	10/26/2005
Fluorene	ND	10		µg/L	1	10/26/2005
Hexachlorobenzene	ND	10		µg/L	1	10/26/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2005
Hexachloroethane	ND	10		µg/L	1	10/26/2005

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Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-1-C
Lab Order: 0510204
Collection Date: 10/17/2005 2:00:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2005
Isophorone	ND	10		µg/L	1	10/26/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2005
2-Methylphenol	ND	15		µg/L	1	10/26/2005
3+4-Methylphenol	ND	20		µg/L	1	10/26/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2005
Naphthalene	ND	10		µg/L	1	10/26/2005
2-Nitroaniline	ND	50		µg/L	1	10/26/2005
3-Nitroaniline	ND	50		µg/L	1	10/26/2005
4-Nitroaniline	ND	20		µg/L	1	10/26/2005
Nitrobenzene	ND	10		µg/L	1	10/26/2005
2-Nitrophenol	ND	15		µg/L	1	10/26/2005
4-Nitrophenol	ND	50		µg/L	1	10/26/2005
Pentachlorophenol	ND	50		µg/L	1	10/26/2005
Phenanthrene	ND	10		µg/L	1	10/26/2005
Phenol	ND	10		µg/L	1	10/26/2005
Pyrene	ND	15		µg/L	1	10/26/2005
Pyridine	ND	30		µg/L	1	10/26/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/26/2005
Surr: 2,4,6-Tribromophenol	63.9	16.6-150		%REC	1	10/26/2005
Surr: 2-Fluorobiphenyl	51.1	19.6-134		%REC	1	10/26/2005
Surr: 2-Fluorophenol	55.9	9.54-113		%REC	1	10/26/2005
Surr: 4-Terphenyl-d14	80.3	22.7-145		%REC	1	10/26/2005
Surr: Nitrobenzene-d5	63.6	14.6-134		%REC	1	10/26/2005
Surr: Phenol-d6	27.8	10.7-80.3		%REC	1	10/26/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	1400	0.010		µmhos/cm	1	11/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	3.1	1.0		mg/L	1	10/27/2005 5:16:35 PM
Magnesium	ND	1.0		mg/L	1	10/27/2005 5:16:35 PM
Potassium	1.5	1.0		mg/L	1	10/27/2005 5:16:35 PM
Sodium	310	10		mg/L	10	10/28/2005 10:45:13 AM

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E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-A
Lab Order: 0510204
Collection Date: 10/17/2005 3:30:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.1	0.10		mg/L	1	10/22/2005
Chloride	39	0.10		mg/L	1	10/22/2005
Phosphorus, Orthophosphate (As P)	0.59	0.50	H	mg/L	1	10/22/2005
Sulfate	6.9	0.50		mg/L	1	10/22/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	11/1/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	10/28/2005
Toluene	ND	1.0		µg/L	1	10/28/2005
Ethylbenzene	ND	1.0		µg/L	1	10/28/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/28/2005
Naphthalene	ND	2.0		µg/L	1	10/28/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
Acetone	ND	10		µg/L	1	10/28/2005
Bromobenzene	ND	1.0		µg/L	1	10/28/2005
Bromochloromethane	ND	1.0		µg/L	1	10/28/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/28/2005
Bromoform	ND	1.0		µg/L	1	10/28/2005
Bromomethane	ND	2.0		µg/L	1	10/28/2005
2-Butanone	ND	10		µg/L	1	10/28/2005
Carbon disulfide	ND	10		µg/L	1	10/28/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/28/2005
Chlorobenzene	ND	1.0		µg/L	1	10/28/2005
Chloroethane	ND	2.0		µg/L	1	10/28/2005
Chloroform	ND	1.0		µg/L	1	10/28/2005
Chloromethane	ND	1.0		µg/L	1	10/28/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/28/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/28/2005
Dibromomethane	ND	2.0		µg/L	1	10/28/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005

Qualifiers:
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E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-A
Lab Order: 0510204
Collection Date: 10/17/2005 3:30:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/28/2005
2-Hexanone	ND	10		µg/L	1	10/28/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/28/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/28/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/28/2005
Methylene Chloride	ND	3.0		µg/L	1	10/28/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/28/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
Styrene	ND	1.0		µg/L	1	10/28/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/28/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/28/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/28/2005
Vinyl chloride	ND	1.0		µg/L	1	10/28/2005
Xylenes, Total	ND	1.0		µg/L	1	10/28/2005
Surr: 1,2-Dichloroethane-d4	97.7	69.9-130		%REC	1	10/28/2005
Surr: 4-Bromofluorobenzene	98.4	71.2-123		%REC	1	10/28/2005
Surr: Dibromofluoromethane	119	73.9-134		%REC	1	10/28/2005
Surr: Toluene-d8	102	81.9-122		%REC	1	10/28/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/26/2005
Acenaphthylene	ND	10		µg/L	1	10/26/2005
Aniline	ND	20		µg/L	1	10/26/2005
Anthracene	ND	10		µg/L	1	10/26/2005
Azobenzene	ND	10		µg/L	1	10/26/2005

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Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-A
Lab Order: 0510204
Collection Date: 10/17/2005 3:30:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benz(a)anthracene	ND	15		µg/L	1	10/26/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/26/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/26/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/26/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/26/2005
Benzoic acid	ND	50		µg/L	1	10/26/2005
Benzyl alcohol	ND	20		µg/L	1	10/26/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/26/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/26/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/26/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/26/2005
Carbazole	ND	10		µg/L	1	10/26/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/26/2005
4-Chloroaniline	ND	20		µg/L	1	10/26/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/26/2005
2-Chlorophenol	ND	10		µg/L	1	10/26/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/26/2005
Chrysene	ND	15		µg/L	1	10/26/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/26/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/26/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/26/2005
Dibenzofuran	ND	10		µg/L	1	10/26/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/26/2005
Diethyl phthalate	ND	10		µg/L	1	10/26/2005
Dimethyl phthalate	ND	10		µg/L	1	10/26/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/26/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/26/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
Fluoranthene	ND	10		µg/L	1	10/26/2005
Fluorene	ND	10		µg/L	1	10/26/2005
Hexachlorobenzene	ND	10		µg/L	1	10/26/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2005
Hexachloroethane	ND	10		µg/L	1	10/26/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-A
Lab Order: 0510204
Collection Date: 10/17/2005 3:30:00 PM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2005
Isophorone	ND	10		µg/L	1	10/26/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2005
2-Methylphenol	ND	15		µg/L	1	10/26/2005
3+4-Methylphenol	ND	20		µg/L	1	10/26/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2005
Naphthalene	ND	10		µg/L	1	10/26/2005
2-Nitroaniline	ND	50		µg/L	1	10/26/2005
3-Nitroaniline	ND	50		µg/L	1	10/26/2005
4-Nitroaniline	ND	20		µg/L	1	10/26/2005
Nitrobenzene	ND	10		µg/L	1	10/26/2005
2-Nitrophenol	ND	15		µg/L	1	10/26/2005
4-Nitrophenol	ND	50		µg/L	1	10/26/2005
Pentachlorophenol	ND	50		µg/L	1	10/26/2005
Phenanthrene	ND	10		µg/L	1	10/26/2005
Phenol	ND	10		µg/L	1	10/26/2005
Pyrene	ND	15		µg/L	1	10/26/2005
Pyridine	ND	30		µg/L	1	10/26/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/26/2005
Surr: 2,4,6-Tribromophenol	59.4	16.6-150		%REC	1	10/26/2005
Surr: 2-Fluorobiphenyl	49.4	19.6-134		%REC	1	10/26/2005
Surr: 2-Fluorophenol	47.2	9.54-113		%REC	1	10/26/2005
Surr: 4-Terphenyl-d14	80.3	22.7-145		%REC	1	10/26/2005
Surr: Nitrobenzene-d5	64.0	14.6-134		%REC	1	10/26/2005
Surr: Phenol-d6	23.0	10.7-80.3		%REC	1	10/26/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	1400	0.010		µmhos/cm	1	11/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	10	1.0		mg/L	1	10/27/2005 5:20:47 PM
Magnesium	3.6	1.0		mg/L	1	10/27/2005 5:20:47 PM
Potassium	1.1	1.0		mg/L	1	10/27/2005 5:20:47 PM
Sodium	330	10		mg/L	10	10/28/2005 10:55:15 AM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-B
Lab Order: 0510204
Collection Date: 10/18/2005 11:10:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.7	0.10		mg/L	1	10/22/2005
Chloride	29	0.10		mg/L	1	10/22/2005
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/22/2005
Sulfate	130	2.5		mg/L	5	11/1/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	11/1/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	10/28/2005
Toluene	ND	1.0		µg/L	1	10/28/2005
Ethylbenzene	ND	1.0		µg/L	1	10/28/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/28/2005
Naphthalene	ND	2.0		µg/L	1	10/28/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
Acetone	ND	10		µg/L	1	10/28/2005
Bromobenzene	ND	1.0		µg/L	1	10/28/2005
Bromochloromethane	ND	1.0		µg/L	1	10/28/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/28/2005
Bromoform	ND	1.0		µg/L	1	10/28/2005
Bromomethane	ND	2.0		µg/L	1	10/28/2005
2-Butanone	ND	10		µg/L	1	10/28/2005
Carbon disulfide	ND	10		µg/L	1	10/28/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/28/2005
Chlorobenzene	ND	1.0		µg/L	1	10/28/2005
Chloroethane	ND	2.0		µg/L	1	10/28/2005
Chloroform	ND	1.0		µg/L	1	10/28/2005
Chloromethane	ND	1.0		µg/L	1	10/28/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/28/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/28/2005
Dibromomethane	ND	2.0		µg/L	1	10/28/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-B
Lab Order: 0510204
Collection Date: 10/18/2005 11:10:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/28/2005
2-Hexanone	ND	10		µg/L	1	10/28/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/28/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/28/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/28/2005
Methylene Chloride	ND	3.0		µg/L	1	10/28/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/28/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
Styrene	ND	1.0		µg/L	1	10/28/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/28/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/28/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/28/2005
Vinyl chloride	ND	1.0		µg/L	1	10/28/2005
Xylenes, Total	ND	1.0		µg/L	1	10/28/2005
Surr: 1,2-Dichloroethane-d4	96.4	69.9-130		%REC	1	10/28/2005
Surr: 4-Bromofluorobenzene	106	71.2-123		%REC	1	10/28/2005
Surr: Dibromofluoromethane	116	73.9-134		%REC	1	10/28/2005
Surr: Toluene-d8	97.6	81.9-122		%REC	1	10/28/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/26/2005
Acenaphthylene	ND	10		µg/L	1	10/26/2005
Aniline	ND	20		µg/L	1	10/26/2005
Anthracene	ND	10		µg/L	1	10/26/2005
Azobenzene	ND	10		µg/L	1	10/26/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-B
Lab Order: 0510204
Collection Date: 10/18/2005 11:10:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benz(a)anthracene	ND	15		µg/L	1	10/26/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/26/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/26/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/26/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/26/2005
Benzoic acid	ND	50		µg/L	1	10/26/2005
Benzyl alcohol	ND	20		µg/L	1	10/26/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/26/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/26/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/26/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/26/2005
Carbazole	ND	10		µg/L	1	10/26/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/26/2005
4-Chloroaniline	ND	20		µg/L	1	10/26/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/26/2005
2-Chlorophenol	ND	10		µg/L	1	10/26/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/26/2005
Chrysene	ND	15		µg/L	1	10/26/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/26/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/26/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/26/2005
Dibenzofuran	ND	10		µg/L	1	10/26/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
3,3´-Dichlorobenzidine	ND	15		µg/L	1	10/26/2005
Diethyl phthalate	ND	10		µg/L	1	10/26/2005
Dimethyl phthalate	ND	10		µg/L	1	10/26/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/26/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/26/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
Fluoranthene	ND	10		µg/L	1	10/26/2005
Fluorene	ND	10		µg/L	1	10/26/2005
Hexachlorobenzene	ND	10		µg/L	1	10/26/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2005
Hexachloroethane	ND	10		µg/L	1	10/26/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-B
Lab Order: 0510204
Collection Date: 10/18/2005 11:10:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2005
Isophorone	ND	10		µg/L	1	10/26/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2005
2-Methylphenol	ND	15		µg/L	1	10/26/2005
3+4-Methylphenol	ND	20		µg/L	1	10/26/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2005
Naphthalene	ND	10		µg/L	1	10/26/2005
2-Nitroaniline	ND	50		µg/L	1	10/26/2005
3-Nitroaniline	ND	50		µg/L	1	10/26/2005
4-Nitroaniline	ND	20		µg/L	1	10/26/2005
Nitrobenzene	ND	10		µg/L	1	10/26/2005
2-Nitrophenol	ND	15		µg/L	1	10/26/2005
4-Nitrophenol	ND	50		µg/L	1	10/26/2005
Pentachlorophenol	ND	50		µg/L	1	10/26/2005
Phenanthrene	ND	10		µg/L	1	10/26/2005
Phenol	ND	10		µg/L	1	10/26/2005
Pyrene	ND	15		µg/L	1	10/26/2005
Pyridine	ND	30		µg/L	1	10/26/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/26/2005
Surr: 2,4,6-Tribromophenol	55.4	16.6-150		%REC	1	10/26/2005
Surr: 2-Fluorobiphenyl	45.0	19.6-134		%REC	1	10/26/2005
Surr: 2-Fluorophenol	47.8	9.54-113		%REC	1	10/26/2005
Surr: 4-Terphenyl-d14	78.1	22.7-145		%REC	1	10/26/2005
Surr: Nitrobenzene-d5	60.1	14.6-134		%REC	1	10/26/2005
Surr: Phenol-d6	24.7	10.7-80.3		%REC	1	10/26/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	2500	0.010		µmhos/cm	1	11/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	23	1.0		mg/L	1	10/27/2005 5:25:03 PM
Magnesium	3.9	1.0		mg/L	1	10/27/2005 5:25:03 PM
Potassium	2.1	1.0		mg/L	1	10/27/2005 5:25:03 PM
Sodium	540	10		mg/L	10	10/28/2005 10:57:58 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-C
Lab Order: 0510204
Collection Date: 10/19/2005 10:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.5	0.50		mg/L	5	10/22/2005
Chloride	42	0.50		mg/L	5	10/22/2005
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	10/22/2005
Sulfate	270	2.5		mg/L	5	10/22/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	11/1/2005
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/28/2005
Toluene	ND	1.0		µg/L	1	10/28/2005
Ethylbenzene	ND	1.0		µg/L	1	10/28/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/28/2005
Naphthalene	ND	2.0		µg/L	1	10/28/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
Acetone	ND	10		µg/L	1	10/28/2005
Bromobenzene	ND	1.0		µg/L	1	10/28/2005
Bromochloromethane	ND	1.0		µg/L	1	10/28/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/28/2005
Bromoform	ND	1.0		µg/L	1	10/28/2005
Bromomethane	ND	2.0		µg/L	1	10/28/2005
2-Butanone	ND	10		µg/L	1	10/28/2005
Carbon disulfide	ND	10		µg/L	1	10/28/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/28/2005
Chlorobenzene	ND	1.0		µg/L	1	10/28/2005
Chloroethane	ND	2.0		µg/L	1	10/28/2005
Chloroform	ND	1.0		µg/L	1	10/28/2005
Chloromethane	ND	1.0		µg/L	1	10/28/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/28/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/28/2005
Dibromomethane	ND	2.0		µg/L	1	10/28/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: BW-2-C
Lab Order: 0510204
Collection Date: 10/19/2005 10:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/28/2005
2-Hexanone	ND	10		µg/L	1	10/28/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/28/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/28/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/28/2005
Methylene Chloride	ND	3.0		µg/L	1	10/28/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/28/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
Styrene	ND	1.0		µg/L	1	10/28/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/28/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/28/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/28/2005
Vinyl chloride	ND	1.0		µg/L	1	10/28/2005
Xylenes, Total	ND	1.0		µg/L	1	10/28/2005
Surr: 1,2-Dichloroethane-d4	99.6	69.9-130		%REC	1	10/28/2005
Surr: 4-Bromofluorobenzene	104	71.2-123		%REC	1	10/28/2005
Surr: Dibromofluoromethane	98.2	73.9-134		%REC	1	10/28/2005
Surr: Toluene-d8	99.4	81.9-122		%REC	1	10/28/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	10/26/2005
Acenaphthylene	ND	50		µg/L	1	10/26/2005
Aniline	ND	100		µg/L	1	10/26/2005
Anthracene	ND	50		µg/L	1	10/26/2005
Azobenzene	ND	50		µg/L	1	10/26/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-C
Lab Order: 0510204
Collection Date: 10/19/2005 10:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benz(a)anthracene	ND	75		µg/L	1	10/26/2005
Benzo(a)pyrene	ND	75		µg/L	1	10/26/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	10/26/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	10/26/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	10/26/2005
Benzoic acid	ND	250		µg/L	1	10/26/2005
Benzyl alcohol	ND	100		µg/L	1	10/26/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	10/26/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	10/26/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	10/26/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	10/26/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	10/26/2005
Butyl benzyl phthalate	ND	75		µg/L	1	10/26/2005
Carbazole	ND	50		µg/L	1	10/26/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	10/26/2005
4-Chloroaniline	ND	100		µg/L	1	10/26/2005
2-Chloronaphthalene	ND	50		µg/L	1	10/26/2005
2-Chlorophenol	ND	50		µg/L	1	10/26/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	10/26/2005
Chrysene	ND	75		µg/L	1	10/26/2005
Di-n-butyl phthalate	ND	50		µg/L	1	10/26/2005
Di-n-octyl phthalate	ND	75		µg/L	1	10/26/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	10/26/2005
Dibenzofuran	ND	50		µg/L	1	10/26/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	10/26/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	10/26/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	10/26/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	10/26/2005
Diethyl phthalate	ND	50		µg/L	1	10/26/2005
Dimethyl phthalate	ND	50		µg/L	1	10/26/2005
2,4-Dichlorophenol	ND	50		µg/L	1	10/26/2005
2,4-Dimethylphenol	ND	50		µg/L	1	10/26/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	10/26/2005
2,4-Dinitrophenol	ND	250		µg/L	1	10/26/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	10/26/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	10/26/2005
Fluoranthene	ND	50		µg/L	1	10/26/2005
Fluorene	ND	50		µg/L	1	10/26/2005
Hexachlorobenzene	ND	50		µg/L	1	10/26/2005
Hexachlorobutadiene	ND	50		µg/L	1	10/26/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	10/26/2005
Hexachloroethane	ND	50		µg/L	1	10/26/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-2-C
Lab Order: 0510204
Collection Date: 10/19/2005 10:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	10/26/2005
Isophorone	ND	50		µg/L	1	10/26/2005
2-Methylnaphthalene	ND	50		µg/L	1	10/26/2005
2-Methylphenol	ND	75		µg/L	1	10/26/2005
3+4-Methylphenol	ND	100		µg/L	1	10/26/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	10/26/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	10/26/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	10/26/2005
Naphthalene	ND	50		µg/L	1	10/26/2005
2-Nitroaniline	ND	250		µg/L	1	10/26/2005
3-Nitroaniline	ND	250		µg/L	1	10/26/2005
4-Nitroaniline	ND	100		µg/L	1	10/26/2005
Nitrobenzene	ND	50		µg/L	1	10/26/2005
2-Nitrophenol	ND	75		µg/L	1	10/26/2005
4-Nitrophenol	ND	250		µg/L	1	10/26/2005
Pentachlorophenol	ND	250		µg/L	1	10/26/2005
Phenanthrene	ND	50		µg/L	1	10/26/2005
Phenol	ND	50		µg/L	1	10/26/2005
Pyrene	ND	75		µg/L	1	10/26/2005
Pyridine	ND	150		µg/L	1	10/26/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	10/26/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	10/26/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	10/26/2005
Surr: 2,4,6-Tribromophenol	52.2	16.6-150		%REC	1	10/26/2005
Surr: 2-Fluorobiphenyl	46.6	19.6-134		%REC	1	10/26/2005
Surr: 2-Fluorophenol	55.8	9.54-113		%REC	1	10/26/2005
Surr: 4-Terphenyl-d14	75.0	22.7-145		%REC	1	10/26/2005
Surr: Nitrobenzene-d5	62.4	14.6-134		%REC	1	10/26/2005
Surr: Phenol-d6	30.0	10.7-80.3		%REC	1	10/26/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	1400	0.010		µmhos/cm	1	11/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	140	10		mg/L	10	11/3/2005 12:55:59 PM
Magnesium	7.7	1.0		mg/L	1	10/27/2005 5:29:14 PM
Potassium	2.5	1.0		mg/L	1	10/27/2005 5:29:14 PM
Sodium	320	10		mg/L	10	10/28/2005 10:59:56 AM

Qualifiers:

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-B
Lab Order: 0510204
Collection Date: 10/20/2005 8:00:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.4	0.10		mg/L	1	10/22/2005
Chloride	34	0.10		mg/L	1	10/22/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/22/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	10/22/2005
Phosphorus, Orthophosphate (As P)	1.0	0.50		mg/L	1	10/22/2005
Sulfate	56	0.50		mg/L	1	10/22/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	10/28/2005
Toluene	ND	1.0		µg/L	1	10/28/2005
Ethylbenzene	ND	1.0		µg/L	1	10/28/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/28/2005
Naphthalene	ND	2.0		µg/L	1	10/28/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
Acetone	ND	10		µg/L	1	10/28/2005
Bromobenzene	ND	1.0		µg/L	1	10/28/2005
Bromochloromethane	ND	1.0		µg/L	1	10/28/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/28/2005
Bromoform	ND	1.0		µg/L	1	10/28/2005
Bromomethane	ND	2.0		µg/L	1	10/28/2005
2-Butanone	ND	10		µg/L	1	10/28/2005
Carbon disulfide	ND	10		µg/L	1	10/28/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/28/2005
Chlorobenzene	ND	1.0		µg/L	1	10/28/2005
Chloroethane	ND	2.0		µg/L	1	10/28/2005
Chloroform	ND	1.0		µg/L	1	10/28/2005
Chloromethane	ND	1.0		µg/L	1	10/28/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/28/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/28/2005
Dibromomethane	ND	2.0		µg/L	1	10/28/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-B
Lab Order: 0510204
Collection Date: 10/20/2005 8:00:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/28/2005
2-Hexanone	ND	10		µg/L	1	10/28/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/28/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/28/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/28/2005
Methylene Chloride	ND	3.0		µg/L	1	10/28/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/28/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
Styrene	ND	1.0		µg/L	1	10/28/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/28/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/28/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/28/2005
Vinyl chloride	ND	1.0		µg/L	1	10/28/2005
Xylenes, Total	ND	1.0		µg/L	1	10/28/2005
Surr: 1,2-Dichloroethane-d4	96.7	69.9-130		%REC	1	10/28/2005
Surr: 4-Bromofluorobenzene	99.7	71.2-123		%REC	1	10/28/2005
Surr: Dibromofluoromethane	116	73.9-134		%REC	1	10/28/2005
Surr: Toluene-d8	97.8	81.9-122		%REC	1	10/28/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/26/2005
Acenaphthylene	ND	10		µg/L	1	10/26/2005
Aniline	ND	20		µg/L	1	10/26/2005
Anthracene	ND	10		µg/L	1	10/26/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-B
Lab Order: 0510204
Collection Date: 10/20/2005 8:00:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	10		µg/L	1	10/26/2005
Benz(a)anthracene	ND	15		µg/L	1	10/26/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/26/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/26/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/26/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/26/2005
Benzoic acid	ND	50		µg/L	1	10/26/2005
Benzyl alcohol	ND	20		µg/L	1	10/26/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/26/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/26/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/26/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/26/2005
Carbazole	ND	10		µg/L	1	10/26/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/26/2005
4-Chloroaniline	ND	20		µg/L	1	10/26/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/26/2005
2-Chlorophenol	ND	10		µg/L	1	10/26/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/26/2005
Chrysene	ND	15		µg/L	1	10/26/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/26/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/26/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/26/2005
Dibenzofuran	ND	10		µg/L	1	10/26/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/26/2005
Diethyl phthalate	ND	10		µg/L	1	10/26/2005
Dimethyl phthalate	ND	10		µg/L	1	10/26/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/26/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/26/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
Fluoranthene	ND	10		µg/L	1	10/26/2005
Fluorene	ND	10		µg/L	1	10/26/2005
Hexachlorobenzene	ND	10		µg/L	1	10/26/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-B
Lab Order: 0510204
Collection Date: 10/20/2005 8:00:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	10		µg/L	1	10/26/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2005
Isophorone	ND	10		µg/L	1	10/26/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2005
2-Methylphenol	ND	15		µg/L	1	10/26/2005
3+4-Methylphenol	ND	20		µg/L	1	10/26/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2005
Naphthalene	ND	10		µg/L	1	10/26/2005
2-Nitroaniline	ND	50		µg/L	1	10/26/2005
3-Nitroaniline	ND	50		µg/L	1	10/26/2005
4-Nitroaniline	ND	20		µg/L	1	10/26/2005
Nitrobenzene	ND	10		µg/L	1	10/26/2005
2-Nitrophenol	ND	15		µg/L	1	10/26/2005
4-Nitrophenol	ND	50		µg/L	1	10/26/2005
Pentachlorophenol	ND	50		µg/L	1	10/26/2005
Phenanthrene	ND	10		µg/L	1	10/26/2005
Phenol	ND	10		µg/L	1	10/26/2005
Pyrene	ND	15		µg/L	1	10/26/2005
Pyridine	ND	30		µg/L	1	10/26/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/26/2005
Surr: 2,4,6-Tribromophenol	59.8	16.6-150		%REC	1	10/26/2005
Surr: 2-Fluorobiphenyl	50.3	19.6-134		%REC	1	10/26/2005
Surr: 2-Fluorophenol	50.9	9.54-113		%REC	1	10/26/2005
Surr: 4-Terphenyl-d14	77.3	22.7-145		%REC	1	10/26/2005
Surr: Nitrobenzene-d5	63.6	14.6-134		%REC	1	10/26/2005
Surr: Phenol-d6	29.1	10.7-80.3		%REC	1	10/26/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	1600	0.010		µmhos/cm	1	11/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	9.9	1.0		mg/L	1	10/27/2005 5:33:13 PM
Magnesium	2.9	1.0		mg/L	1	10/27/2005 5:33:13 PM
Potassium	1.4	1.0		mg/L	1	10/27/2005 5:33:13 PM
Sodium	370	10		mg/L	10	10/28/2005 11:02:39 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-C
Lab Order: 0510204
Collection Date: 10/20/2005 9:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.6	0.10		mg/L	1	10/22/2005
Chloride	37	0.10		mg/L	1	10/22/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	10/22/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	10/22/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	10/22/2005
Sulfate	350	5.0		mg/L	10	11/1/2005
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/28/2005
Toluene	ND	1.0		µg/L	1	10/28/2005
Ethylbenzene	ND	1.0		µg/L	1	10/28/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/28/2005
Naphthalene	ND	2.0		µg/L	1	10/28/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
Acetone	ND	10		µg/L	1	10/28/2005
Bromobenzene	ND	1.0		µg/L	1	10/28/2005
Bromochloromethane	ND	1.0		µg/L	1	10/28/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/28/2005
Bromoform	ND	1.0		µg/L	1	10/28/2005
Bromomethane	ND	2.0		µg/L	1	10/28/2005
2-Butanone	ND	10		µg/L	1	10/28/2005
Carbon disulfide	ND	10		µg/L	1	10/28/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/28/2005
Chlorobenzene	ND	1.0		µg/L	1	10/28/2005
Chloroethane	ND	2.0		µg/L	1	10/28/2005
Chloroform	ND	1.0		µg/L	1	10/28/2005
Chloromethane	ND	1.0		µg/L	1	10/28/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/28/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/28/2005
Dibromomethane	ND	2.0		µg/L	1	10/28/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-C
Lab Order: 0510204
Collection Date: 10/20/2005 9:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/28/2005
2-Hexanone	ND	10		µg/L	1	10/28/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/28/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/28/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/28/2005
Methylene Chloride	ND	3.0		µg/L	1	10/28/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/28/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
Styrene	ND	1.0		µg/L	1	10/28/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/28/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/28/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/28/2005
Vinyl chloride	ND	1.0		µg/L	1	10/28/2005
Xylenes, Total	ND	1.0		µg/L	1	10/28/2005
Surr: 1,2-Dichloroethane-d4	103	69.9-130		%REC	1	10/28/2005
Surr: 4-Bromofluorobenzene	105	71.2-123		%REC	1	10/28/2005
Surr: Dibromofluoromethane	102	73.9-134		%REC	1	10/28/2005
Surr: Toluene-d8	98.0	81.9-122		%REC	1	10/28/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/26/2005
Acenaphthylene	ND	10		µg/L	1	10/26/2005
Aniline	ND	20		µg/L	1	10/26/2005
Anthracene	ND	10		µg/L	1	10/26/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-C
Lab Order: 0510204
Collection Date: 10/20/2005 9:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	10		µg/L	1	10/26/2005
Benz(a)anthracene	ND	15		µg/L	1	10/26/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/26/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/26/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/26/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/26/2005
Benzoic acid	ND	50		µg/L	1	10/26/2005
Benzyl alcohol	ND	20		µg/L	1	10/26/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/26/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/26/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/26/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/26/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/26/2005
Carbazole	ND	10		µg/L	1	10/26/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/26/2005
4-Chloroaniline	ND	20		µg/L	1	10/26/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/26/2005
2-Chlorophenol	ND	10		µg/L	1	10/26/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/26/2005
Chrysene	ND	15		µg/L	1	10/26/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/26/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/26/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/26/2005
Dibenzofuran	ND	10		µg/L	1	10/26/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/26/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/26/2005
Diethyl phthalate	ND	10		µg/L	1	10/26/2005
Dimethyl phthalate	ND	10		µg/L	1	10/26/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/26/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/26/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/26/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/26/2005
Fluoranthene	ND	10		µg/L	1	10/26/2005
Fluorene	ND	10		µg/L	1	10/26/2005
Hexachlorobenzene	ND	10		µg/L	1	10/26/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/26/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/26/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: BW-3-C
Lab Order: 0510204
Collection Date: 10/20/2005 9:45:00 AM
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	10		µg/L	1	10/26/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/26/2005
Isophorone	ND	10		µg/L	1	10/26/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/26/2005
2-Methylphenol	ND	15		µg/L	1	10/26/2005
3+4-Methylphenol	ND	20		µg/L	1	10/26/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/26/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/26/2005
Naphthalene	ND	10		µg/L	1	10/26/2005
2-Nitroaniline	ND	50		µg/L	1	10/26/2005
3-Nitroaniline	ND	50		µg/L	1	10/26/2005
4-Nitroaniline	ND	20		µg/L	1	10/26/2005
Nitrobenzene	ND	10		µg/L	1	10/26/2005
2-Nitrophenol	ND	15		µg/L	1	10/26/2005
4-Nitrophenol	ND	50		µg/L	1	10/26/2005
Pentachlorophenol	ND	50		µg/L	1	10/26/2005
Phenanthrene	ND	10		µg/L	1	10/26/2005
Phenol	ND	10		µg/L	1	10/26/2005
Pyrene	ND	15		µg/L	1	10/26/2005
Pyridine	ND	30		µg/L	1	10/26/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/26/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/26/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/26/2005
Surr: 2,4,6-Tribromophenol	56.6	16.6-150		%REC	1	10/26/2005
Surr: 2-Fluorobiphenyl	44.8	19.6-134		%REC	1	10/26/2005
Surr: 2-Fluorophenol	43.6	9.54-113		%REC	1	10/26/2005
Surr: 4-Terphenyl-d14	71.5	22.7-145		%REC	1	10/26/2005
Surr: Nitrobenzene-d5	54.6	14.6-134		%REC	1	10/26/2005
Surr: Phenol-d6	22.3	10.7-80.3		%REC	1	10/26/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	1500	0.010		µmhos/cm	1	11/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	6.1	1.0		mg/L	1	10/27/2005 5:37:28 PM
Magnesium	1.1	1.0		mg/L	1	10/27/2005 5:37:28 PM
Potassium	1.8	1.0		mg/L	1	10/27/2005 5:37:28 PM
Sodium	290	10		mg/L	10	10/28/2005 11:05:24 AM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Trip Blank
Lab Order: 0510204
Collection Date:
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-07
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/28/2005
Toluene	ND	1.0		µg/L	1	10/28/2005
Ethylbenzene	ND	1.0		µg/L	1	10/28/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/28/2005
Naphthalene	ND	2.0		µg/L	1	10/28/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/28/2005
Acetone	ND	10		µg/L	1	10/28/2005
Bromobenzene	ND	1.0		µg/L	1	10/28/2005
Bromochloromethane	ND	1.0		µg/L	1	10/28/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/28/2005
Bromoform	ND	1.0		µg/L	1	10/28/2005
Bromomethane	ND	2.0		µg/L	1	10/28/2005
2-Butanone	ND	10		µg/L	1	10/28/2005
Carbon disulfide	ND	10		µg/L	1	10/28/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/28/2005
Chlorobenzene	ND	1.0		µg/L	1	10/28/2005
Chloroethane	ND	2.0		µg/L	1	10/28/2005
Chloroform	ND	1.0		µg/L	1	10/28/2005
Chloromethane	ND	1.0		µg/L	1	10/28/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/28/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/28/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/28/2005
Dibromomethane	ND	2.0		µg/L	1	10/28/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/28/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/28/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/28/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/28/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Trip Blank
Lab Order: 0510204
Collection Date:
Project: Ciniza Annual Groundwater Samples 2005
Lab ID: 0510204-07
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	1.0		µg/L	1	10/28/2005
2-Hexanone	ND	10		µg/L	1	10/28/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/28/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/28/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/28/2005
Methylene Chloride	ND	3.0		µg/L	1	10/28/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/28/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
Styrene	ND	1.0		µg/L	1	10/28/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/28/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/28/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/28/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/28/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/28/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/28/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/28/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/28/2005
Vinyl chloride	ND	1.0		µg/L	1	10/28/2005
Xylenes, Total	ND	1.0		µg/L	1	10/28/2005
Surr: 1,2-Dichloroethane-d4	102	69.9-130		%REC	1	10/28/2005
Surr: 4-Bromofluorobenzene	102	71.2-123		%REC	1	10/28/2005
Surr: Dibromofluoromethane	102	73.9-134		%REC	1	10/28/2005
Surr: Toluene-d8	99.3	81.9-122		%REC	1	10/28/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17038** Test Code: **E300** Units: **mg/L** Analysis Date **10/21/2005** Prep Date
Client ID: Run ID: **WC_051021D** SeqNo: **413479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID **MBLK** Batch ID: **R17140** Test Code: **E300** Units: **mg/L** Analysis Date **10/31/2005** Prep Date
Client ID: Run ID: **LC_051031A** SeqNo: **417317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9023** Batch ID: **9023** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/26/2005** Prep Date **10/24/2005**
Client ID: Run ID: **ELMO_051026A** SeqNo: **415322**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

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
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

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	102.9	0	200	0	51.4	16.6	150	0	
Surr: 2-Fluorobiphenyl	44.64	0	100	0	44.6	19.6	134	0	
Surr: 2-Fluorophenol	104.7	0	200	0	52.3	9.54	113	0	
Surr: 4-Terphenyl-d14	83.74	0	100	0	83.7	22.7	145	0	
Surr: Nitrobenzene-d5	58.22	0	100	0	58.2	14.6	134	0	
Surr: Phenol-d6	62.2	0	200	0	31.1	10.7	80.3	0	

Sample ID **MB-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:15:57 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	ND	1									
Magnesium	ND	1									
Potassium	0.1242	1									J
Sodium	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **rb 5ml** Batch ID: **R17105** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/27/2005** Prep Date

Client ID: Run ID: **THOR_051027A** SeqNo: **415606**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	0.782	4									J
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1							
Trichloroethene (TCE)	ND	1							
Trichlorofluoromethane	ND	1							
1,2,3-Trichloropropane	ND	2							
Vinyl chloride	ND	1							
Xylenes, Total	ND	1							
Surr: 1,2-Dichloroethane-d4	9.724	0	10	0	97.2	69.9	130	0	
Surr: 4-Bromofluorobenzene	9.816	0	10	0	98.2	71.2	123	0	
Surr: Dibromofluoromethane	16.21	0	10	0	162	73.9	134	0	S
Surr: Toluene-d8	10.01	0	10	0	100	81.9	122	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb** Batch ID: **R17125** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/28/2005** Prep Date
Client ID: Run ID: **VAL_051028A** SeqNo: **416323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
cis-1,3-Dichloropropene	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1
1,1,2-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Method Blank

Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	10.74	0	10	0	107	69.9	130	0
Surr: 4-Bromofluorobenzene	10.14	0	10	0	101	71.2	123	0
Surr: Dibromofluoromethane	10.47	0	10	0	105	73.9	134	0
Surr: Toluene-d8	9.73	0	10	0	97.3	81.9	122	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R17038** Test Code: **E300** Units: **mg/L** Analysis Date **10/21/2005** Prep Date

Client ID: Run ID: **WC_051021D** SeqNo: **413480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4799	0.1	0.5	0	96.0	90	110	0			
Chloride	4.71	0.1	5	0	94.2	90	110	0			
Nitrogen, Nitrite (As N)	0.9544	0.1	1	0	95.4	90	110	0			
Nitrogen, Nitrate (As N)	2.379	0.1	2.5	0	95.2	90	110	0			
Phosphorus, Orthophosphate (As P)	4.757	0.5	5	0	95.1	90	110	0			
Sulfate	9.504	0.5	10	0	95.0	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.333	0.1	3.5	0	95.2	90	110	0			

Sample ID **LCS-ST300-05022** Batch ID: **R17140** Test Code: **E300** Units: **mg/L** Analysis Date **10/31/2005** Prep Date

Client ID: Run ID: **LC_051031A** SeqNo: **417318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5114	0.1	0.5	0	102	90	110	0			
Chloride	4.69	0.1	5	0	93.8	90	110	0			
Nitrogen, Nitrite (As N)	0.9663	0.1	1	0	96.6	90	110	0			
Nitrogen, Nitrate (As N)	2.4	0.1	2.5	0	96.0	90	110	0			
Phosphorus, Orthophosphate (As P)	4.786	0.5	5	0	95.7	90	110	0			
Sulfate	9.59	0.5	10	0	95.9	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.366	0.1	3.5	0	96.2	90	110	0			

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **icv** Batch ID: **R17105** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/27/2005** Prep Date
Client ID: Run ID: **THOR_051027A** SeqNo: **415607**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.82	1	20	0	99.1	79.3	136	0			
Toluene	18.53	1	20	0	92.6	65.5	123	0			
Chlorobenzene	18.4	1	20	0	92.0	85.6	126	0			
1,1-Dichloroethene	17.12	1	20	0	85.6	72.7	135	0			
Trichloroethene (TCE)	17.38	1	20	0	86.9	85.6	119	0			

Sample ID **100ng lcs** Batch ID: **R17125** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/28/2005** Prep Date
Client ID: Run ID: **VAL_051028A** SeqNo: **416326**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.19	1	20	0	106	79.3	136	0			
Toluene	17.45	1	20	0	87.2	65.5	123	0			
Chlorobenzene	19.78	1	20	0	98.9	85.6	126	0			
1,1-Dichloroethene	22.34	1	20	0	112	72.7	135	0			
Trichloroethene (TCE)	19.61	1	20	0	98.1	85.6	119	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9023** Batch ID: **9023** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/26/2005** Prep Date **10/24/2005**
Client ID: Run ID: **ELMO_051026A** SeqNo: **415323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	65.38	10	100	0	65.4	11	123	0			
4-Chloro-3-methylphenol	110.3	20	200	0	55.2	15.4	119	0			
2-Chlorophenol	136.2	10	200	0	68.1	12.2	122	0			
1,4-Dichlorobenzene	61.5	10	100	0	61.5	16.9	100	0			
2,4-Dinitrotoluene	52.16	10	100	0	52.2	13	138	0			
N-Nitrosodi-n-propylamine	57.72	10	100	0	57.7	9.93	122	0			
4-Nitrophenol	75.6	50	200	0	37.8	-20.5	87.4	0			
Pentachlorophenol	101.2	50	200	0	50.6	-0.355	114	0			
Phenol	73.7	10	200	0	36.9	7.53	73.1	0			
Pyrene	71.3	15	100	0	71.3	12.6	140	0			
1,2,4-Trichlorobenzene	52.4	10	100	0	52.4	17.4	98.7	0			

Sample ID **LCSD-9023** Batch ID: **9023** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/26/2005** Prep Date **10/24/2005**
Client ID: Run ID: **ELMO_051026A** SeqNo: **415324**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	64.36	10	100	0	64.4	11	123	65.38	1.57	30.5	
4-Chloro-3-methylphenol	104.6	20	200	0	52.3	15.4	119	110.3	5.29	28.6	
2-Chlorophenol	130.8	10	200	0	65.4	12.2	122	136.2	4.03	107	
1,4-Dichlorobenzene	60.42	10	100	0	60.4	16.9	100	61.5	1.77	62.1	
2,4-Dinitrotoluene	48.3	10	100	0	48.3	13	138	52.16	7.68	14.7	
N-Nitrosodi-n-propylamine	55.78	10	100	0	55.8	9.93	122	57.72	3.42	30.3	
4-Nitrophenol	77.7	50	200	0	38.9	12.5	87.4	75.6	2.74	36.3	
Pentachlorophenol	99.8	50	200	0	49.9	3.55	114	101.2	1.43	49	
Phenol	70.58	10	200	0	35.3	7.53	73.1	73.7	4.32	52.4	
Pyrene	71.12	15	100	0	71.1	12.6	140	71.3	0.253	16.3	
1,2,4-Trichlorobenzene	53.3	10	100	0	53.3	17.4	98.7	52.4	1.70	36.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510204
Project: Ciniza Annual Groundwater Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:19:14 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	49.18	1	50	0	98.4	80	120	0			
Magnesium	48.8	1	50	0	97.6	80	120	0			
Potassium	50.1	1	50	0.1242	100	80	120	0			
Sodium	52.32	1	50	0	105	80	120	0			

Sample ID **LCSD-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:21:36 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	49.58	1	50	0	99.2	80	120	49.18	0.823	20	
Magnesium	49	1	50	0	98.0	80	120	48.8	0.406	20	
Potassium	50.1	1	50	0.1242	100	80	120	50.1	0.00219	20	
Sodium	52.9	1	50	0	106	80	120	52.32	1.10	20	

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Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/20/2005

Work Order Number 0510204 | Received by AT

Checklist completed by _____ Signature _____ Date 10/20/05

Matrix | Carrier name Client drop-off

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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Ciniza Annual Groundwater Samples 2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 3°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
10/17/05	1400	H_2O	BW-1-C				0510204-1											X	X	X				
10/17/05	1530	"	BW-2-A				-2											X	X	X				
10/18/05	1110	"	BW-2-B				-3											X	X	X				
10/19/05	1045	"	BW-2-C				-4											X	X	X				
10/20/05	0800	"	BW-3-B				-5											X	X	X				
10/20/05	0945	"	BW-3-C				-6											X	X	X				
			trip blank	2 VOA			-7																	

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
10/20/05	1615	Steve Morris		10/20/05 1615
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: Gen Chem = Cations, Anions, & Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

October 18, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Ciniza Annual GW Samples 2005 Order No.: 0509323

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 7 samples on 9/30/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-12
Lab Order: 0509323
Collection Date: 9/27/2005 8:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-01
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	9/30/2005 10:10:10 PM
Benzene	ND	0.50		µg/L	1	9/30/2005 10:10:10 PM
Toluene	ND	0.50		µg/L	1	9/30/2005 10:10:10 PM
Ethylbenzene	ND	0.50		µg/L	1	9/30/2005 10:10:10 PM
Xylenes, Total	ND	0.50		µg/L	1	9/30/2005 10:10:10 PM
Surr: 4-Bromofluorobenzene	97.0	82.2-119		%REC	1	9/30/2005 10:10:10 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	OW-13
Lab Order:	0509323	**Collection Date:**	9/27/2005 10:30:00 AM
Project:	Ciniza Annual GW Samples 2005		
Lab ID:	0509323-02	**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	9/30/2005 10:40:58 PM
Benzene	ND	0.50		µg/L	1	9/30/2005 10:40:58 PM
Toluene	ND	0.50		µg/L	1	9/30/2005 10:40:58 PM
Ethylbenzene	ND	0.50		µg/L	1	9/30/2005 10:40:58 PM
Xylenes, Total	ND	0.50		µg/L	1	9/30/2005 10:40:58 PM
Surr: 4-Bromofluorobenzene	95.4	82.2-119		%REC	1	9/30/2005 10:40:58 PM

Qualifiers:

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J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-14
Lab Order: 0509323
Collection Date: 9/29/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	77	2.5		µg/L	1	10/3/2005 12:55:48 PM
Benzene	17	0.50		µg/L	1	10/3/2005 12:55:48 PM
Toluene	2.2	0.50		µg/L	1	10/3/2005 12:55:48 PM
Ethylbenzene	2.3	0.50		µg/L	1	10/3/2005 12:55:48 PM
Xylenes, Total	1.4	0.50		µg/L	1	10/3/2005 12:55:48 PM
Surr: 4-Bromofluorobenzene	110	82.2-119		%REC	1	10/3/2005 12:55:48 PM

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R - RPD outside accepted recovery limits
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Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-29
Lab Order: 0509323
Collection Date: 9/28/2005 12:30:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-04
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	10/1/2005 12:43:01 AM
Benzene	ND	0.50		µg/L	1	10/1/2005 12:43:01 AM
Toluene	ND	0.50		µg/L	1	10/1/2005 12:43:01 AM
Ethylbenzene	ND	0.50		µg/L	1	10/1/2005 12:43:01 AM
Xylenes, Total	ND	0.50		µg/L	1	10/1/2005 12:43:01 AM
Surr: 4-Bromofluorobenzene	96.1	82.2-119		%REC	1	10/1/2005 12:43:01 AM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-30
Lab Order: 0509323
Collection Date: 9/29/2005 8:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-05
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	10/1/2005 1:13:44 AM
Benzene	ND	0.50		µg/L	1	10/1/2005 1:13:44 AM
Toluene	ND	0.50		µg/L	1	10/1/2005 1:13:44 AM
Ethylbenzene	ND	0.50		µg/L	1	10/1/2005 1:13:44 AM
Xylenes, Total	ND	0.50		µg/L	1	10/1/2005 1:13:44 AM
Surr: 4-Bromofluorobenzene	94.9	82.2-119		%REC	1	10/1/2005 1:13:44 AM

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-11
Lab Order: 0509323
Collection Date: 9/29/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	2.3	0.10		mg/L	1	9/30/2005
Chloride	87	1.0		mg/L	10	10/11/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	9/30/2005
Nitrogen, Nitrate (As N)	0.72	0.10		mg/L	1	9/30/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	9/30/2005
Sulfate	990	10		mg/L	20	10/12/2005
EPA METHOD 8260B: VOLATILES						Analyst: HLM
Benzene	ND	1.0		µg/L	1	10/4/2005
Toluene	ND	1.0		µg/L	1	10/4/2005
Ethylbenzene	ND	1.0		µg/L	1	10/4/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/4/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/4/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/4/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/4/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/4/2005
Naphthalene	ND	2.0		µg/L	1	10/4/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/4/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/4/2005
Acetone	ND	10		µg/L	1	10/4/2005
Bromobenzene	ND	1.0		µg/L	1	10/4/2005
Bromochloromethane	ND	1.0		µg/L	1	10/4/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/4/2005
Bromoform	ND	1.0		µg/L	1	10/4/2005
Bromomethane	ND	2.0		µg/L	1	10/4/2005
2-Butanone	ND	10		µg/L	1	10/4/2005
Carbon disulfide	ND	10		µg/L	1	10/4/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/4/2005
Chlorobenzene	ND	1.0		µg/L	1	10/4/2005
Chloroethane	ND	2.0		µg/L	1	10/4/2005
Chloroform	ND	1.0		µg/L	1	10/4/2005
Chloromethane	ND	1.0		µg/L	1	10/4/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/4/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/4/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/4/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/4/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/4/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/4/2005
Dibromomethane	ND	2.0		µg/L	1	10/4/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/4/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/4/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-11
Lab Order: 0509323
Collection Date: 9/29/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/4/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/4/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/4/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/4/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/4/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/4/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/4/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/4/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/4/2005
2-Hexanone	ND	10		µg/L	1	10/4/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/4/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/4/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/4/2005
Methylene Chloride	ND	3.0		µg/L	1	10/4/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/4/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/4/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/4/2005
Styrene	ND	1.0		µg/L	1	10/4/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/4/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/4/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/4/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/4/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/4/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/4/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/4/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/4/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/4/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/4/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/4/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/4/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/4/2005
Vinyl chloride	ND	1.0		µg/L	1	10/4/2005
Xylenes, Total	ND	1.0		µg/L	1	10/4/2005
Surr: 1,2-Dichloroethane-d4	103	69.9-130		%REC	1	10/4/2005
Surr: 4-Bromofluorobenzene	107	71.2-123		%REC	1	10/4/2005
Surr: Dibromofluoromethane	102	73.9-134		%REC	1	10/4/2005
Surr: Toluene-d8	96.9	81.9-122		%REC	1	10/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	10		µg/L	1	10/12/2005
Acenaphthylene	ND	10		µg/L	1	10/12/2005
Aniline	ND	20		µg/L	1	10/12/2005
Anthracene	ND	10		µg/L	1	10/12/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-11
Lab Order: 0509323
Collection Date: 9/29/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	10		µg/L	1	10/12/2005
Benz(a)anthracene	ND	15		µg/L	1	10/12/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/12/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/12/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/12/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/12/2005
Benzoic acid	ND	50		µg/L	1	10/12/2005
Benzyl alcohol	ND	20		µg/L	1	10/12/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/12/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/12/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/12/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/12/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/12/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/12/2005
Carbazole	ND	10		µg/L	1	10/12/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/12/2005
4-Chloroaniline	ND	20		µg/L	1	10/12/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/12/2005
2-Chlorophenol	ND	10		µg/L	1	10/12/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/12/2005
Chrysene	ND	15		µg/L	1	10/12/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/12/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/12/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/12/2005
Dibenzofuran	ND	10		µg/L	1	10/12/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/12/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/12/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/12/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/12/2005
Diethyl phthalate	ND	10		µg/L	1	10/12/2005
Dimethyl phthalate	ND	10		µg/L	1	10/12/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/12/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/12/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/12/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/12/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	10/12/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/12/2005
Fluoranthene	ND	10		µg/L	1	10/12/2005
Fluorene	ND	10		µg/L	1	10/12/2005
Hexachlorobenzene	ND	10		µg/L	1	10/12/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/12/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/12/2005

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

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Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-11
Lab Order: 0509323
Collection Date: 9/29/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	10		µg/L	1	10/12/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/12/2005
Isophorone	ND	10		µg/L	1	10/12/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/12/2005
2-Methylphenol	ND	15		µg/L	1	10/12/2005
3+4-Methylphenol	ND	20		µg/L	1	10/12/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/12/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/12/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/12/2005
Naphthalene	ND	10		µg/L	1	10/12/2005
2-Nitroaniline	ND	50		µg/L	1	10/12/2005
3-Nitroaniline	ND	50		µg/L	1	10/12/2005
4-Nitroaniline	ND	20		µg/L	1	10/12/2005
Nitrobenzene	ND	10		µg/L	1	10/12/2005
2-Nitrophenol	ND	15		µg/L	1	10/12/2005
4-Nitrophenol	ND	50		µg/L	1	10/12/2005
Pentachlorophenol	ND	50		µg/L	1	10/12/2005
Phenanthrene	ND	10		µg/L	1	10/12/2005
Phenol	ND	10		µg/L	1	10/12/2005
Pyrene	ND	15		µg/L	1	10/12/2005
Pyridine	ND	30		µg/L	1	10/12/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/12/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/12/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/12/2005
Surr: 2,4,6-Tribromophenol	74.5	16.6-150		%REC	1	10/12/2005
Surr: 2-Fluorobiphenyl	58.0	19.6-134		%REC	1	10/12/2005
Surr: 2-Fluorophenol	45.3	9.54-113		%REC	1	10/12/2005
Surr: 4-Terphenyl-d14	52.8	22.7-145		%REC	1	10/12/2005
Surr: Nitrobenzene-d5	62.8	14.6-134		%REC	1	10/12/2005
Surr: Phenol-d6	32.3	10.7-80.3		%REC	1	10/12/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	2800	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 7470: MERCURY						Analyst: IC
Mercury	0.00039	0.00020		mg/L	1	10/6/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	10/6/2005 11:39:05 AM
Barium	ND	0.020		mg/L	1	10/6/2005 11:39:05 AM
Cadmium	ND	0.0020		mg/L	1	10/6/2005 11:39:05 AM
Calcium	10	1.0		mg/L	1	10/6/2005 3:00:59 PM
Chromium	ND	0.0060		mg/L	1	10/6/2005 11:39:05 AM
Lead	ND	0.0050		mg/L	1	10/6/2005 11:39:05 AM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: OW-11
Lab Order: 0509323
Collection Date: 9/29/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-06
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	1.2	1.0		mg/L	1	10/6/2005 3:00:59 PM
Potassium	1.7	1.0		mg/L	1	10/6/2005 3:00:59 PM
Selenium	ND	0.050		mg/L	1	10/6/2005 11:39:05 AM
Silver	ND	0.0050		mg/L	1	10/6/2005 11:39:05 AM
Sodium	620	10		mg/L	10	10/6/2005 4:03:15 PM
EPA METHOD 150.1: PH						Analyst: CKL
pH	8.44	0.010		pH units	1	9/30/2005

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: Trip Blank
Lab Order: 0509323
Collection Date:
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-07
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	10/1/2005 1:44:12 AM
Toluene	ND	0.50		µg/L	1	10/1/2005 1:44:12 AM
Ethylbenzene	ND	0.50		µg/L	1	10/1/2005 1:44:12 AM
Xylenes, Total	ND	0.50		µg/L	1	10/1/2005 1:44:12 AM
Surr: 4-Bromofluorobenzene	94.5	82.2-119		%REC	1	10/1/2005 1:44:12 AM
EPA METHOD 8260B: VOLATILES						Analyst: HLM
Benzene	ND	1.0		µg/L	1	10/4/2005
Toluene	ND	1.0		µg/L	1	10/4/2005
Ethylbenzene	ND	1.0		µg/L	1	10/4/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/4/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/4/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/4/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/4/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/4/2005
Naphthalene	ND	2.0		µg/L	1	10/4/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/4/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/4/2005
Acetone	ND	10		µg/L	1	10/4/2005
Bromobenzene	ND	1.0		µg/L	1	10/4/2005
Bromochloromethane	ND	1.0		µg/L	1	10/4/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/4/2005
Bromoform	ND	1.0		µg/L	1	10/4/2005
Bromomethane	ND	2.0		µg/L	1	10/4/2005
2-Butanone	ND	10		µg/L	1	10/4/2005
Carbon disulfide	ND	10		µg/L	1	10/4/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/4/2005
Chlorobenzene	ND	1.0		µg/L	1	10/4/2005
Chloroethane	ND	2.0		µg/L	1	10/4/2005
Chloroform	ND	1.0		µg/L	1	10/4/2005
Chloromethane	ND	1.0		µg/L	1	10/4/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/4/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/4/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/4/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/4/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/4/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/4/2005
Dibromomethane	ND	2.0		µg/L	1	10/4/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/4/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/4/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/4/2005

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- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: Trip Blank
Lab Order: 0509323
Collection Date:
Project: Ciniza Annual GW Samples 2005
Lab ID: 0509323-07
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/4/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/4/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/4/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/4/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/4/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/4/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/4/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/4/2005
2-Hexanone	ND	10		µg/L	1	10/4/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/4/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/4/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/4/2005
Methylene Chloride	ND	3.0		µg/L	1	10/4/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/4/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/4/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/4/2005
Styrene	ND	1.0		µg/L	1	10/4/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/4/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/4/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/4/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/4/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/4/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/4/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/4/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/4/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/4/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/4/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/4/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/4/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/4/2005
Vinyl chloride	ND	1.0		µg/L	1	10/4/2005
Xylenes, Total	ND	1.0		µg/L	1	10/4/2005
Surr: 1,2-Dichloroethane-d4	96.9	69.9-130		%REC	1	10/4/2005
Surr: 4-Bromofluorobenzene	104	71.2-123		%REC	1	10/4/2005
Surr: Dibromofluoromethane	99.2	73.9-134		%REC	1	10/4/2005
Surr: Toluene-d8	98.6	81.9-122		%REC	1	10/4/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID MBLK | Batch ID: R16830 | Test Code: E300 | Units: mg/L | Analysis Date 9/30/2005 | Prep Date
Client ID: | Run ID: LC_050930A | SeqNo: 406281

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID MBLK | Batch ID: R16873 | Test Code: E300 | Units: mg/L | Analysis Date 10/5/2005 | Prep Date
Client ID: | Run ID: LC_051005A | SeqNo: 408106

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Qualifiers:
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J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID MBLK | Batch ID: R16932 | Test Code: E300 | Units: mg/L | Analysis Date 10/11/2005 | Prep Date
Client ID: | Run ID: LC_051011A | SeqNo: 410517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1	0	0	0	0	0	0			
Chloride	ND	0.1	0	0	0	0	0	0			
Nitrogen, Nitrite (As N)	ND	0.1	0	0	0	0	0	0			
Nitrogen, Nitrate (As N)	ND	0.1	0	0	0	0	0	0			
Phosphorus, Orthophosphate (As P)	ND	0.5	0	0	0	0	0	0			
Sulfate	ND	0.5	0	0	0	0	0	0			

Sample ID MBLK | Batch ID: R16944 | Test Code: E300 | Units: mg/L | Analysis Date 10/12/2005 | Prep Date
Client ID: | Run ID: LC_051012A | SeqNo: 410818

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID Reagent Blank 5m | Batch ID: R16833 | Test Code: SW8021 | Units: µg/L | Analysis Date 9/30/2005 8:42:07 AM | Prep Date
Client ID: | Run ID: PIDFID_050930A | SeqNo: 406340

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.35	0	20	0	91.7	82.2	119	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank 5m Batch ID: R16840 Test Code: SW8021 Units: µg/L Analysis Date 10/3/2005 8:46:25 AM Prep Date
Client ID: Run ID: PIDFID_051003A SeqNo: 406636

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	21.02	0	20	0	105	82.2	119	0			

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Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID MB-8864 Batch ID: 8864 Test Code: SW8270C Units: µg/L Analysis Date 10/12/2005 Prep Date 10/3/2005
Client ID: Run ID: ELMO_051012A SeqNo: 410869

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									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

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	
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	5.7	10	J
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	

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
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CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	162.5	0	200	0	81.2	16.6	150	0	
Surr: 2-Fluorobiphenyl	62.88	0	100	0	62.9	19.6	134	0	
Surr: 2-Fluorophenol	103.1	0	200	0	51.6	9.54	113	0	
Surr: 4-Terphenyl-d14	62.84	0	100	0	62.8	22.7	145	0	
Surr: Nitrobenzene-d5	68.04	0	100	0	68.0	14.6	134	0	
Surr: Phenol-d6	81.2	0	200	0	40.6	10.7	80.3	0	

Sample ID MB-8897 Batch ID: 8897 Test Code: SW7470 Units: mg/L Analysis Date 10/6/2005 Prep Date 10/6/2005
Client ID: Run ID: MI-LA254_051006A SeqNo: 408247

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Sample ID MB-8884 Batch ID: 8884 Test Code: SW6010A Units: mg/L Analysis Date 10/6/2005 10:00:44 AM Prep Date 10/5/2005
Client ID: Run ID: ICP_051006B SeqNo: 408450

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Lead	ND	0.005									
Selenium	ND	0.05									
Silver	ND	0.005									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID MB-8884 Batch ID: 8884 Test Code: SW6010A Units: mg/L Analysis Date 10/6/2005 2:17:32 PM Prep Date 10/5/2005
Client ID: Run ID: ICP_051006B SeqNo: 408648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	ND	1									
Magnesium	ND	1									
Potassium	ND	1									
Sodium	ND	1									

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Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID 5ml rb | Batch ID: R16841 | Test Code: SW8260B | Units: µg/L | Analysis Date 10/3/2005 | Prep Date
Client ID: | Run ID: VAL_051003A | SeqNo: 406639

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	2.624	10									J
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1	
1,2-Dibromo-3-chloropropane	ND	2	
Dibromochloromethane	ND	1	
Dibromomethane	ND	2	
1,2-Dichlorobenzene	ND	1	
1,3-Dichlorobenzene	ND	1	
1,4-Dichlorobenzene	ND	1	
Dichlorodifluoromethane	ND	1	
1,1-Dichloroethane	ND	1	
1,1-Dichloroethene	ND	1	
1,2-Dichloropropane	ND	1	
1,3-Dichloropropane	ND	1	
2,2-Dichloropropane	ND	1	
1,1-Dichloropropene	ND	1	
Hexachlorobutadiene	ND	1	
2-Hexanone	ND	10	
Isopropylbenzene	ND	1	
4-Isopropyltoluene	ND	1	
4-Methyl-2-pentanone	ND	10	
Methylene Chloride	2.438	3	J
n-Butylbenzene	ND	1	
n-Propylbenzene	ND	1	
sec-Butylbenzene	ND	1	
Styrene	ND	1	
tert-Butylbenzene	ND	1	
1,1,1,2-Tetrachloroethane	ND	1	
1,1,2,2-Tetrachloroethane	ND	1	
Tetrachloroethene (PCE)	ND	1	
trans-1,2-DCE	ND	1	
trans-1,3-Dichloropropene	ND	1	
1,2,3-Trichlorobenzene	ND	1	
1,2,4-Trichlorobenzene	ND	1	
1,1,1-Trichloroethane	ND	1	

Qualifiers:
ND - Not Detected at the Reporting Limit
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CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	10.22	0	10	0	102	69.9	130	0
Surr: 4-Bromofluorobenzene	9.85	0	10	0	98.5	71.2	123	0
Surr: Dibromofluoromethane	10.03	0	10	0	100	73.9	134	0
Surr: Toluene-d8	9.734	0	10	0	97.3	81.9	122	0

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Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
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Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID 0509323-02a ms Batch ID: R16833 Test Code: SW8021 Units: µg/L Analysis Date 9/30/2005 11:11:24 PM Prep Date

Client ID: OW-13 Run ID: PIDFID_050930A SeqNo: 406406

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	37.4	2.5	40	1.539	89.7	64.5	133	0			
Benzene	19.87	0.5	20	0	99.3	88.5	114	0			
Toluene	19.28	0.5	20	0	96.4	87.2	114	0			
Ethylbenzene	18.91	0.5	20	0	94.6	88.6	113	0			
Xylenes, Total	58.78	0.5	60	0	98.0	83.3	114	0			
Surr: 4-Bromofluorobenzene	23.85	0	24	0	99.4	82.2	119	0			

Sample ID 0509323-02a msd Batch ID: R16833 Test Code: SW8021 Units: µg/L Analysis Date 9/30/2005 11:42:00 PM Prep Date

Client ID: OW-13 Run ID: PIDFID_050930A SeqNo: 406407

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	36.16	2.5	40	1.539	86.5	64.5	133	37.4	3.38	28	
Benzene	19.88	0.5	20	0	99.4	88.5	114	19.87	0.0322	27	
Toluene	19.73	0.5	20	0	98.6	87.2	114	19.28	2.28	19	
Ethylbenzene	19.28	0.5	20	0	96.4	88.6	113	18.91	1.93	10	
Xylenes, Total	58.5	0.5	60	0	97.5	83.3	114	58.78	0.473	13	
Surr: 4-Bromofluorobenzene	23.4	0	24	0	97.5	82.2	119	23.85	1.90	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *18-Oct-05*

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID LCS-ST300-05022	Batch ID: R16830	Test Code: E300	Units: mg/L	Analysis Date 9/30/2005	Prep Date
Client ID:		Run ID: LC_050930A		SeqNo: 406282	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5271	0.1	0.5	0	105	90	110	0			
Chloride	4.739	0.1	5	0	94.8	90	110	0			
Nitrogen, Nitrite (As N)	0.9317	0.1	1	0	93.2	90	110	0			
Nitrogen, Nitrate (As N)	2.434	0.1	2.5	0	97.3	90	110	0			
Phosphorus, Orthophosphate (As P)	5.094	0.5	5	0	102	90	110	0			
Sulfate	9.814	0.5	10	0	98.1	90	110	0			

Sample ID LCS-ST300-05022	Batch ID: R16873	Test Code: E300	Units: mg/L	Analysis Date 10/5/2005	Prep Date
Client ID:		Run ID: LC_051005A		SeqNo: 408107	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5385	0.1	0.5	0	108	90	110	0			
Chloride	4.919	0.1	5	0	98.4	90	110	0			
Nitrogen, Nitrite (As N)	0.9952	0.1	1	0	99.5	90	110	0			
Nitrogen, Nitrate (As N)	2.512	0.1	2.5	0	100	90	110	0			
Phosphorus, Orthophosphate (As P)	5.155	0.5	5	0	103	90	110	0			
Sulfate	10	0.5	10	0	100	90	110	0			

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID LCS-ST300-05022 Batch ID: R16932 Test Code: E300 Units: mg/L Analysis Date 10/11/2005 Prep Date
Client ID: Run ID: LC_051011A SeqNo: 410518

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5405	0.1	0.5	0	108	90	110	0			
Chloride	4.892	0.1	5	0	97.8	90	110	0			
Nitrogen, Nitrite (As N)	0.9457	0.1	1	0	94.6	90	110	0			
Nitrogen, Nitrate (As N)	2.495	0.1	2.5	0	99.8	90	110	0			
Phosphorus, Orthophosphate (As P)	5.156	0.5	5	0	103	90	110	0			
Sulfate	10.07	0.5	10	0	101	90	110	0			

Sample ID LCS-ST300-05022 Batch ID: R16944 Test Code: E300 Units: mg/L Analysis Date 10/12/2005 Prep Date
Client ID: Run ID: LC_051012A SeqNo: 410819

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5557	0.1	0.5	0	111	90	110	0			S
Chloride	4.827	0.1	5	0	96.5	90	110	0			
Nitrogen, Nitrite (As N)	0.9707	0.1	1	0	97.1	90	110	0			
Nitrogen, Nitrate (As N)	2.445	0.1	2.5	0	97.8	90	110	0			
Phosphorus, Orthophosphate (As P)	5.01	0.5	5	0	100	90	110	0			
Sulfate	9.867	0.5	10	0	98.7	90	110	0			

Sample ID BTEX lcs 100ng Batch ID: R16833 Test Code: SW8021 Units: µg/L Analysis Date 9/30/2005 8:38:12 PM Prep Date
Client ID: Run ID: PIDFID_050930A SeqNo: 406343

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17.78	2.5	20	0	88.9	64.5	133	0			
Benzene	19.52	0.5	20	0	97.6	88.5	114	0			
Toluene	19.08	0.5	20	0	95.4	87.2	114	0			
Ethylbenzene	18.98	0.5	20	0	94.9	88.6	113	0			
Xylenes, Total	39.45	0.5	40	0	98.6	83.3	114	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID BTEX lcs 100ng | Batch ID: R16840 | Test Code: SW8021 | Units: µg/L | Analysis Date 10/3/2005 1:58:23 PM | Prep Date
Client ID: | Run ID: PIDFID_051003A | SeqNo: 406644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17.2	2.5	20	0	86.0	64.5	133	0			
Benzene	19.89	0.5	20	0	99.5	88.5	114	0			
Toluene	19.34	0.5	20	0	96.7	87.2	114	0			
Ethylbenzene	19.19	0.5	20	0	96.0	88.6	113	0			
Xylenes, Total	39.4	0.5	40	0	98.5	83.3	114	0			

Sample ID BTEX lcsd 100ng | Batch ID: R16840 | Test Code: SW8021 | Units: µg/L | Analysis Date 10/3/2005 2:30:36 PM | Prep Date
Client ID: | Run ID: PIDFID_051003A | SeqNo: 406647

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17.37	2.5	20	0	86.8	64.5	133	17.2	0.951	28	
Benzene	19.92	0.5	20	0	99.6	88.5	114	19.89	0.170	27	
Toluene	19.3	0.5	20	0	96.5	87.2	114	19.34	0.176	19	
Ethylbenzene	19.33	0.5	20	0	96.6	88.6	113	19.19	0.691	10	
Xylenes, Total	39.41	0.5	40	0	98.5	83.3	114	39.4	0.0142	13	

Sample ID 100ng lcs | Batch ID: R16841 | Test Code: SW8260B | Units: µg/L | Analysis Date 10/3/2005 | Prep Date
Client ID: | Run ID: VAL_051003A | SeqNo: 406643

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.88	1	20	0	104	81.4	130	0			
Toluene	21.98	1	20	0	110	90.8	128	0			
Chlorobenzene	21.4	1	20	0	107	89.6	134	0			
1,1-Dichloroethene	18.04	1	20	0	90.2	75.1	120	0			
Trichloroethene (TCE)	20.18	1	20	0	101	75.8	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID 100ng lcs | Batch ID: R16855 | Test Code: SW8260B | Units: µg/L | Analysis Date 10/4/2005 | Prep Date
Client ID: | Run ID: NEPTUNE_051004A | SeqNo: 407483

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.41	1	20	0	117	81.4	130	0			
Toluene	22.8	1	20	0	114	90.8	128	0			
Chlorobenzene	22.21	1	20	0	111	89.6	134	0			
1,1-Dichloroethene	21.23	1	20	0	106	75.1	120	0			
Trichloroethene (TCE)	21.5	1	20	0	108	75.8	110	0			

Sample ID LCS-8864 | Batch ID: 8864 | Test Code: SW8270C | Units: µg/L | Analysis Date 10/12/2005 | Prep Date 10/3/2005
Client ID: | Run ID: ELMO_051012A | SeqNo: 410870

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.04	10	100	0	75.0	11	123	0			
4-Chloro-3-methylphenol	151.7	20	200	0	75.8	15.4	119	0			
2-Chlorophenol	150	10	200	0	75.0	12.2	122	0			
1,4-Dichlorobenzene	68.78	10	100	0	68.8	16.9	100	0			
2,4-Dinitrotoluene	77.38	10	100	0	77.4	13	138	0			
N-Nitrosodi-n-propylamine	71.46	10	100	0	71.5	9.93	122	0			
4-Nitrophenol	96.16	50	200	0	48.1	-20.5	87.4	0			
Pentachlorophenol	144.2	50	200	0	72.1	-0.355	114	0			
Phenol	81.16	10	200	0	40.6	7.53	73.1	0			
Pyrene	73.62	15	100	0	73.6	12.6	140	0			
1,2,4-Trichlorobenzene	68.44	10	100	0	68.4	17.4	98.7	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID LCSD-8864 Batch ID: 8864 Test Code: SW8270C Units: µg/L Analysis Date 10/12/2005 Prep Date 10/3/2005
Client ID: Run ID: ELMO_051012A SeqNo: 410871

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	65.84	10	100	0	65.8	11	123	75.04	13.1	30.5	
4-Chloro-3-methylphenol	137.4	20	200	0	68.7	15.4	119	151.7	9.87	28.6	
2-Chlorophenol	112.8	10	200	0	56.4	12.2	122	150	28.3	107	
1,4-Dichlorobenzene	51.84	10	100	0	51.8	16.9	100	68.78	28.1	62.1	
2,4-Dinitrotoluene	73.66	10	100	0	73.7	13	138	77.38	4.93	14.7	
N-Nitrosodi-n-propylamine	60.32	10	100	0	60.3	9.93	122	71.46	16.9	30.3	
4-Nitrophenol	26.08	50	200	0	13.0	12.5	87.4	96.16	0	36.3	J
Pentachlorophenol	46.76	50	200	0	23.4	3.55	114	144.2	0	49	J
Phenol	64.62	10	200	0	32.3	7.53	73.1	81.16	22.7	52.4	
Pyrene	73.1	15	100	0	73.1	12.6	140	73.62	0.709	16.3	
1,2,4-Trichlorobenzene	54.58	10	100	0	54.6	17.4	98.7	68.44	22.5	36.4	

Sample ID LCS-8897 Batch ID: 8897 Test Code: SW7470 Units: mg/L Analysis Date 10/6/2005 Prep Date 10/6/2005
Client ID: Run ID: MI-LA254_051006A SeqNo: 408248

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005624	0.0002	0.005	0	112	75.2	134	0			

Sample ID LCSD-8897 Batch ID: 8897 Test Code: SW7470 Units: mg/L Analysis Date 10/6/2005 Prep Date 10/6/2005
Client ID: Run ID: MI-LA254_051006A SeqNo: 408249

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005469	0.0002	0.005	0	109	75.2	134	0.005624	2.81	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID LCS-8884 Batch ID: 8884 Test Code: SW6010A Units: mg/L Analysis Date 10/6/2005 10:03:05 AM Prep Date 10/5/2005
Client ID: Run ID: ICP_051006B SeqNo: 408451

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4875	0.02	0.5	0	97.5	80	120	0			
Barium	0.4572	0.02	0.5	0	91.4	80	120	0			
Cadmium	0.4561	0.002	0.5	0	91.2	80	120	0			
Chromium	0.4746	0.006	0.5	0	94.9	80	120	0			
Lead	0.4596	0.005	0.5	0	91.9	80	120	0			
Selenium	0.4143	0.05	0.5	0	82.9	80	120	0			
Silver	0.4596	0.005	0.5	0	91.9	80	120	0			

Sample ID LCSD-8884 Batch ID: 8884 Test Code: SW6010A Units: mg/L Analysis Date 10/6/2005 10:06:23 AM Prep Date 10/5/2005
Client ID: Run ID: ICP_051006B SeqNo: 408452

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4937	0.02	0.5	0	98.7	80	120	0.4875	1.26	20	
Barium	0.4615	0.02	0.5	0	92.3	80	120	0.4572	0.939	20	
Cadmium	0.4612	0.002	0.5	0	92.2	80	120	0.4561	1.11	20	
Chromium	0.4796	0.006	0.5	0	95.9	80	120	0.4746	1.06	20	
Lead	0.4616	0.005	0.5	0	92.3	80	120	0.4596	0.431	20	
Selenium	0.425	0.05	0.5	0	85.0	80	120	0.4143	2.55	20	
Silver	0.4639	0.005	0.5	0	92.8	80	120	0.4596	0.936	20	

Sample ID LCS-8884 Batch ID: 8884 Test Code: SW6010A Units: mg/L Analysis Date 10/6/2005 2:19:10 PM Prep Date 10/5/2005
Client ID: Run ID: ICP_051006B SeqNo: 408649

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	47.33	1	50	0	94.7	80	120	0			
Magnesium	47.17	1	50	0	94.3	80	120	0			
Potassium	50.35	1	50	0	101	80	120	0			
Sodium	50.21	1	50	0	100	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509323
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID LCSD-8884 Batch ID: 8884 Test Code: SW6010A Units: mg/L Analysis Date 10/6/2005 2:20:38 PM Prep Date 10/5/2005
Client ID: Run ID: ICP_051006B SeqNo: 408650

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	48.32	1	50	0	96.6	80	120	47.33	0	20	
Magnesium	48.45	1	50	0	96.9	80	120	47.17	0	20	
Potassium	51.16	1	50	0	102	80	120	50.35	0	20	
Sodium	51.4	1	50	0	103	80	120	50.21	0	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 9/30/2005

Work Order Number 0509323 | Received by AT

Checklist completed by _____ 9/30/05
Signature | Date

Matrix | Carrier name | Client drop-off

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? 6° *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

QA / QC Package: Std ☐ Level 4 ☐ Other:

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

Client: Giant Refining Company - Ciniza

Address: Route 3 Box 7 Gallup, NM 87301

Phone #: 505 722 3833

Fax #: 505 7220210

Project Name: Ciniza Annual Groundwater Samples 2005

Project #:

Project Manager: Steve Morris

Sampler: Steve Morris

Sample Temperature: 6°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3		HEAL No.	BTEX + MTBE + ~~TPH~~'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, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem	ec / pH			Air Bubbles or Headspace (Y or N)
9/27/05	0845	H_2O	OW-12	2 VOAs	X			0509323-1	X																
9/27/05	1030	"	OW-13	"				-2	X																
9/29/05	1400	"	OW-14	"				-3	X																
9/28/05	1230	"	OW-29	"				-4	X																
9/29/05	0845	"	OW-30	"				-5	X																
9/29/05	1045	"	OW-11					-6								X			X	X	X	X			
			Trip Blank					-7	X																

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
9/30/05	0850	Steve Morris	[signature] 9/30/05 0850
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: Gen Chem = Cations, Anions, pH, and conductivity. ~~See attached Mr. Enfield Skinner Lista~~ AT 9/30/05

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 04, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Ciniza Annual GW Samples 2005 Order No.: 0510131

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 6 samples on 10/14/2005 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

Andy Freeman
Business Manager

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Project: Ciniza Annual GW Samples 2005
Lab Order: 0510131

CASE NARRATIVE

Analytical Comments for METHOD 8270_W, SAMPLE 0510131-04B: Sample was originally shot with non-detect results and low acid surrogates recovered. Sample was re-extracted out of hold time and reanalyzed. The recovery for the acid surrogates were acceptable and all analytes were still non-detect.

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-1
Lab Order: 0510131
Collection Date: 10/12/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	0.76	0.10		mg/L	1	10/14/2005
Chloride	45	0.50		mg/L	5	10/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/14/2005
Sulfate	150	2.5		mg/L	5	10/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	10/14/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/18/2005 5:17:58 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/18/2005 5:17:58 PM
Surr: DNOP	123	58-140		%REC	1	10/18/2005 5:17:58 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/18/2005 11:21:11 PM
Surr: BFB	102	79.7-118		%REC	1	10/18/2005 11:21:11 PM
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/23/2005
Toluene	ND	1.0		µg/L	1	10/23/2005
Ethylbenzene	ND	1.0		µg/L	1	10/23/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/23/2005
Naphthalene	ND	2.0		µg/L	1	10/23/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
Acetone	ND	10		µg/L	1	10/23/2005
Bromobenzene	ND	1.0		µg/L	1	10/23/2005
Bromochloromethane	ND	1.0		µg/L	1	10/23/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/23/2005
Bromoform	ND	1.0		µg/L	1	10/23/2005
Bromomethane	ND	2.0		µg/L	1	10/23/2005
2-Butanone	ND	10		µg/L	1	10/23/2005
Carbon disulfide	ND	10		µg/L	1	10/23/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/23/2005
Chlorobenzene	ND	1.0		µg/L	1	10/23/2005
Chloroethane	ND	2.0		µg/L	1	10/23/2005
Chloroform	ND	1.0		µg/L	1	10/23/2005
Chloromethane	ND	1.0		µg/L	1	10/23/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005

Qualifiers:
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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-1
Lab Order: 0510131
Collection Date: 10/12/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/23/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/23/2005
Dibromomethane	ND	2.0		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/23/2005
2-Hexanone	ND	10		µg/L	1	10/23/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/23/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/23/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/23/2005
Methylene Chloride	ND	3.0		µg/L	1	10/23/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/23/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
Styrene	ND	1.0		µg/L	1	10/23/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/23/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/23/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/23/2005
Vinyl chloride	ND	1.0		µg/L	1	10/23/2005
Xylenes, Total	ND	1.0		µg/L	1	10/23/2005
Surr: 1,2-Dichloroethane-d4	94.4	69.9-130		%REC	1	10/23/2005
Surr: 4-Bromofluorobenzene	104	71.2-123		%REC	1	10/23/2005

Qualifiers:
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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0510131
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-01

Client Sample ID: MW-1
Collection Date: 10/12/2005 10:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	93.0	73.9-134		%REC	1	10/23/2005
Surr: Toluene-d8	102	81.9-122		%REC	1	10/23/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/21/2005
Acenaphthylene	ND	10		µg/L	1	10/21/2005
Aniline	ND	20		µg/L	1	10/21/2005
Anthracene	ND	10		µg/L	1	10/21/2005
Azobenzene	ND	10		µg/L	1	10/21/2005
Benz(a)anthracene	ND	15		µg/L	1	10/21/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/21/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/21/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/21/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/21/2005
Benzoic acid	ND	50		µg/L	1	10/21/2005
Benzyl alcohol	ND	20		µg/L	1	10/21/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/21/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/21/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/21/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/21/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/21/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/21/2005
Carbazole	ND	10		µg/L	1	10/21/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/21/2005
4-Chloroaniline	ND	20		µg/L	1	10/21/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/21/2005
2-Chlorophenol	ND	10		µg/L	1	10/21/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/21/2005
Chrysene	ND	15		µg/L	1	10/21/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/21/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/21/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/21/2005
Dibenzofuran	ND	10		µg/L	1	10/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/21/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/21/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/21/2005
Diethyl phthalate	ND	10		µg/L	1	10/21/2005
Dimethyl phthalate	ND	10		µg/L	1	10/21/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/21/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/21/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/21/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/21/2005

Qualifiers:
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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-1
Lab Order: 0510131
Collection Date: 10/12/2005 10:45:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dinitrotoluene	ND	10		µg/L	1	10/21/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/21/2005
Fluoranthene	ND	10		µg/L	1	10/21/2005
Fluorene	ND	10		µg/L	1	10/21/2005
Hexachlorobenzene	ND	10		µg/L	1	10/21/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/21/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/21/2005
Hexachloroethane	ND	10		µg/L	1	10/21/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/21/2005
Isophorone	ND	10		µg/L	1	10/21/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/21/2005
2-Methylphenol	ND	15		µg/L	1	10/21/2005
3+4-Methylphenol	ND	20		µg/L	1	10/21/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/21/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/21/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/21/2005
Naphthalene	ND	10		µg/L	1	10/21/2005
2-Nitroaniline	ND	50		µg/L	1	10/21/2005
3-Nitroaniline	ND	50		µg/L	1	10/21/2005
4-Nitroaniline	ND	20		µg/L	1	10/21/2005
Nitrobenzene	ND	10		µg/L	1	10/21/2005
2-Nitrophenol	ND	15		µg/L	1	10/21/2005
4-Nitrophenol	ND	50		µg/L	1	10/21/2005
Pentachlorophenol	ND	50		µg/L	1	10/21/2005
Phenanthrene	ND	10		µg/L	1	10/21/2005
Phenol	ND	10		µg/L	1	10/21/2005
Pyrene	ND	15		µg/L	1	10/21/2005
Pyridine	ND	30		µg/L	1	10/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/21/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/21/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/21/2005
Surr: 2,4,6-Tribromophenol	59.8	16.6-150		%REC	1	10/21/2005
Surr: 2-Fluorobiphenyl	47.7	19.6-134		%REC	1	10/21/2005
Surr: 2-Fluorophenol	43.4	9.54-113		%REC	1	10/21/2005
Surr: 4-Terphenyl-d14	83.9	22.7-145		%REC	1	10/21/2005
Surr: Nitrobenzene-d5	53.2	14.6-134		%REC	1	10/21/2005
Surr: Phenol-d6	27.1	10.7-80.3		%REC	1	10/21/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	1100	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/14/2005

Qualifiers:
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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0510131
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-01

Client Sample ID: MW-1
Collection Date: 10/12/2005 10:45:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 10:09:24 AM
Barium	ND	0.020		mg/L	1	10/27/2005 10:09:24 AM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 10:09:24 AM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 10:09:24 AM
Chromium	ND	0.0060		mg/L	1	10/27/2005 10:09:24 AM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 10:09:24 AM
Lead	ND	0.0050		mg/L	1	10/27/2005 10:09:24 AM
Nickel	ND	0.010		mg/L	1	10/27/2005 10:09:24 AM
Selenium	ND	0.020		mg/L	1	10/27/2005 10:09:24 AM
Silver	ND	0.0050		mg/L	1	10/27/2005 10:09:24 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 10:09:24 AM
Zinc	ND	0.050		mg/L	1	10/27/2005 10:09:24 AM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 4:34:22 PM
Barium	ND	0.020		mg/L	1	10/27/2005 4:34:22 PM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 4:34:22 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 4:34:22 PM
Calcium	1.7	1.0		mg/L	1	10/27/2005 4:34:22 PM
Chromium	ND	0.0060		mg/L	1	10/27/2005 4:34:22 PM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 4:34:22 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 9:28:23 AM
Magnesium	ND	1.0		mg/L	1	10/27/2005 4:34:22 PM
Nickel	ND	0.010		mg/L	1	10/27/2005 4:34:22 PM
Potassium	ND	1.0		mg/L	1	10/27/2005 4:34:22 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 4:34:22 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 4:34:22 PM
Sodium	270	10		mg/L	10	10/28/2005 10:21:12 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 4:34:22 PM
Zinc	ND	0.050		mg/L	1	10/27/2005 4:34:22 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	9.08	0.010		pH units	1	10/18/2005

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-4
Lab Order: 0510131
Collection Date: 10/12/2005 7:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	0.34	0.10		mg/L	1	10/14/2005
Chloride	16	0.10		mg/L	1	10/14/2005
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/14/2005
Sulfate	150	2.5		mg/L	5	10/27/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	10/14/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/18/2005 5:50:22 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/18/2005 5:50:22 PM
Surr: DNOP	125	58-140		%REC	1	10/18/2005 5:50:22 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/18/2005 11:52:30 PM
Surr: BFB	98.4	79.7-118		%REC	1	10/18/2005 11:52:30 PM
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/23/2005
Toluene	ND	1.0		µg/L	1	10/23/2005
Ethylbenzene	ND	1.0		µg/L	1	10/23/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/23/2005
Naphthalene	ND	2.0		µg/L	1	10/23/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
Acetone	ND	10		µg/L	1	10/23/2005
Bromobenzene	ND	1.0		µg/L	1	10/23/2005
Bromochloromethane	ND	1.0		µg/L	1	10/23/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/23/2005
Bromoform	ND	1.0		µg/L	1	10/23/2005
Bromomethane	ND	2.0		µg/L	1	10/23/2005
2-Butanone	ND	10		µg/L	1	10/23/2005
Carbon disulfide	ND	10		µg/L	1	10/23/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/23/2005
Chlorobenzene	ND	1.0		µg/L	1	10/23/2005
Chloroethane	ND	2.0		µg/L	1	10/23/2005
Chloroform	ND	1.0		µg/L	1	10/23/2005
Chloromethane	ND	1.0		µg/L	1	10/23/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-4
Lab Order: 0510131
Collection Date: 10/12/2005 7:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/23/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/23/2005
Dibromomethane	ND	2.0		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/23/2005
2-Hexanone	ND	10		µg/L	1	10/23/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/23/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/23/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/23/2005
Methylene Chloride	ND	3.0		µg/L	1	10/23/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/23/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
Styrene	ND	1.0		µg/L	1	10/23/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/23/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/23/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/23/2005
Vinyl chloride	ND	1.0		µg/L	1	10/23/2005
Xylenes, Total	ND	1.0		µg/L	1	10/23/2005
Surr: 1,2-Dichloroethane-d4	98.0	69.9-130		%REC	1	10/23/2005
Surr: 4-Bromofluorobenzene	101	71.2-123		%REC	1	10/23/2005

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R - RPD outside accepted recovery limits
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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-4
Lab Order: 0510131
Collection Date: 10/12/2005 7:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	94.8	73.9-134		%REC	1	10/23/2005
Surr: Toluene-d8	98.6	81.9-122		%REC	1	10/23/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/23/2005
Acenaphthylene	ND	10		µg/L	1	10/23/2005
Aniline	ND	20		µg/L	1	10/23/2005
Anthracene	ND	10		µg/L	1	10/23/2005
Azobenzene	ND	10		µg/L	1	10/23/2005
Benz(a)anthracene	ND	15		µg/L	1	10/23/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/23/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/23/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/23/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/23/2005
Benzoic acid	ND	50		µg/L	1	10/23/2005
Benzyl alcohol	ND	20		µg/L	1	10/23/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/23/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/23/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/23/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/23/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/23/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/23/2005
Carbazole	ND	10		µg/L	1	10/23/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/23/2005
4-Chloroaniline	ND	20		µg/L	1	10/23/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/23/2005
2-Chlorophenol	ND	10		µg/L	1	10/23/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/23/2005
Chrysene	ND	15		µg/L	1	10/23/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/23/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/23/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/23/2005
Dibenzofuran	ND	10		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/23/2005
Diethyl phthalate	ND	10		µg/L	1	10/23/2005
Dimethyl phthalate	ND	10		µg/L	1	10/23/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/23/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/23/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/23/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/23/2005

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R - RPD outside accepted recovery limits
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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-4
Lab Order: 0510131
Collection Date: 10/12/2005 7:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dinitrotoluene	ND	10		µg/L	1	10/23/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/23/2005
Fluoranthene	ND	10		µg/L	1	10/23/2005
Fluorene	ND	10		µg/L	1	10/23/2005
Hexachlorobenzene	ND	10		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/23/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/23/2005
Hexachloroethane	ND	10		µg/L	1	10/23/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/23/2005
Isophorone	ND	10		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/23/2005
2-Methylphenol	ND	15		µg/L	1	10/23/2005
3+4-Methylphenol	ND	20		µg/L	1	10/23/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/23/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/23/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/23/2005
Naphthalene	ND	10		µg/L	1	10/23/2005
2-Nitroaniline	ND	50		µg/L	1	10/23/2005
3-Nitroaniline	ND	50		µg/L	1	10/23/2005
4-Nitroaniline	ND	20		µg/L	1	10/23/2005
Nitrobenzene	ND	10		µg/L	1	10/23/2005
2-Nitrophenol	ND	15		µg/L	1	10/23/2005
4-Nitrophenol	ND	50		µg/L	1	10/23/2005
Pentachlorophenol	ND	50		µg/L	1	10/23/2005
Phenanthrene	ND	10		µg/L	1	10/23/2005
Phenol	ND	10		µg/L	1	10/23/2005
Pyrene	ND	15		µg/L	1	10/23/2005
Pyridine	ND	30		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/23/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/23/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/23/2005
Surr: 2,4,6-Tribromophenol	59.2	16.6-150		%REC	1	10/23/2005
Surr: 2-Fluorobiphenyl	44.1	19.6-134		%REC	1	10/23/2005
Surr: 2-Fluorophenol	41.3	9.54-113		%REC	1	10/23/2005
Surr: 4-Terphenyl-d14	94.8	22.7-145		%REC	1	10/23/2005
Surr: Nitrobenzene-d5	50.0	14.6-134		%REC	1	10/23/2005
Surr: Phenol-d6	22.2	10.7-80.3		%REC	1	10/23/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	1200	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/17/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-4
Lab Order: 0510131
Collection Date: 10/12/2005 7:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 10:13:58 AM
Barium	ND	0.020		mg/L	1	10/27/2005 10:13:58 AM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 10:13:58 AM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 10:13:58 AM
Chromium	ND	0.0060		mg/L	1	10/27/2005 10:13:58 AM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 10:13:58 AM
Lead	ND	0.0050		mg/L	1	10/27/2005 10:13:58 AM
Nickel	ND	0.010		mg/L	1	10/27/2005 10:13:58 AM
Selenium	ND	0.020		mg/L	1	10/27/2005 10:13:58 AM
Silver	ND	0.0050		mg/L	1	10/27/2005 10:13:58 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 10:13:58 AM
Zinc	ND	0.050		mg/L	1	10/27/2005 10:13:58 AM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 4:38:36 PM
Barium	0.022	0.020		mg/L	1	10/27/2005 4:38:36 PM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 4:38:36 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 4:38:36 PM
Calcium	1.8	1.0		mg/L	1	10/27/2005 4:38:36 PM
Chromium	ND	0.0060		mg/L	1	10/27/2005 4:38:36 PM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 4:38:36 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 9:30:18 AM
Magnesium	ND	1.0		mg/L	1	10/27/2005 4:38:36 PM
Nickel	ND	0.010		mg/L	1	10/27/2005 4:38:36 PM
Potassium	ND	1.0		mg/L	1	10/27/2005 4:38:36 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 4:38:36 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 4:38:36 PM
Sodium	280	10		mg/L	10	10/28/2005 10:23:59 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 4:38:36 PM
Zinc	ND	0.050		mg/L	1	10/27/2005 4:38:36 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	8.80	0.010		pH units	1	10/18/2005

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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-5
Lab Order: 0510131
Collection Date: 10/11/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	0.78	0.10		mg/L	1	10/14/2005
Chloride	56	0.50		mg/L	5	10/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/14/2005
Sulfate	160	2.5		mg/L	5	10/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	10/14/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/18/2005 6:22:50 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/18/2005 6:22:50 PM
Surr: DNOP	127	58-140		%REC	1	10/18/2005 6:22:50 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/19/2005 12:23:41 AM
Surr: BFB	100	79.7-118		%REC	1	10/19/2005 12:23:41 AM
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/23/2005
Toluene	ND	1.0		µg/L	1	10/23/2005
Ethylbenzene	ND	1.0		µg/L	1	10/23/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/23/2005
Naphthalene	ND	2.0		µg/L	1	10/23/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
Acetone	ND	10		µg/L	1	10/23/2005
Bromobenzene	ND	1.0		µg/L	1	10/23/2005
Bromochloromethane	ND	1.0		µg/L	1	10/23/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/23/2005
Bromoform	ND	1.0		µg/L	1	10/23/2005
Bromomethane	ND	2.0		µg/L	1	10/23/2005
2-Butanone	ND	10		µg/L	1	10/23/2005
Carbon disulfide	ND	10		µg/L	1	10/23/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/23/2005
Chlorobenzene	ND	1.0		µg/L	1	10/23/2005
Chloroethane	ND	2.0		µg/L	1	10/23/2005
Chloroform	ND	1.0		µg/L	1	10/23/2005
Chloromethane	ND	1.0		µg/L	1	10/23/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-5
Lab Order: 0510131
Collection Date: 10/11/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/23/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/23/2005
Dibromomethane	ND	2.0		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/23/2005
2-Hexanone	ND	10		µg/L	1	10/23/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/23/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/23/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/23/2005
Methylene Chloride	ND	3.0		µg/L	1	10/23/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/23/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
Styrene	ND	1.0		µg/L	1	10/23/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/23/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/23/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/23/2005
Vinyl chloride	ND	1.0		µg/L	1	10/23/2005
Xylenes, Total	ND	1.0		µg/L	1	10/23/2005
Surr: 1,2-Dichloroethane-d4	95.5	69.9-130		%REC	1	10/23/2005
Surr: 4-Bromofluorobenzene	104	71.2-123		%REC	1	10/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-5
Lab Order: 0510131
Collection Date: 10/11/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	95.5	73.9-134		%REC	1	10/23/2005
Surr: Toluene-d8	98.9	81.9-122		%REC	1	10/23/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/23/2005
Acenaphthylene	ND	10		µg/L	1	10/23/2005
Aniline	ND	20		µg/L	1	10/23/2005
Anthracene	ND	10		µg/L	1	10/23/2005
Azobenzene	ND	10		µg/L	1	10/23/2005
Benz(a)anthracene	ND	15		µg/L	1	10/23/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/23/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/23/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/23/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/23/2005
Benzoic acid	ND	50		µg/L	1	10/23/2005
Benzyl alcohol	ND	20		µg/L	1	10/23/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/23/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/23/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/23/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/23/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/23/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/23/2005
Carbazole	ND	10		µg/L	1	10/23/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/23/2005
4-Chloroaniline	ND	20		µg/L	1	10/23/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/23/2005
2-Chlorophenol	ND	10		µg/L	1	10/23/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/23/2005
Chrysene	ND	15		µg/L	1	10/23/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/23/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/23/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/23/2005
Dibenzofuran	ND	10		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/23/2005
Diethyl phthalate	ND	10		µg/L	1	10/23/2005
Dimethyl phthalate	ND	10		µg/L	1	10/23/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/23/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/23/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/23/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/23/2005

Qualifiers:
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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-5
Lab Order: 0510131
Collection Date: 10/11/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dinitrotoluene	ND	10		µg/L	1	10/23/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/23/2005
Fluoranthene	ND	10		µg/L	1	10/23/2005
Fluorene	ND	10		µg/L	1	10/23/2005
Hexachlorobenzene	ND	10		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/23/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/23/2005
Hexachloroethane	ND	10		µg/L	1	10/23/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/23/2005
Isophorone	ND	10		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/23/2005
2-Methylphenol	ND	15		µg/L	1	10/23/2005
3+4-Methylphenol	ND	20		µg/L	1	10/23/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/23/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/23/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/23/2005
Naphthalene	ND	10		µg/L	1	10/23/2005
2-Nitroaniline	ND	50		µg/L	1	10/23/2005
3-Nitroaniline	ND	50		µg/L	1	10/23/2005
4-Nitroaniline	ND	20		µg/L	1	10/23/2005
Nitrobenzene	ND	10		µg/L	1	10/23/2005
2-Nitrophenol	ND	15		µg/L	1	10/23/2005
4-Nitrophenol	ND	50		µg/L	1	10/23/2005
Pentachlorophenol	ND	50		µg/L	1	10/23/2005
Phenanthrene	ND	10		µg/L	1	10/23/2005
Phenol	ND	10		µg/L	1	10/23/2005
Pyrene	ND	15		µg/L	1	10/23/2005
Pyridine	ND	30		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/23/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/23/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/23/2005
Surr: 2,4,6-Tribromophenol	59.4	16.6-150		%REC	1	10/23/2005
Surr: 2-Fluorobiphenyl	43.5	19.6-134		%REC	1	10/23/2005
Surr: 2-Fluorophenol	31.4	9.54-113		%REC	1	10/23/2005
Surr: 4-Terphenyl-d14	97.4	22.7-145		%REC	1	10/23/2005
Surr: Nitrobenzene-d5	51.7	14.6-134		%REC	1	10/23/2005
Surr: Phenol-d6	16.3	10.7-80.3		%REC	1	10/23/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	1200	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/17/2005

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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: MW-5
Lab Order: 0510131
Collection Date: 10/11/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 10:18:09 AM
Barium	ND	0.020		mg/L	1	10/27/2005 10:18:09 AM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 10:18:09 AM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 10:18:09 AM
Chromium	ND	0.0060		mg/L	1	10/27/2005 10:18:09 AM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 10:18:09 AM
Lead	ND	0.0050		mg/L	1	10/27/2005 10:18:09 AM
Nickel	ND	0.010		mg/L	1	10/27/2005 10:18:09 AM
Selenium	ND	0.020		mg/L	1	10/27/2005 10:18:09 AM
Silver	ND	0.0050		mg/L	1	10/27/2005 10:18:09 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 10:18:09 AM
Zinc	ND	0.050		mg/L	1	10/27/2005 10:18:09 AM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 4:42:45 PM
Barium	ND	0.020		mg/L	1	10/27/2005 4:42:45 PM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 4:42:45 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 4:42:45 PM
Calcium	1.5	1.0		mg/L	1	10/27/2005 4:42:45 PM
Chromium	ND	0.0060		mg/L	1	10/27/2005 4:42:45 PM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 4:42:45 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 9:32:09 AM
Magnesium	ND	1.0		mg/L	1	10/27/2005 4:42:45 PM
Nickel	ND	0.010		mg/L	1	10/27/2005 4:42:45 PM
Potassium	ND	1.0		mg/L	1	10/27/2005 4:42:45 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 4:42:45 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 4:42:45 PM
Sodium	250	10		mg/L	10	10/28/2005 10:26:43 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 4:42:45 PM
Zinc	ND	0.050		mg/L	1	10/27/2005 4:42:45 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	9.07	0.010		pH units	1	10/18/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-2
Lab Order: 0510131
Collection Date: 10/12/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	0.74	0.10		mg/L	1	10/14/2005
Chloride	1700	5.0		mg/L	50	10/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/14/2005
Sulfate	1500	25		mg/L	50	10/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	10/14/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/18/2005 6:55:20 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/18/2005 6:55:20 PM
Surr: DNOP	110	58-140		%REC	1	10/18/2005 6:55:20 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.51	0.10		mg/L	2	10/19/2005 2:08:42 PM
Surr: BFB	103	79.7-118		%REC	2	10/19/2005 2:08:42 PM
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/23/2005
Toluene	ND	1.0		µg/L	1	10/23/2005
Ethylbenzene	ND	1.0		µg/L	1	10/23/2005
Methyl tert-butyl ether (MTBE)	8.3	1.0		µg/L	1	10/23/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/23/2005
Naphthalene	ND	2.0		µg/L	1	10/23/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
Acetone	ND	10		µg/L	1	10/23/2005
Bromobenzene	ND	1.0		µg/L	1	10/23/2005
Bromochloromethane	ND	1.0		µg/L	1	10/23/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/23/2005
Bromoform	ND	1.0		µg/L	1	10/23/2005
Bromomethane	ND	2.0		µg/L	1	10/23/2005
2-Butanone	ND	10		µg/L	1	10/23/2005
Carbon disulfide	ND	10		µg/L	1	10/23/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/23/2005
Chlorobenzene	ND	1.0		µg/L	1	10/23/2005
Chloroethane	ND	2.0		µg/L	1	10/23/2005
Chloroform	ND	1.0		µg/L	1	10/23/2005
Chloromethane	ND	1.0		µg/L	1	10/23/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005

Qualifiers:

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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-2
Lab Order: 0510131
Collection Date: 10/12/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/23/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/23/2005
Dibromomethane	ND	2.0		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/23/2005
2-Hexanone	ND	10		µg/L	1	10/23/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/23/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/23/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/23/2005
Methylene Chloride	ND	3.0		µg/L	1	10/23/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/23/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
Styrene	ND	1.0		µg/L	1	10/23/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/23/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/23/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/23/2005
Vinyl chloride	ND	1.0		µg/L	1	10/23/2005
Xylenes, Total	ND	1.0		µg/L	1	10/23/2005
Surr: 1,2-Dichloroethane-d4	102	69.9-130		%REC	1	10/23/2005
Surr: 4-Bromofluorobenzene	97.6	71.2-123		%REC	1	10/23/2005

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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-2
Lab Order: 0510131
Collection Date: 10/12/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	99.7	73.9-134		%REC	1	10/23/2005
Surr: Toluene-d8	91.0	81.9-122		%REC	1	10/23/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	11/2/2005
Acenaphthylene	ND	10		µg/L	1	11/2/2005
Aniline	ND	20		µg/L	1	11/2/2005
Anthracene	ND	10		µg/L	1	11/2/2005
Azobenzene	ND	10		µg/L	1	11/2/2005
Benz(a)anthracene	ND	15		µg/L	1	11/2/2005
Benzo(a)pyrene	ND	15		µg/L	1	11/2/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	11/2/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/2/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	11/2/2005
Benzoic acid	ND	50		µg/L	1	11/2/2005
Benzyl alcohol	ND	20		µg/L	1	11/2/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/2/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/2/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/2/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/2/2005
Butyl benzyl phthalate	ND	15		µg/L	1	11/2/2005
Carbazole	ND	10		µg/L	1	11/2/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/2/2005
4-Chloroaniline	ND	20		µg/L	1	11/2/2005
2-Chloronaphthalene	ND	10		µg/L	1	11/2/2005
2-Chlorophenol	ND	10		µg/L	1	11/2/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/2/2005
Chrysene	ND	15		µg/L	1	11/2/2005
Di-n-butyl phthalate	ND	10		µg/L	1	11/2/2005
Di-n-octyl phthalate	ND	15		µg/L	1	11/2/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/2/2005
Dibenzofuran	ND	10		µg/L	1	11/2/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	11/2/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/2/2005
Diethyl phthalate	ND	10		µg/L	1	11/2/2005
Dimethyl phthalate	ND	10		µg/L	1	11/2/2005
2,4-Dichlorophenol	ND	10		µg/L	1	11/2/2005
2,4-Dimethylphenol	ND	10		µg/L	1	11/2/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/2/2005
2,4-Dinitrophenol	ND	50		µg/L	1	11/2/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-2
Lab Order: 0510131
Collection Date: 10/12/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	11/2/2005
Fluoranthene	ND	10		µg/L	1	11/2/2005
Fluorene	ND	10		µg/L	1	11/2/2005
Hexachlorobenzene	ND	10		µg/L	1	11/2/2005
Hexachlorobutadiene	ND	10		µg/L	1	11/2/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/2/2005
Hexachloroethane	ND	10		µg/L	1	11/2/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/2/2005
Isophorone	ND	10		µg/L	1	11/2/2005
2-Methylnaphthalene	ND	10		µg/L	1	11/2/2005
2-Methylphenol	ND	15		µg/L	1	11/2/2005
3+4-Methylphenol	ND	20		µg/L	1	11/2/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	11/2/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/2/2005
Naphthalene	ND	10		µg/L	1	11/2/2005
2-Nitroaniline	ND	50		µg/L	1	11/2/2005
3-Nitroaniline	ND	50		µg/L	1	11/2/2005
4-Nitroaniline	ND	20		µg/L	1	11/2/2005
Nitrobenzene	ND	10		µg/L	1	11/2/2005
2-Nitrophenol	ND	15		µg/L	1	11/2/2005
4-Nitrophenol	ND	50		µg/L	1	11/2/2005
Pentachlorophenol	ND	50		µg/L	1	11/2/2005
Phenanthrene	ND	10		µg/L	1	11/2/2005
Phenol	ND	10		µg/L	1	11/2/2005
Pyrene	ND	15		µg/L	1	11/2/2005
Pyridine	ND	30		µg/L	1	11/2/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/2/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/2/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/2/2005
Surr: 2,4,6-Tribromophenol	73.8	16.6-150		%REC	1	11/2/2005
Surr: 2-Fluorobiphenyl	66.9	19.6-134		%REC	1	11/2/2005
Surr: 2-Fluorophenol	52.3	9.54-113		%REC	1	11/2/2005
Surr: 4-Terphenyl-d14	69.8	22.7-145		%REC	1	11/2/2005
Surr: Nitrobenzene-d5	68.1	14.6-134		%REC	1	11/2/2005
Surr: Phenol-d6	40.1	10.7-80.3		%REC	1	11/2/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	8800	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/17/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-2
Lab Order: 0510131
Collection Date: 10/12/2005 2:00:00 PM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-04
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 10:22:18 AM
Barium	ND	0.020		mg/L	1	10/27/2005 10:22:18 AM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 10:22:18 AM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 10:22:18 AM
Chromium	ND	0.0060		mg/L	1	10/27/2005 10:22:18 AM
Cobalt	0.0072	0.0060		mg/L	1	10/27/2005 10:22:18 AM
Lead	ND	0.0050		mg/L	1	10/27/2005 10:22:18 AM
Nickel	0.035	0.010		mg/L	1	10/27/2005 10:22:18 AM
Selenium	ND	0.020		mg/L	1	10/27/2005 10:22:18 AM
Silver	ND	0.0050		mg/L	1	10/27/2005 10:22:18 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 10:22:18 AM
Zinc	ND	0.050		mg/L	1	10/27/2005 10:22:18 AM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 4:46:54 PM
Barium	ND	0.020		mg/L	1	10/27/2005 4:46:54 PM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 4:46:54 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 4:46:54 PM
Calcium	180	1.0		mg/L	1	10/27/2005 4:46:54 PM
Chromium	0.024	0.0060		mg/L	1	10/27/2005 4:46:54 PM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 4:46:54 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 9:34:43 AM
Magnesium	58	1.0		mg/L	1	10/27/2005 4:46:54 PM
Nickel	0.029	0.010		mg/L	1	10/27/2005 4:46:54 PM
Potassium	1.4	1.0		mg/L	1	10/27/2005 4:46:54 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 4:46:54 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 4:46:54 PM
Sodium	1900	100		mg/L	100	10/28/2005 2:20:22 PM
Vanadium	ND	0.050		mg/L	1	10/27/2005 4:46:54 PM
Zinc	ND	0.050		mg/L	1	10/27/2005 4:46:54 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	7.58	0.010		pH units	1	10/18/2005

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-4
Lab Order: 0510131
Collection Date: 10/13/2005 11:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.0	0.10		mg/L	1	10/14/2005
Chloride	51	0.50		mg/L	5	10/24/2005
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	10/14/2005
Sulfate	150	2.5		mg/L	5	10/24/2005
Nitrate (As N)+Nitrite (As N)	ND	0.50		mg/L	5	10/14/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/18/2005 7:27:52 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/18/2005 7:27:52 PM
Surr: DNOP	113	58-140		%REC	1	10/18/2005 7:27:52 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/19/2005 1:26:14 AM
Surr: BFB	98.6	79.7-118		%REC	1	10/19/2005 1:26:14 AM
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/23/2005
Toluene	ND	1.0		µg/L	1	10/23/2005
Ethylbenzene	ND	1.0		µg/L	1	10/23/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/23/2005
Naphthalene	ND	2.0		µg/L	1	10/23/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
Acetone	ND	10		µg/L	1	10/23/2005
Bromobenzene	ND	1.0		µg/L	1	10/23/2005
Bromochloromethane	ND	1.0		µg/L	1	10/23/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/23/2005
Bromoform	ND	1.0		µg/L	1	10/23/2005
Bromomethane	ND	2.0		µg/L	1	10/23/2005
2-Butanone	ND	10		µg/L	1	10/23/2005
Carbon disulfide	ND	10		µg/L	1	10/23/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/23/2005
Chlorobenzene	ND	1.0		µg/L	1	10/23/2005
Chloroethane	ND	2.0		µg/L	1	10/23/2005
Chloroform	ND	1.0		µg/L	1	10/23/2005
Chloromethane	ND	1.0		µg/L	1	10/23/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
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* - Value exceeds Maximum Contaminant Level
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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-4
Lab Order: 0510131
Collection Date: 10/13/2005 11:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/23/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/23/2005
Dibromomethane	ND	2.0		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/23/2005
2-Hexanone	ND	10		µg/L	1	10/23/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/23/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/23/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/23/2005
Methylene Chloride	ND	3.0		µg/L	1	10/23/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/23/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
Styrene	ND	1.0		µg/L	1	10/23/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/23/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/23/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/23/2005
Vinyl chloride	ND	1.0		µg/L	1	10/23/2005
Xylenes, Total	ND	1.0		µg/L	1	10/23/2005
Surr: 1,2-Dichloroethane-d4	99.8	69.9-130		%REC	1	10/23/2005
Surr: 4-Bromofluorobenzene	102	71.2-123		%REC	1	10/23/2005

Qualifiers:
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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-4
Lab Order: 0510131
Collection Date: 10/13/2005 11:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	100	73.9-134		%REC	1	10/23/2005
Surr: Toluene-d8	101	81.9-122		%REC	1	10/23/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	10/23/2005
Acenaphthylene	ND	10		µg/L	1	10/23/2005
Aniline	ND	20		µg/L	1	10/23/2005
Anthracene	ND	10		µg/L	1	10/23/2005
Azobenzene	ND	10		µg/L	1	10/23/2005
Benz(a)anthracene	ND	15		µg/L	1	10/23/2005
Benzo(a)pyrene	ND	15		µg/L	1	10/23/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	10/23/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	10/23/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	10/23/2005
Benzoic acid	ND	50		µg/L	1	10/23/2005
Benzyl alcohol	ND	20		µg/L	1	10/23/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	10/23/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	10/23/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	10/23/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	10/23/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	10/23/2005
Butyl benzyl phthalate	ND	15		µg/L	1	10/23/2005
Carbazole	ND	10		µg/L	1	10/23/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	10/23/2005
4-Chloroaniline	ND	20		µg/L	1	10/23/2005
2-Chloronaphthalene	ND	10		µg/L	1	10/23/2005
2-Chlorophenol	ND	10		µg/L	1	10/23/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	10/23/2005
Chrysene	ND	15		µg/L	1	10/23/2005
Di-n-butyl phthalate	ND	10		µg/L	1	10/23/2005
Di-n-octyl phthalate	ND	15		µg/L	1	10/23/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	10/23/2005
Dibenzofuran	ND	10		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	10/23/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	10/23/2005
Diethyl phthalate	ND	10		µg/L	1	10/23/2005
Dimethyl phthalate	ND	10		µg/L	1	10/23/2005
2,4-Dichlorophenol	ND	10		µg/L	1	10/23/2005
2,4-Dimethylphenol	ND	10		µg/L	1	10/23/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	10/23/2005
2,4-Dinitrophenol	ND	50		µg/L	1	10/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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* - Value exceeds Maximum Contaminant Level
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Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-4
Lab Order: 0510131
Collection Date: 10/13/2005 11:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dinitrotoluene	ND	10		µg/L	1	10/23/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	10/23/2005
Fluoranthene	ND	10		µg/L	1	10/23/2005
Fluorene	ND	10		µg/L	1	10/23/2005
Hexachlorobenzene	ND	10		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	10		µg/L	1	10/23/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	10/23/2005
Hexachloroethane	ND	10		µg/L	1	10/23/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/23/2005
Isophorone	ND	10		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	10		µg/L	1	10/23/2005
2-Methylphenol	ND	15		µg/L	1	10/23/2005
3+4-Methylphenol	ND	20		µg/L	1	10/23/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/23/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	10/23/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/23/2005
Naphthalene	ND	10		µg/L	1	10/23/2005
2-Nitroaniline	ND	50		µg/L	1	10/23/2005
3-Nitroaniline	ND	50		µg/L	1	10/23/2005
4-Nitroaniline	ND	20		µg/L	1	10/23/2005
Nitrobenzene	ND	10		µg/L	1	10/23/2005
2-Nitrophenol	ND	15		µg/L	1	10/23/2005
4-Nitrophenol	ND	50		µg/L	1	10/23/2005
Pentachlorophenol	ND	50		µg/L	1	10/23/2005
Phenanthrene	ND	10		µg/L	1	10/23/2005
Phenol	ND	10		µg/L	1	10/23/2005
Pyrene	ND	15		µg/L	1	10/23/2005
Pyridine	ND	30		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/23/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/23/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	10/23/2005
Surr: 2,4,6-Tribromophenol	55.5	16.6-150		%REC	1	10/23/2005
Surr: 2-Fluorobiphenyl	45.8	19.6-134		%REC	1	10/23/2005
Surr: 2-Fluorophenol	28.8	9.54-113		%REC	1	10/23/2005
Surr: 4-Terphenyl-d14	80.2	22.7-145		%REC	1	10/23/2005
Surr: Nitrobenzene-d5	47.2	14.6-134		%REC	1	10/23/2005
Surr: Phenol-d6	16.3	10.7-80.3		%REC	1	10/23/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	1200	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/17/2005

Qualifiers:
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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

15D

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SMW-4
Lab Order: 0510131
Collection Date: 10/13/2005 11:30:00 AM
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-05
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 10:26:56 AM
Barium	ND	0.020		mg/L	1	10/27/2005 10:26:56 AM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 10:26:56 AM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 10:26:56 AM
Chromium	ND	0.0060		mg/L	1	10/27/2005 10:26:56 AM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 10:26:56 AM
Lead	ND	0.0050		mg/L	1	10/27/2005 10:26:56 AM
Nickel	ND	0.010		mg/L	1	10/27/2005 10:26:56 AM
Selenium	ND	0.020		mg/L	1	10/27/2005 10:26:56 AM
Silver	ND	0.0050		mg/L	1	10/27/2005 10:26:56 AM
Vanadium	0.052	0.050		mg/L	1	10/27/2005 10:26:56 AM
Zinc	ND	0.050		mg/L	1	10/27/2005 10:26:56 AM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 5:00:25 PM
Barium	ND	0.020		mg/L	1	10/27/2005 5:00:25 PM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 5:00:25 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 5:00:25 PM
Calcium	3.2	1.0		mg/L	1	10/27/2005 5:00:25 PM
Chromium	ND	0.0060		mg/L	1	10/27/2005 5:00:25 PM
Cobalt	ND	0.0060		mg/L	1	10/27/2005 5:00:25 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 9:46:19 AM
Magnesium	ND	1.0		mg/L	1	10/27/2005 5:00:25 PM
Nickel	ND	0.010		mg/L	1	10/27/2005 5:00:25 PM
Potassium	ND	1.0		mg/L	1	10/27/2005 5:00:25 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 5:00:25 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 5:00:25 PM
Sodium	300	10		mg/L	10	10/28/2005 10:31:28 AM
Vanadium	ND	0.050		mg/L	1	10/27/2005 5:00:25 PM
Zinc	ND	0.050		mg/L	1	10/27/2005 5:00:25 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	8.66	0.010		pH units	1	10/18/2005

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Trip Blank
Lab Order: 0510131
Collection Date:
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-06
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/19/2005 1:57:24 AM
Surr: BFB	105	79.7-118		%REC	1	10/19/2005 1:57:24 AM
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	ND	1.0		µg/L	1	10/23/2005
Toluene	ND	1.0		µg/L	1	10/23/2005
Ethylbenzene	ND	1.0		µg/L	1	10/23/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/23/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/23/2005
Naphthalene	ND	2.0		µg/L	1	10/23/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	10/23/2005
Acetone	ND	10		µg/L	1	10/23/2005
Bromobenzene	ND	1.0		µg/L	1	10/23/2005
Bromochloromethane	ND	1.0		µg/L	1	10/23/2005
Bromodichloromethane	ND	1.0		µg/L	1	10/23/2005
Bromoform	ND	1.0		µg/L	1	10/23/2005
Bromomethane	ND	2.0		µg/L	1	10/23/2005
2-Butanone	ND	10		µg/L	1	10/23/2005
Carbon disulfide	ND	10		µg/L	1	10/23/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	10/23/2005
Chlorobenzene	ND	1.0		µg/L	1	10/23/2005
Chloroethane	ND	2.0		µg/L	1	10/23/2005
Chloroform	ND	1.0		µg/L	1	10/23/2005
Chloromethane	ND	1.0		µg/L	1	10/23/2005
2-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005
4-Chlorotoluene	ND	1.0		µg/L	1	10/23/2005
cis-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/23/2005
Dibromochloromethane	ND	1.0		µg/L	1	10/23/2005
Dibromomethane	ND	2.0		µg/L	1	10/23/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/23/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	10/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Trip Blank
Lab Order: 0510131
Collection Date:
Project: Ciniza Annual GW Samples 2005
Lab ID: 0510131-06
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	10/23/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	10/23/2005
2-Hexanone	ND	10		µg/L	1	10/23/2005
Isopropylbenzene	ND	1.0		µg/L	1	10/23/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	10/23/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	10/23/2005
Methylene Chloride	ND	3.0		µg/L	1	10/23/2005
n-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
n-Propylbenzene	ND	1.0		µg/L	1	10/23/2005
sec-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
Styrene	ND	1.0		µg/L	1	10/23/2005
tert-Butylbenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	10/23/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/23/2005
trans-1,2-DCE	ND	1.0		µg/L	1	10/23/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/23/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/23/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/23/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	10/23/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/23/2005
Vinyl chloride	ND	1.0		µg/L	1	10/23/2005
Xylenes, Total	ND	1.0		µg/L	1	10/23/2005
Surr: 1,2-Dichloroethane-d4	103	69.9-130		%REC	1	10/23/2005
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	1	10/23/2005
Surr: Dibromofluoromethane	102	73.9-134		%REC	1	10/23/2005
Surr: Toluene-d8	98.5	81.9-122		%REC	1	10/23/2005

Qualifiers:
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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0510131
Lab ID: C05100731-001
Client Sample ID: MW-1

Report Date: 10/27/05
Collection Date: 10/12/05 10:45
Date Received: 10/18/05
Matrix: Aqueous

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Automated	ND	mg/L		0.005		E335.3	10/21/05 10:19 / eli-b
METALS - DISSOLVED							
Antimony	ND	mg/L		0.001		SW6020	10/20/05 06:36 / bws
METALS - TOTAL							
Antimony	ND	mg/L		0.001		SW6020	10/21/05 17:46 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0510131
Lab ID: C05100731-002
Client Sample ID: MW-4

Report Date: 10/27/05
Collection Date: 10/12/05 07:30
Date Received: 10/18/05
Matrix: Aqueous

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Automated	ND	mg/L		0.005		E335.3	10/21/05 10:21 / eli-b
METALS - DISSOLVED							
Antimony	ND	mg/L		0.001		SW6020	10/20/05 07:35 / bws
METALS - TOTAL							
Antimony	ND	mg/L		0.001		SW6020	10/21/05 17:52 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0510131
Lab ID: C05100731-003
Client Sample ID: MW-5

Report Date: 10/27/05
Collection Date: 10/11/05 14:00
Date Received: 10/18/05
Matrix: Aqueous

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Automated	ND	mg/L		0.005		E335.3	10/21/05 10:29 / eli-b
METALS - DISSOLVED							
Antimony	ND	mg/L		0.001		SW6020	10/20/05 07:42 / bws
METALS - TOTAL							
Antimony	ND	mg/L		0.001		SW6020	10/21/05 17:59 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0510131
Lab ID: C05100731-004
Client Sample ID: SMW-2

Report Date: 10/27/05
Collection Date: 10/12/05 14:00
Date Received: 10/18/05
Matrix: Aqueous

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Cyanide, Total Manual Distillation	ND	mg/L		0.0050		E335.4	10/24/05 14:38 / eli-b
METALS - DISSOLVED							
Antimony	ND	mg/L		0.001		SW6020	10/20/05 07:50 / bws
METALS - TOTAL							
Antimony	ND	mg/L		0.001		SW6020	10/21/05 18:05 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0510131
Lab ID: C05100731-005
Client Sample ID: SMW-4

Report Date: 10/27/05
Collection Date: 10/13/05 11:30
Date Received: 10/18/05
Matrix: Aqueous

Analyses	Result	Units	Qual	MCL/ RL QCL	Method	Analysis Date / By
NON-METALS						
Cyanide, Total Automated	ND	mg/L		0.005	E335.3	10/21/05 10:32 / eli-b
METALS - DISSOLVED						
Antimony	ND	mg/L		0.001	SW6020	10/20/05 07:57 / bws
METALS - TOTAL						
Antimony	ND	mg/L		0.001	SW6020	10/21/05 18:12 / sml

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Hall Environmental
Project: 0510131

Report Date: 10/27/05
Work Order: C05100731

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E335.3								Batch: B_A2005-10-21_4_CN__01	
Sample ID: LFB-4	Laboratory Fortified Blank							10/21/05 08:40	
Cyanide, Total Automated	0.0980	mg/L	0.0050	98	90	110			
Sample ID: MBLK-5	Method Blank							10/21/05 08:42	
Cyanide, Total Automated	ND	mg/L	0.001						
Sample ID: C05100731-002C	Matrix Spike							10/21/05 10:23	
Cyanide, Total Automated	0.104	mg/L	0.0050	104	80	120			
Sample ID: C05100731-002C	Matrix Spike Duplicate							10/21/05 10:25	
Cyanide, Total Automated	0.103	mg/L	0.0050	103	80	120	0.3	10	
Sample ID: B05101131-002EMS	Matrix Spike							10/21/05 10:50	
Cyanide, Total Automated	0.102	mg/L	0.0050	102	80	120			
Sample ID: B05101131-002EMSD	Matrix Spike Duplicate							10/21/05 10:52	
Cyanide, Total Automated	0.105	mg/L	0.0050	105	80	120	3.4	10	
Sample ID: B05101328-001EMS	Matrix Spike							10/21/05 12:07	
Cyanide, Total Automated	0.102	mg/L	0.0050	100	80	120			
Sample ID: B05101328-001EMSD	Matrix Spike Duplicate							10/21/05 12:09	
Cyanide, Total Automated	0.0950	mg/L	0.0050	93.4	80	120	7.1	10	
Method: E335.4								Batch: B_18270	
Sample ID: LFB-4	Laboratory Fortified Blank							10/24/05 14:25	
Cyanide, Total Manual Distillation	0.0921	mg/L	0.0050	92.1	90	110			
Sample ID: LCS-6	Laboratory Control Spike							10/24/05 14:29	
Cyanide, Total Manual Distillation	0.152	mg/L	0.0050	102	90	110			
Sample ID: MBLK-8	Method Blank							10/24/05 14:32	
Cyanide, Total Manual Distillation	ND	mg/L	0.003						
Sample ID: B05101342-002DMS	Matrix Spike							10/24/05 15:14	
Cyanide, Total Manual Distillation	0.111	mg/L	0.0050	106	90	110			
Sample ID: B05101342-002DMSD	Matrix Spike Duplicate							10/24/05 15:16	
Cyanide, Total Manual Distillation	0.111	mg/L	0.0050	106	90	110	0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Hall Environmental
Project: 0510131

Report Date: 10/27/05
Work Order: C05100731

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Batch: 9320
Sample ID: MB-9320	Method Blank								10/21/05 17:06
Antimony	ND	mg/L	0.00004						
Sample ID: LCS1-9320	Laboratory Control Spike - Low								10/21/05 17:39
Antimony	0.0202	mg/L	0.050	101	75	125			
Sample ID: C05100757-002BMS4	Post Digestion Spike								10/21/05 19:05
Antimony	0.258	mg/L	0.050	103	75	125			
Sample ID: C05100757-002BMSD4	Post Digestion Spike Dup								10/21/05 19:12
Antimony	0.257	mg/L	0.050	102	75	125	0.5	20	
Sample ID: C05100767-001BMS4	Post Digestion Spike								10/21/05 19:45
Antimony	0.262	mg/L	0.050	105	75	125			
- Matrix spike recoveries outside the acceptance criteria of 70 to 130 percent are considered matrix related, not system related. Reported values are within method specifications. (EPA Method 200.8, par. 9.4.4)									
Sample ID: C05100767-001BMSD4	Post Digestion Spike Dup								10/21/05 19:51
Antimony	0.263	mg/L	0.050	105	75	125	0.5	20	
- Matrix spike duplicate recoveries outside the acceptance criteria of 70 to 130 percent are considered matrix related, not system related. Reported values are within method specifications. (EPA Method 200.8, par. 9.4.4)									
Method: SW6020									Batch: R57057
Sample ID: LRB	Method Blank								10/19/05 16:36
Antimony	0.00009	mg/L	0.00004						
Sample ID: LFB	Laboratory Fortified Blank								10/19/05 16:44
Antimony	0.0513	mg/L	0.0010	102	75	125			
Sample ID: C05100731-001BMS4	Post Digestion Spike								10/20/05 06:43
Antimony	0.0514	mg/L	0.050	103	75	125			
Sample ID: C05100731-001BMSD4	Post Digestion Spike Dup								10/20/05 07:20
Antimony	0.0520	mg/L	0.050	104	75	125	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK**	Batch ID: **R16980**	Test Code: **E300**	Units: **mg/L**	Analysis Date **10/14/2005**	Prep Date
Client ID:		Run ID: **LC_051014A**		SeqNo: **411864**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID **MBLK**	Batch ID: **R16980**	Test Code: **E300**	Units: **mg/L**	Analysis Date **10/14/2005**	Prep Date
Client ID:		Run ID: **LC_051014A**		SeqNo: **411907**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID **MBLK**	Batch ID: **R17066**	Test Code: **E300**	Units: **mg/L**	Analysis Date **10/24/2005**	Prep Date
Client ID:		Run ID: **LC_051024A**		SeqNo: **414296**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17108** Test Code: **E300** Units: **mg/L** Analysis Date **10/27/2005** Prep Date
Client ID: Run ID: **LC_051027A** SeqNo: **415631**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID **MB-8981** Batch ID: **8981** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/18/2005 3:40:11 PM** Prep Date **10/18/2005**
Client ID: Run ID: **FID(17A) 2_051018A** SeqNo: **412584**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.191	0	1	0	119	58	140	0			

Sample ID **Reagent Blank 5m** Batch ID: **R16999** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/18/2005 8:14:20 AM** Prep Date
Client ID: Run ID: **PIDFID_051018A** SeqNo: **412615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	21.26	0	20	0	106	79.7	118	0			

Sample ID **Reagent Blank 5m** Batch ID: **R17012** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/19/2005 11:33:25 A** Prep Date
Client ID: Run ID: **PIDFID_051019A** SeqNo: **412884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	19.81	0	20	0	99.1	79.7	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8970** Batch ID: **8970** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/17/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413452**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

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
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

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50						
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						
Surr: 2,4,6-Tribromophenol	111.5	0	200	0	55.7	16.6	150	0
Surr: 2-Fluorobiphenyl	44.82	0	100	0	44.8	19.6	134	0
Surr: 2-Fluorophenol	84.78	0	200	0	42.4	9.54	113	0
Surr: 4-Terphenyl-d14	72.68	0	100	0	72.7	22.7	145	0
Surr: Nitrobenzene-d5	51.52	0	100	0	51.5	14.6	134	0
Surr: Phenol-d6	55.46	0	200	0	27.7	10.7	80.3	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9051** Batch ID: **9051** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/2/2005** Prep Date **10/26/2005**
Client ID: Run ID: **ELMO_051102A** SeqNo: **418017**

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	7.52	15									J
Dibenz(a,h)anthracene	8.22	10									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

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
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

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	126.4	0	200	0	63.2	16.6	150	0	
Surr: 2-Fluorobiphenyl	64.88	0	100	0	64.9	19.6	134	0	
Surr: 2-Fluorophenol	120.1	0	200	0	60.1	9.54	113	0	
Surr: 4-Terphenyl-d14	72.42	0	100	0	72.4	22.7	145	0	
Surr: Nitrobenzene-d5	69.08	0	100	0	69.1	14.6	134	0	
Surr: Phenol-d6	85.88	0	200	0	42.9	10.7	80.3	0	

Sample ID **MB-8964** Batch ID: **8964** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/14/2005** Prep Date **10/14/2005**
Client ID: Run ID: **MI-LA254_051014A** SeqNo: **411533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Sample ID **MB-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB** Batch ID: **R17096** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 9:03:42 AM** Prep Date

Client ID: Run ID: **ICP_051026B** SeqNo: **415364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.02									
Silver	ND	0.005									
Vanadium	ND	0.05									
Zinc	ND	0.05									
Yttrium	103.1	0									
Yttrium Radial	102.4	0									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:15:57 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Beryllium	0.000151	0.003									J
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Magnesium	ND	1									
Nickel	ND	0.01									
Potassium	0.1242	1									J
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Vanadium	ND	0.05									
Zinc	ND	0.05									

Sample ID **MB-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 9:04:57 AM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.005									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb** Batch ID: **R17048** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/23/2005** Prep Date

Client ID: Run ID: **VAL_051021D** SeqNo: **413813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.966	0	10	0	99.7	69.9	130	0
Surr: 4-Bromofluorobenzene	11.31	0	10	0	113	71.2	123	0
Surr: Dibromofluoromethane	9.9	0	10	0	99.0	73.9	134	0
Surr: Toluene-d8	9.656	0	10	0	96.6	81.9	122	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022**	Batch ID: **R16980**	Test Code: **E300**	Units: **mg/L**	Analysis Date **10/14/2005**	Prep Date
Client ID:		Run ID: **LC_051014A**		SeqNo: **411865**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4716	0.1	0.5	0	94.3	90	110	0			
Chloride	4.577	0.1	5	0	91.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.599	0.5	5	0	92.0	90	110	0			
Sulfate	9.233	0.5	10	0	92.3	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.247	0.1	3.5	0	92.8	90	110	0			

Sample ID **LCS**	Batch ID: **R16980**	Test Code: **E300**	Units: **mg/L**	Analysis Date **10/14/2005**	Prep Date
Client ID:		Run ID: **LC_051014A**		SeqNo: **411908**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.465	0.1	0.5	0	93.0	90	110	0			
Chloride	4.5	0.1	5	0	90.0	90	110	0			
Phosphorus, Orthophosphate (As P)	3.719	0.5	5	0	74.4	90	110	0			S
Sulfate	9.51	0.5	10	0	95.1	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.155	0.1	3.5	0	90.1	90	110	0			

Sample ID **LCS-ST300-05022**	Batch ID: **R17066**	Test Code: **E300**	Units: **mg/L**	Analysis Date **10/24/2005**	Prep Date
Client ID:		Run ID: **LC_051024A**		SeqNo: **414301**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5209	0.1	0.5	0	104	90	110	0			
Chloride	4.625	0.1	5	0	92.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.628	0.5	5	0	92.6	90	110	0			
Sulfate	9.36	0.5	10	0	93.6	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.256	0.1	3.5	0	93.0	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R17108** Test Code: **E300** Units: **mg/L** Analysis Date **10/27/2005** Prep Date
Client ID: Run ID: **LC_051027A** SeqNo: **415632**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4951	0.1	0.5	0	99.0	90	110	0			
Chloride	4.834	0.1	5	0	96.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.977	0.5	5	0	99.5	90	110	0			
Sulfate	9.814	0.5	10	0	98.1	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.406	0.1	3.5	0	97.3	90	110	0			

Sample ID **LCS-8981** Batch ID: **8981** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/18/2005 4:12:55 PM** Prep Date **10/18/2005**
Client ID: Run ID: **FID(17A) 2_051018A** SeqNo: **412585**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.282	1	5	0	106	81.2	149	0			

Sample ID **LCSD-8981** Batch ID: **8981** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/18/2005 4:45:30 PM** Prep Date **10/18/2005**
Client ID: Run ID: **FID(17A) 2_051018A** SeqNo: **412586**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.907	1	5	0	118	81.2	149	5.282	11.2	23	

Sample ID **GRO lcs 2.5ug** Batch ID: **R16999** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/18/2005 5:05:16 PM** Prep Date
Client ID: Run ID: **PIDFID_051018A** SeqNo: **412616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5124	0.05	0.5	0	102	82.6	114	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **GRO lcs 2.5ug** Batch ID: **R17012** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/19/2005 11:59:33 P** Prep Date
Client ID: Run ID: **PIDFID_051019A** SeqNo: **412885**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.447	0.05	0.5	0	89.4	82.6	114	0			

Sample ID **100ng lcs** Batch ID: **R17048** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/23/2005** Prep Date
Client ID: Run ID: **VAL_051021D** SeqNo: **413814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.17	1	20	0	111	79.3	136	0			
Toluene	17.62	1	20	0	88.1	65.5	123	0			
Chlorobenzene	20.56	1	20	0	103	85.6	126	0			
1,1-Dichloroethene	22.25	1	20	0	111	72.7	135	0			
Trichloroethene (TCE)	19.68	1	20	0	98.4	85.6	119	0			

Sample ID **LCS-8970** Batch ID: **8970** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/17/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	83.66	10	100	0	83.7	11	123	0			
4-Chloro-3-methylphenol	155.3	20	200	0	77.6	15.4	119	0			
2-Chlorophenol	147.1	10	200	0	73.6	12.2	122	0			
1,4-Dichlorobenzene	65.28	10	100	0	65.3	16.9	100	0			
2,4-Dinitrotoluene	81.84	10	100	0	81.8	13	138	0			
N-Nitrosodi-n-propylamine	76.12	10	100	0	76.1	9.93	122	0			
4-Nitrophenol	69.32	50	200	0	34.7	-20.5	87.4	0			
Pentachlorophenol	140.7	50	200	0	70.3	-0.355	114	0			
Phenol	80.56	10	200	0	40.3	7.53	73.1	0			
Pyrene	81.62	15	100	0	81.6	12.6	140	0			
1,2,4-Trichlorobenzene	64.44	10	100	0	64.4	17.4	98.7	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8970** Batch ID: **8970** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/17/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	66.84	10	100	0	66.8	11	123	83.66	22.4	30.5	
4-Chloro-3-methylphenol	119.7	20	200	0	59.8	15.4	119	155.3	25.9	28.6	
2-Chlorophenol	112.7	10	200	0	56.3	12.2	122	147.1	26.5	107	
1,4-Dichlorobenzene	52.08	10	100	0	52.1	16.9	100	65.28	22.5	62.1	
2,4-Dinitrotoluene	67.34	10	100	0	67.3	13	138	81.84	19.4	14.7	R
N-Nitrosodi-n-propylamine	58.6	10	100	0	58.6	9.93	122	76.12	26.0	30.3	
4-Nitrophenol	55.8	50	200	0	27.9	12.5	87.4	69.32	21.6	36.3	
Pentachlorophenol	117.4	50	200	0	58.7	3.55	114	140.7	18.0	49	
Phenol	65.2	10	200	0	32.6	7.53	73.1	80.56	21.1	52.4	
Pyrene	68.92	15	100	0	68.9	12.6	140	81.62	16.9	16.3	R
1,2,4-Trichlorobenzene	49.52	10	100	0	49.5	17.4	98.7	64.44	26.2	36.4	

Sample ID **LCS-9051** Batch ID: **9051** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/2/2005** Prep Date **10/26/2005**
Client ID: Run ID: **ELMO_051102A** SeqNo: **418018**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	79.16	10	100	0	79.2	11	123	0			
4-Chloro-3-methylphenol	158	20	200	0	79.0	15.4	119	0			
2-Chlorophenol	153.3	10	200	0	76.7	12.2	122	0			
1,4-Dichlorobenzene	67	10	100	0	67.0	16.9	100	0			
2,4-Dinitrotoluene	74.26	10	100	0	74.3	13	138	0			
N-Nitrosodi-n-propylamine	73.86	10	100	0	73.9	9.93	122	0			
4-Nitrophenol	61.86	50	200	0	30.9	-20.5	87.4	0			
Pentachlorophenol	106.2	50	200	0	53.1	-0.355	114	0			
Phenol	84.98	10	200	0	42.5	7.53	73.1	0			
Pyrene	80.64	15	100	0	80.6	12.6	140	0			
1,2,4-Trichlorobenzene	67.22	10	100	0	67.2	17.4	98.7	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9051** Batch ID: **9051** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/2/2005** Prep Date **10/26/2005**
Client ID: Run ID: **ELMO_051102A** SeqNo: **418019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	76.02	10	100	0	76.0	11	123	79.16	4.05	30.5	
4-Chloro-3-methylphenol	133.5	20	200	0	66.8	15.4	119	158	16.8	28.6	
2-Chlorophenol	140.5	10	200	0	70.3	12.2	122	153.3	8.71	107	
1,4-Dichlorobenzene	64.54	10	100	0	64.5	16.9	100	67	3.74	62.1	
2,4-Dinitrotoluene	71.52	10	100	0	71.5	13	138	74.26	3.76	14.7	
N-Nitrosodi-n-propylamine	69.1	10	100	0	69.1	9.93	122	73.86	6.66	30.3	
4-Nitrophenol	62.3	50	200	0	31.2	12.5	87.4	61.86	0.709	36.3	
Pentachlorophenol	97.4	50	200	0	48.7	3.55	114	106.2	8.64	49	
Phenol	82.02	10	200	0	41.0	7.53	73.1	84.98	3.54	52.4	
Pyrene	73.7	15	100	0	73.7	12.6	140	80.64	8.99	16.3	
1,2,4-Trichlorobenzene	62.36	10	100	0	62.4	17.4	98.7	67.22	7.50	36.4	

Sample ID **LCS-8964** Batch ID: **8964** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/14/2005** Prep Date **10/14/2005**
Client ID: Run ID: **MI-LA254_051014A** SeqNo: **411534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004877	0.0002	0.005	0	97.5	75.2	134	0			

Sample ID **LCSD-8964** Batch ID: **8964** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/14/2005** Prep Date **10/14/2005**
Client ID: Run ID: **MI-LA254_051014A** SeqNo: **411551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004788	0.0002	0.005	0	95.8	75.2	134	0.004877	1.84	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004663	0.0002	0.005	0	93.3	75.2	134	0			

Sample ID **LCSD-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004783	0.0002	0.005	0	95.7	75.2	134	0.004663	2.54	0	

Sample ID **LCS** Batch ID: **R17096** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 9:06:56 AM** Prep Date
Client ID: Run ID: **ICP_051026B** SeqNo: **415365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5095	0.02	0.5	0	102	80	120	0			
Barium	0.4867	0.02	0.5	0	97.3	80	120	0			
Beryllium	0.5026	0.003	0.5	0	101	80	120	0			
Cadmium	0.4964	0.002	0.5	0	99.3	80	120	0			
Chromium	0.4886	0.006	0.5	0	97.7	80	120	0			
Cobalt	0.4724	0.006	0.5	0	94.5	80	120	0			
Lead	0.4977	0.005	0.5	0	99.5	80	120	0			
Nickel	0.485	0.01	0.5	0	97.0	80	120	0			
Selenium	0.477	0.02	0.5	0	95.4	80	120	0			
Silver	0.4934	0 005	0.5	0	98.7	80	120	0			
Vanadium	0.5044	0.05	0.5	0	101	80	120	0			
Zinc	0.5089	0.05	0.5	0	102	80	120	0			
Yttrium	97.73	0	100	0	97.7	70	130	0			
Yttrium Radial	101.4	0	100	0	101	70	130	0			

Qualifiers:
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J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD** Batch ID: **R17096** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 9:10:13 AM** Prep Date

Client ID: Run ID: **ICP_051026B** SeqNo: **415366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5045	0.02	0.5	0	101	80	120	0.5095	0.979	20	
Barium	0.4633	0.02	0.5	0	92.7	80	120	0.4867	4.94	20	
Beryllium	0.4903	0.003	0.5	0	98.1	80	120	0.5026	2.48	20	
Cadmium	0.4791	0.002	0.5	0	95.8	80	120	0.4964	3.55	20	
Chromium	0.4708	0.006	0.5	0	94.2	80	120	0.4886	3.71	20	
Cobalt	0.4592	0.006	0.5	0	91.8	80	120	0.4724	2.83	20	
Lead	0.484	0.005	0.5	0	96.8	80	120	0.4977	2.78	20	
Nickel	0.4623	0.01	0.5	0	92.5	80	120	0.485	4.79	20	
Selenium	0.4754	0.02	0.5	0	95.1	80	120	0.477	0.339	20	
Silver	0.472	0.005	0.5	0	94.4	80	120	0.4934	4.43	20	
Vanadium	0.4821	0.05	0.5	0	96.4	80	120	0.5044	4.52	20	
Zinc	0.485	0.05	0.5	0	97.0	80	120	0.5089	4.81	20	
Yttrium	99.12	0	100	0	99.1	70	130	97.73	1.41	20	
Yttrium Radial	101.3	0	100	0	101	70	130	101.4	0.0910	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:19:14 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4732	0.02	0.5	0	94.6	80	120	0			
Barium	0.4692	0.02	0.5	0	93.8	80	120	0			
Beryllium	0.484	0.003	0.5	0.000151	96.8	80	120	0			
Cadmium	0.4645	0.002	0.5	0	92.9	80	120	0			
Calcium	49.18	1	50	0	98.4	80	120	0			
Chromium	0.4691	0.006	0.5	0	93.8	80	120	0			
Cobalt	0.5081	0.006	0.5	0	102	80	120	0			
Magnesium	48.8	1	50	0	97.6	80	120	0			
Nickel	0.453	0.01	0.5	0	90.6	80	120	0			
Potassium	50.1	1	50	0.1242	100	80	120	0			
Selenium	0.4463	0.05	0.5	0	89.3	80	120	0			
Silver	0.465	0.005	0.5	0	93.0	80	120	0			
Sodium	52.32	1	50	0	105	80	120	0			
Vanadium	0.4761	0.05	0.5	0	95.2	80	120	0			
Zinc	0.4587	0.05	0.5	0	91.7	80	120	0			

Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510131
Project: Ciniza Annual GW Samples 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:21:36 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4697	0.02	0.5	0	93.9	80	120	0.4732	0.739	20	
Barium	0.4551	0.02	0.5	0	91.0	80	120	0.4692	3.06	20	
Beryllium	0.4808	0.003	0.5	0.000151	96.1	80	120	0.484	0.666	20	
Cadmium	0.4561	0.002	0.5	0	91.2	80	120	0.4645	1.82	20	
Calcium	49.58	1	50	0	99.2	80	120	49.18	0.823	20	
Chromium	0.4598	0.006	0.5	0	92.0	80	120	0.4691	2.01	20	
Cobalt	0.4994	0.006	0.5	0	99.9	80	120	0.5081	1.73	20	
Magnesium	49	1	50	0	98.0	80	120	48.8	0.406	20	
Nickel	0.4391	0.01	0.5	0	87.8	80	120	0.453	3.13	20	
Potassium	50.1	1	50	0.1242	100	80	120	50.1	0.00219	20	
Selenium	0.4285	0.05	0.5	0	85.7	80	120	0.4463	4.06	20	
Silver	0.4501	0.005	0.5	0	90.0	80	120	0.465	3.25	20	
Sodium	52.9	1	50	0	106	80	120	52.32	1.10	20	
Vanadium	0.4611	0.05	0.5	0	92.2	80	120	0.4761	3.20	20	
Zinc	0.4504	0.05	0.5	0	90.1	80	120	0.4587	1.83	20	

Sample ID **LCSD-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 9:12:58 AM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4704	0.005	0.5	0	94.1	80	120	0.4728	0.504	20	

Sample ID **LCS-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 9:20:56 AM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4728	0.005	0.5	0	94.6	80	120	0			

Qualifiers:
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J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/14/2005

Work Order Number 0510131 | Received by AT

Checklist completed by _____ Signature | 10/14/05 Date

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 9210

Project Name: Ciniza Annual Groundwater Sampler 2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 5°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals Total + Dissol.	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem Cyanide			Air Bubbles or Headspace (Y or N)
10-12-05	1045	H2O	MW-1	14			051013-1			X					X			X	X	X	X		
10-12-05	0730	"	MW-4	14			-2			X					X			X	X	X	X		
10-11-05	1400	"	MW-5	14			-3			X					X			X	X	X	X		
10-12-05	1400	"	SMW-2	14			-4			X					X			X	X	X	X		
10-13-05	1130	"	SMW-4	14			-5			X					X			X	X	X	X		
			TRIP BLANK		3		-6			X								X					

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
10/14/05	0830	Steve Morris	10/14/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
			0830

Remarks: Gen Chem = Cations, Anions, pH + Conductivity - Ref: 0307136 See Modified Skinner List

Hall Environmental Analysis Laboratory

Date: *04-Aug-05*

CLIENT: Giant Refining Co
Lab Order: 0508005
Project: GWM-1-3rd Qtr. 2005
Lab ID: 0508005-01

Client Sample ID: GWM-1-3Q
Collection Date: 8/1/2005 7:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	2.6	0.10		mg/L	1	8/1/2005
Chloride	2000	10		mg/L	100	8/2/2005
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	8/2/2005
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	8/1/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/1/2005
Sulfate	96	2.5		mg/L	5	8/2/2005
EPA METHOD 8260: VOLATILES						Analyst: **HLM**
Benzene	8.1	1.0		µg/L	1	8/3/2005
Toluene	4.6	1.0		µg/L	1	8/3/2005
Ethylbenzene	2.8	1.0		µg/L	1	8/3/2005
Methyl tert-butyl ether (MTBE)	170	10		µg/L	10	8/2/2005
1,2,4-Trimethylbenzene	7.3	1.0		µg/L	1	8/3/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/3/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/3/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/3/2005
Naphthalene	ND	2.0		µg/L	1	8/3/2005
1-Methylnaphthalene	4.5	4.0		µg/L	1	8/3/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	8/3/2005
Acetone	ND	10		µg/L	1	8/3/2005
Bromobenzene	ND	1.0		µg/L	1	8/3/2005
Bromochloromethane	ND	1.0		µg/L	1	8/3/2005
Bromodichloromethane	ND	1.0		µg/L	1	8/3/2005
Bromoform	ND	1.0		µg/L	1	8/3/2005
Bromomethane	ND	2.0		µg/L	1	8/3/2005
2-Butanone	ND	10		µg/L	1	8/3/2005
Carbon disulfide	ND	10		µg/L	1	8/3/2005
Carbon Tetrachloride	ND	1.0		µg/L	1	8/3/2005
Chlorobenzene	ND	1.0		µg/L	1	8/3/2005
Chloroethane	ND	2.0		µg/L	1	8/3/2005
Chloroform	ND	1.0		µg/L	1	8/3/2005
Chloromethane	ND	1.0		µg/L	1	8/3/2005
2-Chlorotoluene	ND	1.0		µg/L	1	8/3/2005
4-Chlorotoluene	ND	1.0		µg/L	1	8/3/2005
cis-1,2-DCE	ND	1.0		µg/L	1	8/3/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/3/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/3/2005
Dibromochloromethane	ND	1.0		µg/L	1	8/3/2005
Dibromomethane	ND	2.0		µg/L	1	8/3/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/3/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/3/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limit
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Aug-05*

CLIENT: Giant Refining Co
Lab Order: 0508005
Project: GWM-1-3rd Qtr. 2005
Lab ID: 0508005-01

Client Sample ID: GWM-1-3Q
Collection Date: 8/1/2005 7:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/3/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/3/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	8/3/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	8/3/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	8/3/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	8/3/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	8/3/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	8/3/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	8/3/2005
2-Hexanone	ND	10		µg/L	1	8/3/2005
Isopropylbenzene	ND	1.0		µg/L	1	8/3/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	8/3/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	8/3/2005
Methylene Chloride	ND	3.0		µg/L	1	8/3/2005
n-Butylbenzene	ND	1.0		µg/L	1	8/3/2005
n-Propylbenzene	ND	1.0		µg/L	1	8/3/2005
sec-Butylbenzene	ND	1.0		µg/L	1	8/3/2005
Styrene	ND	1.0		µg/L	1	8/3/2005
tert-Butylbenzene	ND	1.0		µg/L	1	8/3/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/3/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	8/3/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/3/2005
trans-1,2-DCE	ND	1.0		µg/L	1	8/3/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/3/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/3/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/3/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/3/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/3/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/3/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	8/3/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/3/2005
Vinyl chloride	ND	1.0		µg/L	1	8/3/2005
Xylenes, Total	10	1.0		µg/L	1	8/3/2005
Surr: 1,2-Dichloroethane-d4	97.2	87.7-108		%REC	1	8/3/2005
Surr: 4-Bromofluorobenzene	103	88.8-113		%REC	10	8/2/2005
Surr: Dibromofluoromethane	101	84.1-111		%REC	1	8/3/2005
Surr: Toluene-d8	101	85.9-109		%REC	1	8/3/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	ND	10		µg/L	1	8/3/2005
Acenaphthylene	ND	10		µg/L	1	8/3/2005
Aniline	ND	10		µg/L	1	8/3/2005
Anthracene	ND	10		µg/L	1	8/3/2005

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Aug-05*

CLIENT: Giant Refining Co
Lab Order: 0508005
Project: GWM-1-3rd Qtr. 2005
Lab ID: 0508005-01

Client Sample ID: GWM-1-3Q
Collection Date: 8/1/2005 7:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	10		µg/L	1	8/3/2005
Benz(a)anthracene	ND	15		µg/L	1	8/3/2005
Benzo(a)pyrene	ND	10		µg/L	1	8/3/2005
Benzo(b)fluoranthene	ND	10		µg/L	1	8/3/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/3/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	8/3/2005
Benzoic acid	ND	50		µg/L	1	8/3/2005
Benzyl alcohol	ND	20		µg/L	1	8/3/2005
Bis(2-chloroethoxy)methane	ND	0		µg/L	1	8/3/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	8/3/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	8/3/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	8/3/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/3/2005
Butyl benzyl phthalate	ND	15		µg/L	1	8/3/2005
Carbazole	ND	10		µg/L	1	8/3/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	8/3/2005
4-Chloroaniline	ND	20		µg/L	1	8/3/2005
2-Chloronaphthalene	ND	10		µg/L	1	8/3/2005
2-Chlorophenol	ND	10		µg/L	1	8/3/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	8/3/2005
Chrysene	ND	15		µg/L	1	8/3/2005
Di-n-butyl phthalate	ND	10		µg/L	1	8/3/2005
Di-n-octyl phthalate	ND	15		µg/L	1	8/3/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/3/2005
Dibenzofuran	ND	10		µg/L	1	8/3/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	8/3/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	8/3/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	8/3/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	8/3/2005
Diethyl phthalate	ND	10		µg/L	1	8/3/2005
Dimethyl phthalate	ND	10		µg/L	1	8/3/2005
2,4-Dichlorophenol	ND	10		µg/L	1	8/3/2005
2,4-Dimethylphenol	110	10		µg/L	1	8/3/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	8/3/2005
2,4-Dinitrophenol	ND	50		µg/L	1	8/3/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	8/3/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	8/3/2005
Fluoranthene	ND	10		µg/L	1	8/3/2005
Fluorene	ND	10		µg/L	1	8/3/2005
Hexachlorobenzene	ND	10		µg/L	1	8/3/2005
Hexachlorobutadiene	ND	10		µg/L	1	8/3/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/3/2005

Qualifiers:
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Aug-05*

CLIENT: Giant Refining Co
Lab Order: 0508005
Project: GWM-1-3rd Qtr. 2005
Lab ID: 0508005-01

Client Sample ID: GWM-1-3Q
Collection Date: 8/1/2005 7:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	10		µg/L	1	8/3/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/3/2005
Isophorone	ND	10		µg/L	1	8/3/2005
2-Methylnaphthalene	ND	10		µg/L	1	8/3/2005
2-Methylphenol	ND	15		µg/L	1	8/3/2005
3+4-Methylphenol	ND	10		µg/L	1	8/3/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/3/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	8/3/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/3/2005
Naphthalene	ND	10		µg/L	1	8/3/2005
2-Nitroaniline	ND	50		µg/L	1	8/3/2005
3-Nitroaniline	ND	50		µg/L	1	8/3/2005
4-Nitroaniline	ND	20		µg/L	1	8/3/2005
Nitrobenzene	ND	10		µg/L	1	8/3/2005
2-Nitrophenol	ND	15		µg/L	1	8/3/2005
4-Nitrophenol	ND	50		µg/L	1	8/3/2005
Pentachlorophenol	ND	50		µg/L	1	8/3/2005
Phenanthrene	ND	10		µg/L	1	8/3/2005
Phenol	ND	10		µg/L	1	8/3/2005
Pyrene	ND	15		µg/L	1	8/3/2005
Pyridine	ND	30		µg/L	1	8/3/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/3/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/3/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	8/3/2005
Surr: 2,4,6-Tribromophenol	25.7	16.6-150		%REC	1	8/3/2005
Surr: 2-Fluorobiphenyl	78.8	19.6-134		%REC	1	8/3/2005
Surr: 2-Fluorophenol	11.5	9.54-113		%REC	1	8/3/2005
Surr: 4-Terphenyl-d14	64.7	22.7-145		%REC	1	8/3/2005
Surr: Nitrobenzene-d5	74.6	14.6-134		%REC	1	8/3/2005
Surr: Phenol-d6	20.8	10.7-80.3		%REC	1	8/3/2005
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	8/3/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	0.098	0.020		mg/L	1	8/4/2005 9:55:10 AM
Barium	0.57	0.020		mg/L	1	8/4/2005 9:55:10 AM
Cadmium	ND	0.0020		mg/L	1	8/4/2005 9:55:10 AM
Calcium	410	10		mg/L	10	8/4/2005 10:28:02 AM
Chromium	ND	0.0060		mg/L	1	8/4/2005 9:55:10 AM
Lead	ND	0.0050		mg/L	1	8/4/2005 9:55:10 AM
Magnesium	110	1.0		mg/L	1	8/4/2005 9:55:10 AM
Potassium	6.5	1.0		mg/L	1	8/4/2005 9:55:10 AM

Qualifiers:
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B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: GWM-1-3Q
Lab Order: 0508005
Collection Date: 8/1/2005 7:00:00 AM
Project: GWM-1-3rd Qtr. 2005
Lab ID: 0508005-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Selenium	ND	0.050		mg/L	1	8/4/2005 9:55:10 AM
Silver	ND	0.0050		mg/L	1	8/4/2005 9:55:10 AM
Sodium	1500	20		mg/L	20	8/4/2005 10:38:12 AM

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E - Value above quantitation range

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

July 05, 2005

Ed Riege
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: GWM-1-2nd Qtr. 2005 Order No.: 0506293

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 1 sample on 6/30/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *05-Jul-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	GWM-1-2Q-05
Lab Order:	0506293	**Collection Date:**	6/28/2005 12:30:00 PM
Project:	GWM-1-2nd Qtr. 2005		
Lab ID:	0506293-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	10	2.5		µg/L	5	6/30/2005 7:39:06 PM
Toluene	ND	2.5		µg/L	5	6/30/2005 7:39:06 PM
Ethylbenzene	3.5	2.5		µg/L	5	6/30/2005 7:39:06 PM
Xylenes, Total	41	2.5		µg/L	5	6/30/2005 7:39:06 PM
Surr: 4-Bromofluorobenzene	101	83.3-121		%REC	5	6/30/2005 7:39:06 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *05-Jul-05*

CLIENT: Giant Refining Co
Work Order: 0506293
Project: GWM-1-2nd Qtr. 2005

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank 5m Batch ID: R15863 Test Code: SW8021 Units: µg/L Analysis Date 6/30/2005 10:30:22 AM Prep Date

Client ID: Run ID: PIDFID_050630A SeqNo: 376231

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	17.44	0	20	0	87.2	83.3	121	0			

2 / 4

Qualifiers:
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J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *05-Jul-05*

CLIENT: Giant Refining Co
Work Order: 0506293
Project: GWM-1-2nd Qtr. 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **BTEX LCS 100ng** Batch ID: **R15863** Test Code: **SW8021** Units: **µg/L** Analysis Date **6/30/2005 12:03:37 PM** Prep Date

Client ID: Run ID: **PIDFID_050630A** SeqNo: **376239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.58	0.5	20	0	92.9	88.7	114	0			
Toluene	18.93	0.5	20	0	94.6	89.3	112	0			
Ethylbenzene	18.79	0.5	20	0	93.9	88.6	113	0			
Xylenes, Total	57.41	0.5	60	0	95.7	89.4	112	0			

3 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

J

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 6/30/2005

Work Order Number 0506293 | Received by AT

Checklist completed by _____ 6/30/05
Signature | Date

Matrix | Carrier name FedEx

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 _____

_____

_____

CHAIN-OF-CUSTODY RECORD

Accreditation Applied:
NELAC ☐ USACE ☐
Other:

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

Client: GIANT REFINING COMPANY CINIZA
Address: ROUTE 3 BOX 7 GALLUP, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: GWM-1-2ND QTR 2005
Project #:
Project Manager: ED RIEGE
Sampler: JOHNNY SANCHEZ
Sample Temperature: 5°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative H_gCl_2	Preservative HNO_3	Preservative HCL	HEAL No.
6/28/05	1230HR	H_2O	GWM-1-2Q-05	3 VOA's		.	✓	05062913-1

ANALYSIS REQUEST

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_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)	8021 BTEX			Air Bubbles or Headspace (Y or N)
													X			

Date	Time	Relinquished By: (Signature)	Remarks:
6/29/05	0800		6/30/05
Date:	Time:	Relinquished By: (Signature)	Remarks: 1016

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

February 23, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: GWM-1-1st Qtr. 2005 Order No.: 0502178

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 2/18/2005 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

Hall Environmental Analysis Laboratory

Date: *23-Feb-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	GWM-1-1Q-05
Lab Order:	0502178	**Collection Date:**	2/15/2005 2:30:00 PM
Project:	GWM-1-1st Qtr. 2005		
Lab ID:	0502178-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	5.0	0.50		µg/L	1	2/22/2005 9:49:27 AM
Toluene	2.4	0.50		µg/L	1	2/22/2005 9:49:27 AM
Ethylbenzene	2.6	0.50		µg/L	1	2/22/2005 9:49:27 AM
Xylenes, Total	31	0.50		µg/L	1	2/22/2005 9:49:27 AM
Surr: 4-Bromofluorobenzene	112	83.3-121		%REC	1	2/22/2005 9:49:27 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *23-Feb-05*

CLIENT: Giant Refining Co
Work Order: 0502178
Project: GWM-1-1st Qtr. 2005

QC SUMMARY REPORT
Method Blank

Sample ID **Reagent Blank 5m** Batch ID: **R14637** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/21/2005 9:04:53 AM** Prep Date

Client ID: Run ID: **PIDFID_050221A** SeqNo: **340815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.5	0	20	0	97.5	83.3	121	0			

Sample ID **Reagent Blank 5m** Batch ID: **R14648** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/22/2005 7:49:45 AM** Prep Date

Client ID: Run ID: **PIDFID_050222A** SeqNo: **341024**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.33	0	20	0	102	83.3	121	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Date: *23-Feb-05*

CLIENT: Giant Refining Co
Work Order: 0502178
Project: GWM-1-1st Qtr. 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID BTEX std 100ng Batch ID: R14637 Test Code: SW8021 Units: µg/L Analysis Date 2/21/2005 11:21:58 AM Prep Date
Client ID: Run ID: PIDFID_050221A SeqNo: 340816

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.91	0.5	20	0	99.6	88.7	114	0			
Toluene	20.02	0.5	20	0	100	89.3	112	0			
Ethylbenzene	19.91	0.5	20	0	99.5	88.6	113	0			
Xylenes, Total	60.56	0.5	60	0	101	89.4	112	0			

Sample ID BTEX std 100ng Batch ID: R14648 Test Code: SW8021 Units: µg/L Analysis Date 2/22/2005 7:22:24 PM Prep Date
Client ID: Run ID: PIDFID_050222A SeqNo: 341035

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.17	0.5	20	0	101	88.7	114	0			
Toluene	20.5	0.5	20	0	103	89.3	112	0			
Ethylbenzene	20.05	0.5	20	0	100	88.6	113	0			
Xylenes, Total	60.68	0.5	60	0	101	89.4	112	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 2/18/2005

Work Order Number 0502178 | Received by AT

Checklist completed by _____ 2/18/05
Signature | Date

Matrix | Carrier name Client drop-off

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? 6° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

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6. Summary of Groundwater Testing

OW-11

A grab sample fom OW-11 was taken on September 29, 2005. The sample was analyzed for RCRA Metals, VOC, SVOC, BTEX, MTBE and general chemistry. Lab results showed results less than the New Mexico Water Quality Standards (NMWQS) for anions, VOCs, SVOCs, and metals. All the tested parameters were less than the applicable MCLs, NM ground water, and NM TPH screening levels. However, the general chemistry results showed that fluoride (2.3 mg/l) and sulfate (990 mg/l) were present at levels greater than the NMWQS for fluoride (1.6 mg/l) and sulfate (600 mg/l).

RECOMMENDATION: *Giant Ciniza will continue to test annually for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry*

OW-12

OW-12 was sampled on September 27, 2005 and analyzed for BTEX and MTBE. Lab analysis showed all parameters at concentrations less than (all non-detect) the NMWQS for BTEX and MTBE.

RECOMMENDATION: *Giant Ciniza will continue to monitor OW-12 on an annual basis for BTEX and MTBE*

OW-13

OW-13 was sampled on September 27, 2005 and analyzed for BTEX and MTBE. Lab analysis showed all parameters at concentrations less than (all non-detect) the NMWQS for BTEX compounds and MTBE.

RECOMMENDATION: *Giant Ciniza will continue to monitor OW-13 on an annual basis for BTEX and MTBE*

OW-14

OW-14 was sampled on September 29, 2005 and analyzed for BTEX and MTBE. Lab analysis showed concentrations less than the NMWQS for Toluene, Ethylbenzene, Xylene, and MTBE.

RECOMMENDATION: *Giant Ciniza will monitor OW-14 on a semi-annual basis for BTEX and MTBE. This well has been known to contain contaminants. Wells OW-12, OW-13, OW- 29, and OW-30 were installed to monitor if contaminants from OW-14 were migrating.* ***Data from the additional wells have not shown any signs of contaminants.***

OW-14 was only sampled once in 2005 because the agreement to sample OW-14 became effective when the year was half over in June 2005. Giant Ciniza will try to sample this well in the first half and again in the second half of 2006.

OW-29

OW-29 was sampled on September 28, 2005 and analyzed for BTEX and MTBE. Lab analysis showed concentrations less than (all non-detect) the NMWQS for Benzene, Toluene, Ethylbenzene, Xylene, and MTBE.

RECOMMENDATION: *Giant Ciniza will continue to monitor OW-29 on an annual basis for BTEX and MTBE*

OW-30

OW-30 was sampled on September 29, 2005 and analyzed for BTEX and MTBE. Lab analysis showed concentrations less than (all non-detect) the NMWQS for Benzene, Toluene, Ethylbenzene, Xylene, and MTBE.

RECOMMENDATION: *Giant Ciniza will continue to monitor OW-30 on an annual basis for BTEX and MTBE*

BW-1-A

BW-1-A is a dry well and therefore was not sampled in 2005.

RECOMMENDATION: *Giant Ciniza will continue to visually inspect BW-1-A annually for any liquids. If liquids are observed, then sampling will occur. All samples will be analyzed for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry.*

BW-1-B

BW-1-B is a dry well and therefore was not sampled in 2005.

RECOMMENDATION: *Giant Ciniza will continue to visually inspect BW-1-B annually for any liquids. If liquids appear, samples will be analyzed for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry.*

BW-1-C

BW-1-C was sampled on October 17, 2005 and analyzed for VOC, SVOC, BTEX, MTBE, metals, and General Chemistry. Lab analysis showed concentrations less than (all non-detect) the NMWQS for benzene, toluene, ethylbenzene, xylene, and MTBE. However, lab results showed fluoride (2.2 mg/l) was slightly greater than the NMWQS (1.6 mg/l).

RECOMMENDATION: *Giant Ciniza will continue to monitor BW-1-C on an annual basis for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry*

BW-2-A

BW-2-A was sampled on October 17, 2005 and analyzed for VOC, SVOC, BTEX, MTBE, recoverable metals, and General Chemistry. Lab results showed all parameters less than NMWQS.

RECOMMENDATION: *Giant Ciniza will continue to monitor BW-2-A on an annual basis for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry*

BW-2-B

BW-2-B was sampled on October 18, 2005 and analyzed for VOC, SVOC, BTEX, MTBE, metals and General Chemistry. Lab results showed concentrations less than the NMWQS for all parameters except fluoride which was slightly greater (1.7 mg/l) than the NMWQS (1.6 mg/l).

RECOMMENDATION: *Giant Ciniza will continue to monitor BW-2-B on an annual basis for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry. All future lab reports will be compared to past data to determine if levels of Selenium are increasing or remaining static.*

BW-2-C

BW-2-C was sampled on October 19, 2005 and analyzed for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry. Lab results showed concentrations less than the NMWQS for all parameters.

RECOMMENDATION: Giant Ciniza will continue to monitor BW-2-C on an annual basis for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry.

BW-3-A

BW-3-A was dry and therefore could not be sampled.

RECOMMENDATION: *Giant Ciniza will continue to visually inspect BW-3-A for any liquids. If liquids appear, samples will be analyzed for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry.*

BW-3-B

BW-3-B was sampled on October 20, 2005 and analyzed for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry. Lab results showed concentrations less than the NMWQS for all parameters.

RECOMMENDATION: *Giant Ciniza will continue to monitor BW-3-B on an annual basis for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry*

BW-3-C

BW-3-C was sampled on October 20, 2005 and analyzed for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry. Lab results showed concentrations less than the NMWQS for all parameters except fluoride which was present at the standard concentration (1.6 mg/l).

RECOMMENDATION: *Giant Ciniza will continue to monitor BW-3-C on an annual basis for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry*

GWM-1

GWM-1 was sampled on February 15, 2005, June 28, 2005, and August 1, 2005. The samples from February 15 and June 28 were analyzed for BTEX. The sample from August 1 was analyzed for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry. The sample from June 28 showed benzene present at the 0.01 mg/l NMWQS standard. The sample from August 1 showed benzene present at 8.1 ug/l (0.0081 mg/l). These benzene values are greater than the 0.005 mg/l MCL standard for benzene. The sample from February 15 was present at the 0.005 mg/l MCL. All other results from the February 15 and June 28 sampling were less than the NMWQS. Lab results from the August 1 sampling showed concentrations less than the NMWQS for all parameters except fluoride (2.6 mg/l) and chloride (2,000 mg/l) which were greater than the NMWQS for fluoride (1.6 mg/l) and chloride (250 mg/l).

RECOMMENDATION: *Giant Ciniza will monitor GWM-1 on an annual basis for VOC, SVOC, BTEX, MTBE, Metals, and General Chemistry. Ciniza also checks GWM-1 on a quarterly basis for the presence of water. Based on 2006 lab data, discussions with NMED and NMOCD are ongoing and sampling maybe changed*

GWM-2

GWM-2 was installed in the Fall of 2005 and was dry.

RECOMMENDATION: *Giant Ciniza will monitor GWM-2 on a quarterly basis for the presence of water. If water is found, Giant will contact OCD/HWB immediately.*

GWM-3

GWM-3 was installed in the Fall of 2005 and was dry.

RECOMMENDATION: *Giant Ciniza will continue to monitor GWM-3 on a quarterly basis for the presence of water. If water is found, Giant will contact OCD/HWB immediately.*

POND #2

Pond #2 should have been sampled in 2005 but was not due to an oversight.

RECOMMENDATION: *Giant Ciniza will continue to monitor Pond 2on an annual basis for BTEX, MTBE, RCRA Metals, BOD, COD, and TDS. Moreover, in 2006 Giant will monitor above this point (pond 1) for any contaminants. A Hazardous Waste determination has been prepared and discussions with OCD and NMED are underway.*

PW-2

PW-2 was not required to be sampled in 2005.

RECOMMENDATION: *Giant Ciniza will continue to monitor PW-2 according to the discharge plan for VOC, SVOC, Metals, Cyanide, and Nitrates. The next scheduled sampling will take place in 2008*

PW-3

PW-3 was not required to be sampled in 2005

RECOMMENDATION: *Giant Ciniza will monitor PW-3 according to the discharge plan. Sampling will be conducted every 3 years beginning in 2006*

PW-4

PW-4 was not required to be sampled in 2005.

RECOMMENDATION: *Giant Ciniza will continue to monitor PW-4 according to the discharge plan for VOC, SVOC, Metals, Cyanide, and Nitrates and is scheduled for sampling in 2007*

OW-1 and OW-10

These wells will be visually checked on a quarterly basis starting the 4th quarter of 2004. In 2005, at OW-1 the depth to water is zero and OW-10 is at 2.95 feet.

RECOMMENDATION: *Giant Ciniza will continue to visually inspect OW-1 and OW-10 for artesian flow quarterly*

MW-1, MW-4, MW-5, SMW-2 AND SMW-4

MW-1, MW-4 and MW-5 were sampled on October 11 and 12, 2005. SMW-2 and SMW-4 were sampled on October 12 and 13 in 2005. Lab results showed concentrations less than the NMWQS on all parameters except for chloride (1,700 mg/l) and sulfate (1,500 mg/l) in SMW-2 for which the NMWQS for chloride and fluoride are 250 mg/l and 600 mg/l respectively. The pH detected in MW-1 (9.08) and MW-5 (9.07) were slightly greater than the NMWQS of pH=9.

RECOMMENDATION: *Giant Ciniza will sample MW-1 annually. MW-4, MW-5, SMW-2 and SMW-4 will be sampled in 2007 and 2009 and biennially thereafter.*

7. List of Tables

GW Well Depths to Water 2005

Well #	Date:	DTW: in Ft.	Water Elev.
BW-1A	5/24/2005	Dry	
BW-1B	5/24/2005	67.5	
BW-1C	5/24/2005	6.6	
BW-2A	5/24/2005	31.3	
BW-2B	5/24/2005	28	
BW-2C	5/24/2005	20.5	
BW-3A	5/24/2005	Dry	
BW-3B	5/24/2005	32.2	
BW-3C	5/24/2005	7.9	
OW-11	5/24/2005	21	6902.89
OW-12	5/24/2005	48.5	6891.93
OW-13	5/24/2005	23.7	6894.9
OW-14	5/24/2005	27.15	6899.49
OW-29	5/24/2005	21.4	6892.1
OW-30	5/24/2005	21.7	6899.9
MW-1	5/24/2005	7	6871.52
MW-4	5/24/2005	7.7	6874.84
MW-5	5/24/2005	11.3	6827.02
SMW-2	5/24/2005	26.45	6857.66
SMW-4	5/24/2005	29.6	6850.48

DTW = Depth to Water

Groundwater levels before purging or sampling

GW Well Depths to Water 2005

Well #	Date:	DTW:
BW-1A	5-24-05	Dry
BW-1B	5-24-05	67.5'
BW-1C w	5-24-05	6.6'
BW-2A w	5-24-05	31.3'
BW-2B w	5-24-05	28.0'
BW-2C w	5-24-05	20.5'
BW-3A	5-24-05	Dry
BW-3B w	5-24-05	32.2'
BW-3C w	5-24-05	7.9'
OW-11	5-24-05	21.0'
OW-12	5-24-05	48.5'
OW-13	"	23.7'
OW-14	"	27.15
OW-29	5-24-05	21.4'
OW-30	5-24-05	21.7
MW-1	5-24-05	7.0'
MW-4	5-24-05	7.7'
MW-5	5-24-05	11.3'
SMW-2	5-24-05	26.45
SMW-4	5-24-05	29.6'

Purge Only pg-①

6-13-2005

OW-12 DTW 44.5 ft. 223 gal = 3 WVs

1030 hrs 1st purge 50 gallons = 173 left to get 3 WVs
lost suction

6-16-05

OW-12 lost suction

0630 2nd purge 45 gal = 128 gal left to get 3 WVs

6-21-05

OW-12

0630 - 3rd purge 50 gal + lost suction = 78 gal to get 3 WVs

OW-12

0640 4th purge 42 gal + lost suction = 36 gal to get 3 WVs

7-21-05 SC Morris on site sunny warm morning

0630 hrs MW-1 DTW 7.45 ft 382 gal = 3 WVs

1st purge 140 gal + lost suction leaving 242 gal to get 3 WVs

7-22-05

1000 hrs MW-5 - DTW 11.9 ft 258 gal = 3 WVs

1st purge 165 gal leaving 103 gal to get 3 WVs

7-25

0615 hrs MW-5 DTW 11.85 ft

2nd purge 53 gal leaving 59 gal to get 3 WVs

Purge Only pg (2)

7-25-05

0650 MW-4 DTW 8.25 ft 349 gal = 3 WV's

1st purge 165 gal leaving 184 gal to get 3 WV's

7-26-05

0630 MW-4 184 gal to get 3 WV's

2nd purge 140 gal leaving 44 gal to get 3 WV's

10-12-05

0645 MW-4 2nd purge 130 gallons to get 3 WVs

0730 Purged 130 gallons + sampled
DTW 7.9 ft

1000 MW-1 157 gallons left to get 3 WVs
2nd purge DTW 7.4 ft.

1045 Purged 157 gallons + sampled

1100 SMW-4 DTW 29.6 ft. 3 WVs = 20.8 gal
Purged 9-7 gallons + lost suction
Rechecked DTW at 1300 hrs. at 53 ft. not enough recharge to sample well today.

1330 SMW-2 DTW-26.35
Purged 2 gallons to flush pump discharge hose and sampled

10-13-05

1100 SMW-4 DTW-33.1 ft 3.25 gal recharge overnight.

1130 Purged 1 gallon + sampled

2-C 20-35, 64 gal
2-B 27.85

10-17-05

1100 BW-1-A DTW - Dry - no water

BW-1-B DTW - 67.5
There appears to be about 2" of water in well
Can not sample.

BW-1-C DTW 7.3 ft 3WVs = 73.2 gallons
1150 1st purge = 3 gal + lost suction
1300 2nd purge = 5 gallons + lost suction. Ran pump more slowly to try + watch recharge.
1400 Sampled well

1500 BW-2-A DTW - 32.1 3WVs = 16.1 gallons
1st purge
Water muddy - reddish brown
1530 Purged 17 gal + sampled well

10-18-05
1000 BW-2-B DTW 27.85 3WVs = 31 gallons
1st purge 29 gallons + lost suction
Water milky with reddish tinge
1110 Waited 30 min. + sampled

1200 BW-2-C DTW 20.35 ft Pump at 140 ft depth
Purged 18.6 gallons + lost suction
400 Attempted sampling but could not pump water.
Rechecked DTW but got no signal at 100 ft. (Max)

3C 8.3ft - 3WV = 72gal

10-19-2005

1000 BW-2-C DTW 54.2 ft.

1045 Sampled well. Water very muddy, reddish brown.

1345 BW-3-A - Dry - No water

1400 BW-3-B DTW - 32.75 ft. 3 WVs = 19.2 gal
Purged 16 gallons + lost suction

1500 BW-3-C DTW - 8.3 ft 3 WVs = 72 gallons
Started purge - 16 gallons + lost suction

10-20-2005

0730 BW-3-B DTW - 32.75

0800 Sampled well

0930 BW-3-C DTW - 78.4 ft.

0945 Sampled Well

WELL PUMPING & SAMPLING LOG

WELL #	MW-1	MW-~~3~~ 5	MW-~~4~~ 4	SMW-2	SMW-4							
PURGE DATE												
PURGE TIME												
OVA READING												
LIQUID DEPTH												
PUMP DEPTH												
IMMISC. LAYER												
FLOW RATE												
PUMP TIME												

SAMPLE DAY	10/12/05	10/11/05	10/12/05	10/12/05	10/13/05							
SAMPLE TIME	1045	1400	0730	1400	1130							
OVA READING												
LIQUID DEPTH	7.4	12.55	7.9	26.35	33.1							
1) TEMP. F	56	57	55	57	56							
pH	8.97	8.7	8.80	6.86	8.44							
SP. COND.	1136	1172	1198	8480	1212							
2) TEMP. F	56	57	55	57	56							
pH	8.88	8.75	8.79	6.91	8.36							
SP. COND.	1133	1160	1197	8430	1207							
3) TEMP. F	56	57	55	57	56							
pH	8.88	8.76	8.76	6.92	8.41							
SP. COND.	1131	1172	1198	8460	1208							
4) TEMP. F	56	57	55	57	56							
pH	8.88	8.75	8.76	6.92	8.41							
SP. COND.	1139	1172	1198	8370	1210							

WELL PUMPING & SAMPLING LOG

WELL #	OW-12	OW-13	OW-14	OW29	OW-30	OW-11						
PURGE DATE												
PURGE TIME												
OVA READING												
LIQUID DEPTH												
PUMP DEPTH												
IMMISC. LAYER												
FLOW RATE												
PUMP TIME												

SAMPLE DAY	9/27/05	9/27/05	9/29/05	9/28/05	9/29/05	9/29/05						
SAMPLE TIME	0845	1030	1400	1230		1045						
OVA READING												
LIQUID DEPTH	60.9	24.25	27.15	22.0	26.3	21.1						
1) TEMP. F	58	57	57	57	55	57						
pH	9.13	7.96	6.78	6.98	7.15	8.25						
SP. COND.	1111	1234	2730	1669	1633	2840						
2) TEMP. F	57	57	57	57	55	57						
pH	9.17	7.89	6.93	6.94	7.18	8.26						
SP. COND.	1107	1226	2750	1665	1631	2840						
3) TEMP. F	57	57	57	57	55	57						
pH	9.14	7.87	6.90	6.95	7.16	8.26						
SP. COND.	1121	1227	2750	1666	1629	2840						
4) TEMP. F	57	57	57	57	55	57						
pH	9.12	7.86	6.92	6.89	7.18	8.25						
SP. COND.	1121	1233	2680	1657	1633	2820						

WELL PUMPING & SAMPLING LOG

WELL #	BW-1-C	BW-2-A	BW-2B	BW-2-C	BW-3-B	~~BW-4-C~~ BW-3C						
PURGE DATE												
PURGE TIME												
OVA READING												
LIQUID DEPTH												
PUMP DEPTH												
IMMISC. LAYER												
FLOW RATE												
PUMP TIME												
PUMP METHOD												
DISP. AREA												

SAMPLE DAY	10/17/05	10/17/05	10/18/05	10/19/05	10/20/05	10/20/05						
SAMPLE TIME	1400	1530	1110	1045	0800	0945						
OVA READING												
LIQUID DEPTH	7.3	32.1	27.85	54.2	32.75	78.4						
1) TEMP. F	55	57	55	57	55	53						
pH	8.58	7.75	7.82	8.91	8.07	8.62						
SP. COND.	1287	1353	2260	1357	1556	1453						
2) TEMP. F	55	57	55	57	55	55						
pH	8.54	7.65	7.77	8.87	8.08	8.63						
SP. COND.	1293	1353	2250	1353	1555	1457						
3) TEMP. F	55	57	55	57	55	55						
pH	8.42	7.67	7.80	8.90	8.07	8.64						
SP. COND.	1288	1350	2270	1367	1563	1448						
4) TEMP. F	55	57	55	57	55	55						
pH	8.60	7.67	7.77	8.88	8.04	8.59						
SP. COND.	1287	1347	2260	1363	1547	1434						

8-5-91**

TABLE 1

ELEVATION

WELL	CASING DIAMETER	T.O.C. *	B.O.C. *	CAPACITY PER FOOT	TOTAL DEPTH
MW-1	5	6878.52	6746.5	1.02	132.02
~~MW-2~~	5	6880.84	6740.6	1.02	140.24
MW-4	5	6882.54	6760.4	1.02	122.14
MW-5	4	6883.32	6750.3	0.74	133.02
~~SMW-1~~	2	6883.29	6834.20	0.163	
SMW-2	2	6884.44	6827.10	0.163	50.24 ft
~~SMW-3~~	2	6884.56	6838.70	0.163	45.86
SMW-4	2	6880.08	6807.80	0.163	72.22
~~SMW-5~~	2	6878.02	6801.80	0.163	76.22
SMW-6	2	6880.71	6807.60	0.163	73.11
OW-1	4	6868.00	6773.96	0.74	94.04
~~OW-2~~	4	6871.00	6810.00	0.74	61.0
~~OW-3~~	4	6876.00	6809.30	0.74	66.73
OW-11	4	6923.89	6857.27	0.74	66.62
OW-12	4	6940.43	6795.43	0.74	145.00
OW-13	4	6920.12	6820.12	0.74	100.00
OW-14	4	6926.64	6881.64	0.74	45.00
~~OW-24~~	4	6880.00	6815.00	0.74	65.0

* T.O.C. - Top of Casing
B.O.C. - Bottom of Casing

** Update of 1989 Sample and Analysis Plan.

sm/c:/word/envforms/table1/welldepths

Volume of Product Recovered

RW-1 HYDROCARBON RECOVERY 2/22 TO 12/29 2005

Date of measurement	Time	Quarter	Well #	Depth to Product (feet)	Depth to Water (feet)	Product Level Thickness (feet)	Volume of Product Bailed/ Pumped (gallons)	Water Gallons
2/22/2005	0830	1st.	RW-1	32'-5 1/2"	36'-6"	4'-0 1/2"	14	
3/2/2005	0745	1st.	RW-1	32'-5"	36'-5 1/4"	4'-0 1/4"	9	
3/8/2005	0830	1st.	RW-1	31'-11"	36'-4 1/4"	4'-5 1/4"	15	
3/9/2005	0830	1st.	RW-1	31'-11"	37'-6"	5'-7"	4	
3/11 to 3/18/05		1st.	RW-1	Started Pumping Well on 3/11/05			74	
3/18 to 3/23/05		1st.	RW-1	Continue Pumping			48	
3/23 to 4/1/05		1st.	RW-1	Continue Pumping			62	
4/1 To 4/4/05		2nd	RW-1	Pump shut down to measure well			27	
4/5/2005	11:30Hrs	2nd	RW-1	34'-9"	38'-11"	4'-2"		
4/4 TO 4/15/05	11:00Hrs	2nd	RW-1	Continue Pumping			50	
4-15 to 5-5-05	1230 Hrs	2nd	RW-1	Continue Pumping			45	154
5-5 to 6-17-05	1130 Hrs	2nd	RW-1	Continue Pumping			24	196
6/27/2005	1400 Hrs	2nd	RW-1	Pump shut down to measure well				
6/28/2005	1100 Hrs	2nd	RW-1	32' 5 1/2"	33' 3"	0' 9 1/2"		
6/28/2005		2nd	RW-1	Continue Pumping				
6/17 to 7/8/2005	1030 Hrs	2nd	RW-1	Continue Pumping			18	146
7/8 to 8/9/2005	1330 Hrs	3rd	RW-1	Continue Pumping			28	350
8/9 to 9/16/2005	1135 Hrs	3rd	RW-1	36'- 5 1/2"	36' - 6 1/2"	0' - 1"	8	240
12/5/2005	1315 Hrs	4th	RW-1	31'-11"	34'-8 1/2"	2'-9 1/2"		
12/8/2005	1400 Hrs	4th	RW-1	Start Pumping				
12/22/2005	1530 Hrs	4th	RW-1	Pulled Pump			5	120
12/29/2005	1400 Hrs	4th	RW-1	Hand Bailed			0.5	4.5
3/16/2006	1300 Hrs.	1st.	RW-1	32'-2 3/4"	34'-5 3/4"	2'-3"		
3/16/2006	1430 Hrs.	1st.	RW-1	Start Pumping				
3/23/2006	1430 Hrs.	1st.	RW-1	Shut Off Pump				
3/27/2006	1530 Hrs.	1st.	RW-1	Start Pumping				
3/31/2006	1130 Hrs.	1st.	RW-1	Continue Pumping			7	174
4/3/2006	1130 Hrs.	2nd	RW-1	Stopped Pumping			1	38
4/4/2006	1100 Hrs.	2nd	RW-1	32'-9"	33'-1"	0'-4"		
6/6/2006	1300 Hrs.	2nd	RW-1	32'-4 3/4"	34'-6 1/2"	2'-1 3/4"		
6/8/2006	1500 Hrs.	2nd	RW-1	Start Pumping (Intermittingly)				
6/29/2006	1000 Hrs.	2nd	RW-1	Stopped Pumping			8	365
					Total Gallons		**447.5**	**1787.5**

4/4/2006 1100 Hrs 43'-9 3/4" to bottom of well from top of steel casing.

GIANT CINIZA REFINERY

Permit Requirement: GW-032

Condition Permit ID # : OCD Sect. 9, Item 4

Monitoring Required: Quarterly
Measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1, RW-2, RW-5, RW-6

Date of measurment	Time	Quarter	Well #	Depth to Prouduct (feet)	Depth to Water (feet)	Product Level Thickness (feet)	Volume of Product Bailed (gallons)
2/22/2005	8:30am	1st.	**RW-1**	32'-5 1/2"	36'-6"	4'-0 1/2"	14
2/22/2005	12:30pm	1st.	**RW-2**	No Product	27'-9 1/2"	0	0
2/22/2005	1:15pm	1st.	**RW-5**	32'-11"	34'-1"	1'-2"	4 1/2
2/22/2005	2:30pm	1st.	**RW-6**	33'-1 1/2"	34'-6"	1'-4 1/2"	4 1/2
Name and Title of person who performed measurement: **Johnny Sanchez (Enviromental Specialist) & Darren Joe (Special Projects)**							

Signature: Johnny Sanchez / Darren Joe

CC: Ed Riege

GIANT CINIZA REFINERY

Permit Requirement: GW-032

Condition Permit ID # : OCD Sect. 9, Item 4

Monitoring Required: Quarterly measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1, RW-2, RW-5, RW-6

Date of measurement	Time	Quarter	Well #	Depth to Product (feet)	Depth to Water (feet)	Product Level Thickness (feet)	Volume of Product Bailed (gallons)
3/3/2005	0745	1st.	**RW-1**	32'-5"	36'-5 1/4"	4'-0 1/4"	9
		1st.	**RW-2**				
3/3/2005	1130	1st.	**RW-5**	33'-0"	33'-9"	0'-9"	6
3/3/2005	1400	1st.	**RW-6**	33'-2 1/4"	34'-4 1/2"	1'-2 1/4"	6
Name and Title of person who performed measurement: **Johnny Sanchez (Environmental Specialist) & Darren Joe (Special Projects)**							

Signature: Johnny Sanchez / Darren R. Joe

CC: Ed Riege

GIANT CINIZA REFINERY

Permit Requirement: GW-032

Condition Permit ID # : OCD Sect. 9, Item 4

Monitoring Required: Quarterly measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1, RW-2, RW-5, RW-6

Date of measurement	Time	Quarter	Well #	Depth to Product (feet)	Depth to Water (feet)	Product Level Thickness (feet)	Volume of Product Bailed (gallons)
3/8/2005	0830	1st.	**RW-1**	31'-11"	36'-4 1/4"	4'-5 1/4"	15
		1st.	**RW-2**				
3/8/2005	1330	1st.	**RW-5**	33"-1"	33'-5"	0'-4"	1/2
3/8/2005	1430	1st.	**RW-6**	33'-1 3/4"	34'-0"	0'-10 1/4"	2
Name and Title of person who performed measurement: **Johnny Sanchez (Environmental Specialist)**							

Signature: Johnny Sanchez

CC: Ed Riege

GIANT CINIZA REFINERY

Permit Requirement: **GW-032**

Condition Permit ID # : **OCD Sect. 9, Item 4**

Monitoring Required: **Quarterly**
Measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1 DRUMS

Top of Drum Inside is 34" ~1.612 Gallons per Inch

Date of measurment	Time	Drum Number	Well #	Depth to Prouduct (Inches)	Depth to Water (Inches)	Product Level Thickness (Inches)	Volume of Product (gallons)
3/18/2005	1030	1	**RW-1**	25	16.25	8.75	14.105
3/18/2005	1030	2	**RW-1**	19.5	0	19.5	31.434
3/18/2005	1030	3	**RW-1**	17.5	0	17.5	28.21
3/18/2005	1030	4	**RW-1**	0	0	0	0
Start Pumping Product 3/11/05							73.749

Signature: _____

CC: Ed Riege

GIANT CINIZA REFINERY

Permit Requirement: **GW-032**

Condition Permit ID # : **OCD Sect. 9, Item 4**

Monitoring Required: **Quarterly**
Measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1

Date of measurment	Time	Drum Number	Well #	Volume of Water (Gallons)			Volume of Product (gallons)
3-23 To 4-1-05	10:00 Hrs.	1	**RW-1**	29			16
3-23 To 4-1-05	10:00 Hrs.	2	**RW-1**	25			15
3-23 To 4-1-05	10:00 Hrs.	3	**RW-1**	29			16
3-23 To 4-1-05	10:00 Hrs.	4	**RW-1**	30			15
			Total	113			62

RW-1 Gallons of Hydrocarbons

Date	
2/22/2005	14
3/3/2005	9
3/8/2005	15
3/9/2005	4
3/11/05 Thru 3/18/05	74
3/18/05 Thru 3/23/05	48
3/23/05 Thru 4/01/05	62
	226 Total to Date

GIANT CINIZA REFINERY

Permit Requirement: GW-032

Condition Permit ID # : OCD Sect. 9, Item 4

Monitoring Required: Quarterly measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1, RW-2, RW-5, & RW-6

Date of measurement	Time	Quarter	Well #	Depth to Product (feet)	Depth to Water (feet)	Product Level Thickness (feet)	Volume of Product Bailed (gallons)
6/28/2005	1100 Hrs.	2nd	**RW-1**	32' 5 1/2"	33' 3"	0' 9 1/2"	Continue Pumping
6/24/2005	1315 Hrs.	2nd	**RW-2**	No Product	27'-9 1/4"	0	0
6/24/2005	900 Hrs.	2nd	**RW-5**	32'-11 1/2"	34'-0 1/2"	1'-1"	2 1/2
6/24/2005	1100Hrs	2nd	**RW-6**	33'-3 3/4"	34'-5 1/2"	1'-2 1/4"	3 1/2

Name and Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)

Signature: Johnny Sanchez

CC: Ed Riege

GIANT CINIZA REFINERY

Permit Requirement: GW-032

Condition Permit ID # : OCD Sect. 9, Item 4

Monitoring Required: Quarterly measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1, RW-2, RW-5, & RW-6

Date of measurement	Time	Quarter	Well #	Depth to Product (feet)	Depth to Water (feet)	Product Level Thickness (feet)	Volume of Product Bailed (gallons)
9/16/2005	1135 Hrs.	3rd	**RW-1**	36'- 5 1/2"	36'-6 1/2"	0'- 1"	8/9 to 9/16 Pumped 8 Gals
9/16/2005	0830 Hrs.	3rd	**RW-2**	No Product	28'-0 1/4"	0	0
9/16/2005	0920 Hrs.	3rd	**RW-5**	32'-10"	33'-10 1/4"	1'-0 1/4"	2 1/2
9/16/2005	1020 Hrs	3rd	**RW-6**	32'-11 3/4"	34'-4"	1'-4 1/4"	3
Name and Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)							

Signature: Johnny Sanchez

CC: Ed Riege

GIANT CINIZA REFINERY

Permit Requirement: GW-032

Condition Permit ID # : OCD Sect. 9, Item 4

Monitoring Required: Quarterly measurement of product layer thickness and bailing of product.

Equipment Identification: RW-1, RW-2, RW-5, & RW-6

Date of measurement	Time	Quarter	Well #	Depth to Product (feet)	Depth to Water (feet)	Product Level Thickness (feet)	Volume of Product Bailed (gallons)
12/5/2005	1315 Hrs.	4th	**RW-1**	31'-11"	34'-8 1/2"	2'- 9 1/2"	***
12/5/2005	1340 Hrs.	4th	**RW-2**	No Product	27'-11"	0	0
12/5/2005	1400 Hrs.	4th	**RW-5**	32'-6 1/4"	33'-2 1/2"	0'-8 1/4"	1 1/2
12/5/2005	1500 Hrs.	4th	**RW-6**	32'-8 1/2"	33'-9"	1'-0 1/2"	2
Name and Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)							

*** Could not start pump. Started pump 12/8/05, Pulled pump 12/22/05, Hand Bailed 12/29/05. Period of 12/8/05 to 12/29/05 5.5 gallons of product and 124.5 gallons of water.

Signature: Johnny Sanchez

CC: Ed Riege

Well Data Summary Table

Well Data Summary Table
2005 Annual Groundwater Discharge Report
Giant Refining - Ciniza Refinery
August , 2006 by Jim Lieb

Well ID Number	Measurement Date	Well Casing Rim Elevations (ft)	Well Casing Bottom Elevations (ft)	Total Well Depth (ft)	Depth to SPH (ft)*	SPH Thickness (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Corrected Water Table Elevation (ft)**
BW-1A	June 24,2005	6,876.73	6,836.73	40	na	na	dry	dry	na
BW-1B	June 24,2005	6,876.91	6,811.71	65.2	na	na	65.20	6,811.71	na
BW-1C	June 24,2005	6,876.75	6,719.75	157	na	na	6.60	6,870.15	na
BW-2A	June 24,2005	6,874.72	6,809.22	65.5	na	na	31.30	6,843.42	na
BW-2B	June 24,2005	6,874.58	6,784.08	90.5	na	na	28.00	6,846.58	na
BW-2C	June 24,2005	6,875.40	6,724.40	151	na	na	20.50	6,854.90	na
BW-3A	June 24,2005	6,878.22	6,828.22	50	na	na	dry	dry	na
BW-3B	June 24,2005	6,878.79	6,803.79	75	na	na	32.20	6,846.59	na
BW-3C	June 24,2005	6,878.08	6,723.08	155	na	na	7.90	6,870.18	na
OW-1	not sampled	6,868.00	6,773.96	94.04	na	na	not sampled	not sampled	na
OW-11	June 24,2005	6,923.89	6,857.27	66.62	na	na	21.00	6,902.89	na
OW-12	June 24,2005	6,940.43	6,795.43	145	na	na	48.50	6,891.93	na
OW-13	June 24,2005	6,920.12	6,820.12	100	na	na	23.70	6,896.42	na
OW-14	June 24,2005	6,926.64	6,881.64	45	na	na	27.15	6,899.49	na
OW-29	June 24,2005			0	na	na	21.40	-21.4	na
OW-30	June 24,2005	6,921.60	6,873.20	48.4	na	na	21.70	6,899.90	na
MW-1	June 24,2005	6,878.52	6,746.50	132.02	na	na	7.00	6,871.52	na
MW-4	June 24,2005	6,882.54	6,760.40	122.14	na	na	7.70	6,874.84	na
MW-5	June 24,2005	6,883.32	6,750.30	133.02	na	na	11.30	6,872.02	na
RW-1 (OW-27)	February 22,2005	6,943.50			32.46	4.04	36.50	6,907.00	6910.232
	March 2,2005				32.42	4.02	36.44	6,907.06	6910.276
	March 8,2005				31.92	4.44	36.35	6,907.15	6910.702
	March 9,2005				31.92	5.58	37.50	6,906.00	6910.464
	April 5,2005				34.75	4.17	38.92	6,904.58	6907.916
	June 28,2005				32.46	0.79	33.25	6,910.25	6910.882
	September 16,2005				36.46	0.08	36.54	6,906.96	6907.024
	December 5,2005				31.92	2.79	34.71	6,908.79	6911.022
RW-2 (OW-28)	February 22,2005	6,927.20			na	0	27.79	6,899.41	6899.41
	June 28,2005				na	0	27.77	6,899.43	6899.43
	September 16,2005				na	0	28.25	6,898.95	6898.95
	December 5,2005				na	0	27.92	6,899.28	6899.28
RW-5	February 22,2005	6,942.50	40.00		32.92	1.17	34.08	6,908.42	6909.356
	March 3,2005				33.00	0.75	33.75	6,908.75	6909.35
	March 8,2005				33.08	0.33	33.42	6,909.08	6909.344
	June 24,2005				32.96	1.08	34.08	6,908.42	6909.284
	September 16,2005				32.83	1.02	33.85	6,908.65	6909.466
	December 5,2005				32.52	0.69	33.19	6,909.31	6909.862
RW-6	February 22,2005	6,972.60	38.80		33.13	1.38	34.50	6,938.10	6939.204
	March 3,2005				33.19	1.19	34.38	6,938.22	6939.172
	March 8,2005				33.15	0.85	34.00	6,938.60	6939.28
	June 24,2005				33.31	1.19	34.46	6,938.14	6939.092
	September 16,2005				32.98	1.35	34.33	6,938.27	6939.35
	December 5,2005				32.69	1.02	33.75	6,938.85	6939.666
SMW-2	June 24,2005	6,884.44	6,827.10	57.34	na	na	26.45	6857.99	na
SMW-4	June 24,2005	6,882.54	6,760.40	122.14	na	na	29.60	6852.94	na
SMW-6	not sampled	6,880.71	6,807.60	73.11	na	na	not sampled	not sampled	na
GWM-1		6,912.65	6,888.95	23.7	na	na	na	na	na
GWM-2				0	na	na	na	na	na
GWM-3				0	na	na	na	na	na

*SPH = Separate Phase Hydrocarbons
**Corrected water table elevations are only provided if SPH was detected.
Water was not observed in GWM-1, GWM-2, and GWM-3 in 2005.

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Check well OW-1 for artesian flow condition

Date	Time	Quarter	Depth to Water (feet)	Comments
2/15/2005	1300 Hrs.	1st	0.00	
Name & Title of person who performed measurement: Darren Joe (Special Projects) & Johnny Sanchez (Environmental Specialist)				

Signature:_____

CC: Ed Riege

File: (S:)\env-share\Wells OW-1,OW-10 GWM-1 Form

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Check well OW-1 for artesian flow condition

Date	Time	Quarter	Depth to Water (feet)	Comments
6/24/2005	1400 Hrs.	2nd	0	
Name & Title of person who performed measurement: Steve Morris (Environmental Engineer)				

Signature:_____

CC: Ed Riege

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Check well OW-1 for artesian flow condition

Date	Time	Quarter	Depth to Water (feet)	Comments
9/16/2005	0850 Hrs.	3rd	0	
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)				

Signature:_____

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Check well OW-1 for artesian flow condition

Date	Time	Quarter	Depth to Water (feet)	Comments
12/6/2005	2:45PM	4th	0	
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)				

Signature:_____

CC: Ed Riege

File: (S:)\env-share\Wells OW-1,OW-10 GWM-1 Form

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-10 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level on OW-10

Date	Time	Quarter	Depth to Water (feet)	Comments
2/15/2005	1315	1st	2.75	
Name & Title of person who performed measurement: Darren Joe (Special Projects) & Johnny Sanchez (Environmental Specialist)				

Signature: _____

CC: Ed Riege

File: (S:)\env-share\Wells OW-1,OW-10 GWM-1 Form

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-10 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level on OW-10

Date	Time	Quarter	Depth to Water (feet)	Comments
6/24/2005	1350 Hrs.	2nd	2.6	
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)				

Signature:_____

CC: Ed Riege

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-10 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level on OW-10

Date	Time	Quarter	Depth to Water (feet)	Comments
9/16/2005	0900 Hrs.	3rd	2.4	
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)				

Signature: _____

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

OW-10 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level on OW-10

Date	Time	Quarter	Depth to Water (feet)	Comments
12/6/2005	2:30PM	4th	2.7	To Top of Plastic Casing
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specilist)				

Signature: _____

CC: Ed Riege

File: (S:)\env-share\Wells OW-1,OW-10 GWM-1 Form

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level of GWM-1

Date	Time	Quarter	Depth to Water (feet)	Comments
2/15/2005	1430	1st	20.50	
Name & Title of person who performed measurement: Darren Joe (Special Projects) & Johnny Sanchez (Environmental Specialist)				

Signature: _____

CC: Ed Riege

File: (S:)\env-share\Wells OW-1,OW-10 GWM-1 Form

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT
GWM-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level & sample on GWM-1

Date	Time	Quarter	Depth to Water (feet)	Comments
6/24/2005	1405 Hrs.	2nd	20.5	Plan to Sample
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)				

Signature: _____

CC: Ed Riege

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level & sample on GWM-1

Date	Time	Quarter	Depth to Water (feet)	Comments
9/16/2005	0910 Hrs.	3rd	20.65	Steve sampled 08/01/05 for 3rd Qtr.
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)				

Signature:_____

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-1 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 4

Monitoring Requirement: Quarterly water level on GWM-1

Date	Time	Quarter	Depth to Water (feet)	Comments
12/6/2005	3:00PM	4th	20.65	To top of plastic casing
Name & Title of person who performed measurement: Johnny Sanchez (Environmental Specialist)				

Signature: _____

CC: Ed Riege

File: (S:)\env-share\Wells OW-1,OW-10 GWM-1 Form

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-2 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 3

Monitoring Requirement: Monthly Through 2005

Date	Time	Month	Depth to Bottom (feet)	Comments (Dry?)
10-12-05	2:30 PM	OCT.	18.97	TO TOP OF PLASTIC CASING, DRY 1ST TIME MEASURING
Name & Title of person who performed measurement: JOHNNY SANCHEZ ENV. SPECIALIST				

Signature: Johnny Sanchez

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-2 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 3

Monitoring Requirement: Monthly Through 2005

Date	Time	Month	Depth to Bottom (feet)	Comments (Dry?)
11-15-05	11:30AM	Nov.	18.97	DRY
Name & Title of person who performed measurement:			JOHNNY SANCHEZ (ENV. SPECIALIST)	

Signature: Johnny Sanchez

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-2 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 3

Monitoring Requirement: Monthly Through 2005

Date	Time	Month	Depth to Bottom (feet)	Comments (Dry?)
12-6-05	3:05 PM	DEC.	18.97	DRY
Name & Title of person who performed measurement:			Johnny Sanchez (Env. Specialist)	

Signature: Johnny Sanchez

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-3 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 3

Monitoring Requirement: Monthly Through 2005

Date	Time	Month	Depth to Bottom (feet)	Comments (Dry?)
10-12-05	2:40PM	OCT	17.93	TO TOP OF PLASTIC CASING, DRY. 1ST TIME MEASURING
Name & Title of person who performed measurement:				JOHNNY SANCHEZ (ENV. SPECIALIST)

Signature: Johnny Sanchez

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-3 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 3

Monitoring Requirement: Monthly Through 2005

Date	Time	Month	Depth to Bottom (feet)	Comments (Dry?)
11-15-05	11:35 AM	NOV.	17.93	Dry
Name & Title of person who performed measurement:			Johnny Sanchez (ENV. Specialist)	

Signature: Johnny Sanchez

GIANT CINIZA REFINERY

GROUNDWATER DISCHARGE PERMIT

GWM-3 WELL INSPECTION

Permit Requirement: OCD, Section 9, Item 3

Monitoring Requirement: Monthly Through 2005

Date	Time	Month	Depth to Bottom (feet)	Comments (Dry?)
12-6-05	3:15 PM	DEC	17.93	DRY
Name & Title of person who performed measurement:			JOHNNY SANCHEZ (ENV. SPECIAL)	

Signature: Johnny Sanchez

8. List of Figures

Figure 1
Regional Map

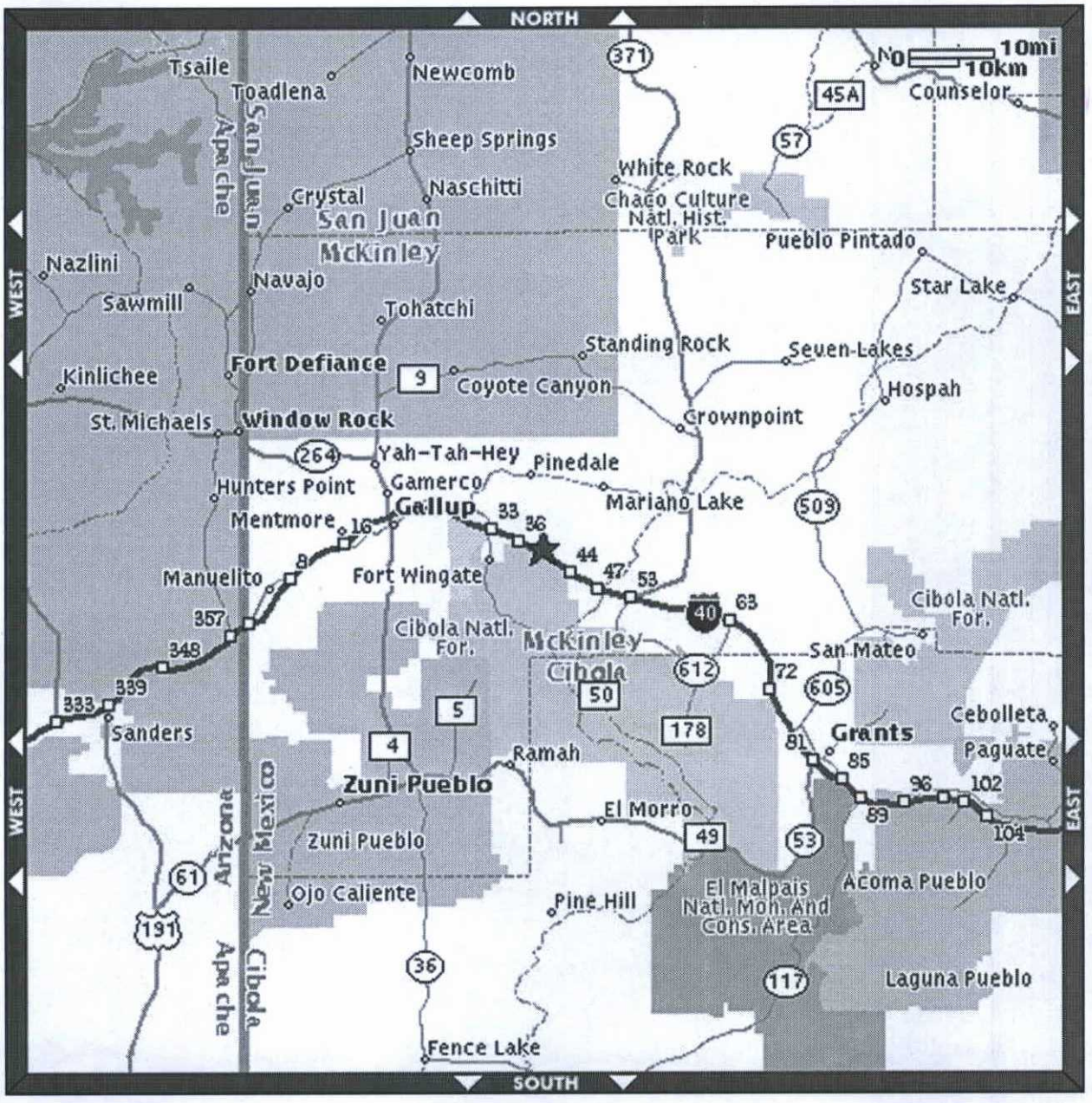

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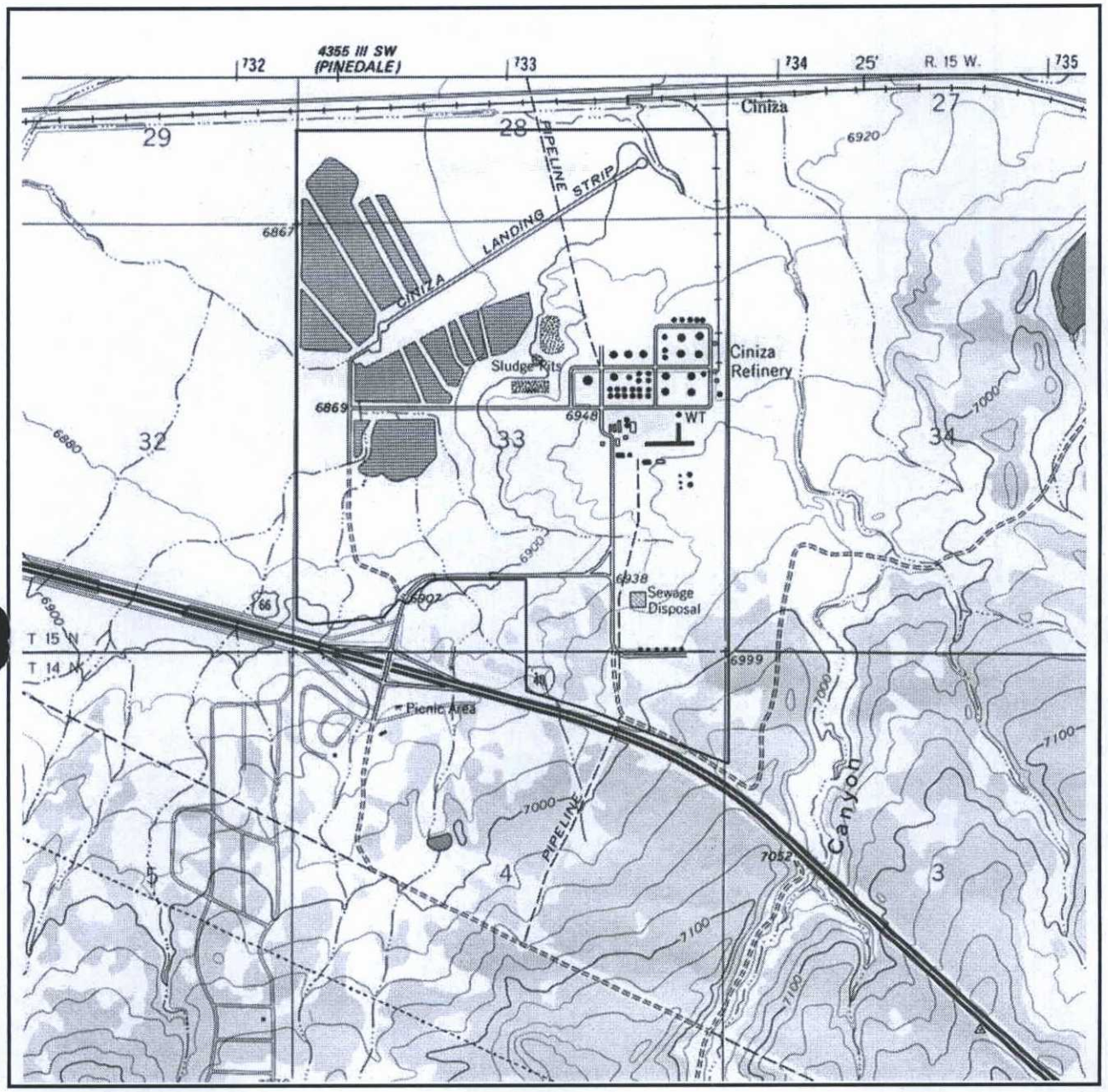
Figure 2 - Topographic Map of the Refinery Site

Locality Map
USGS Topographical Map - Ciniza Quadrangle (Revised 1980)



Well and Boring Locations Map

Potentiometric Elevation Map
(Alluvium – Chinle Group Interface Water Levels)

Annual Product Thickness Map
(Separate Phase Hydrocarbon Thickness)

Plots of Water Table Elevations

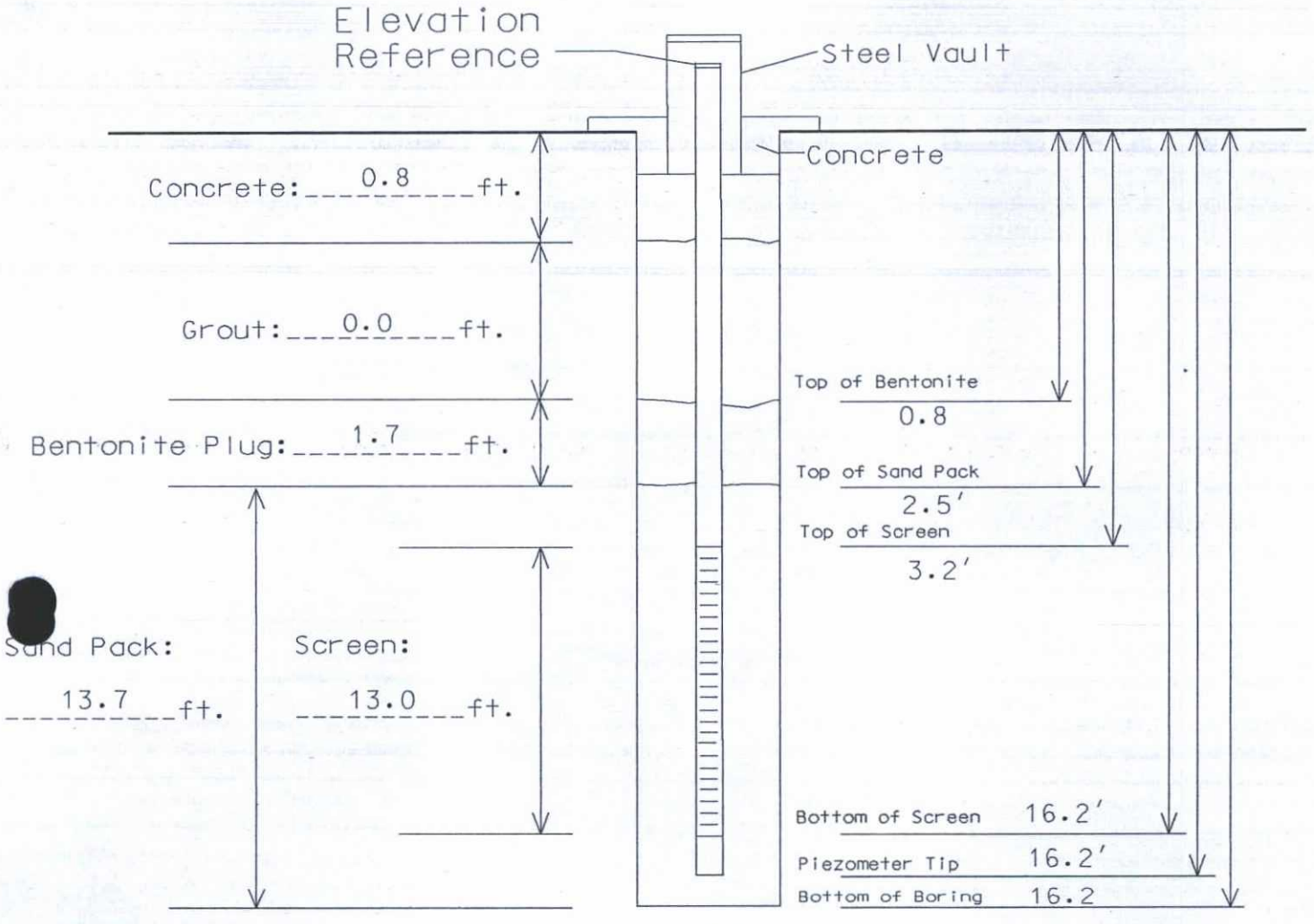
Appendix A: Well Drilling Logs for GWM-2 and GWM-3

PRECISION ENGINEERING, INC.

505-523-7674

Installation Diagram

Monitoring Well No. GWM 2



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards. Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.10" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 2244.46

Bottom Cap Used? Yes

Site Easting: 3864.28

Other:

Project #: 05-099

Project Name: Ciniza Refinery

Elevation: 6913.17

Sheet: 1 OF 1
Bore Point: 10' S, 4'E of GMW-1
Water Elevation: Not Encountered
Boring No.: GWM-2

Precision Engineering, Inc.
P.O. Box 422
Las Cruces, NM 88004
505-523-7674

File #: 05-099
Site: Giant-Ciniza

Elevation: 6913.17
Date: 9/25/2005

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR,ETC.)	%M	LL	PI	CLASS.
	0.0-0.5				**Clay**, Gravelly (From Roadfill), Wet, Sandy, Red/Brown				
	0.5-5.0				**Clay**, Red/Brown, Some Silt, Very Fine Sand In Thin Seams, Wet, Firm				
				2.5					
				5.0					
	5.0-10.0				**Same As Above**				
				7.5					
				10.0					
	10.0-14.7				**Same As Above**, No Sand				
	14.7-15.0			15.0	**Clay**, Fine Sand, Red/Brown, Soft, Root Matter, Wet				
	16.2			20.0	TD Set Well @ 16.2' 13.0' - 2" PVC Sch. 40 #10 Slot Screen 3.2' - 2" PVC Sch. 40 Riser to Ground Surface 10-20 Sand From Bottom of Hole to 2.5' Below Ground Surface, 3/8 Bentonite Chip to 8" Below Ground Surface, Hydrated Chips Set Above Ground Surface Finish with 4'x4' Concrete Pad. Top of Casing ~ 3.0' Above Ground Surface				

[redacted]IZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER LOGGED BY: WHK

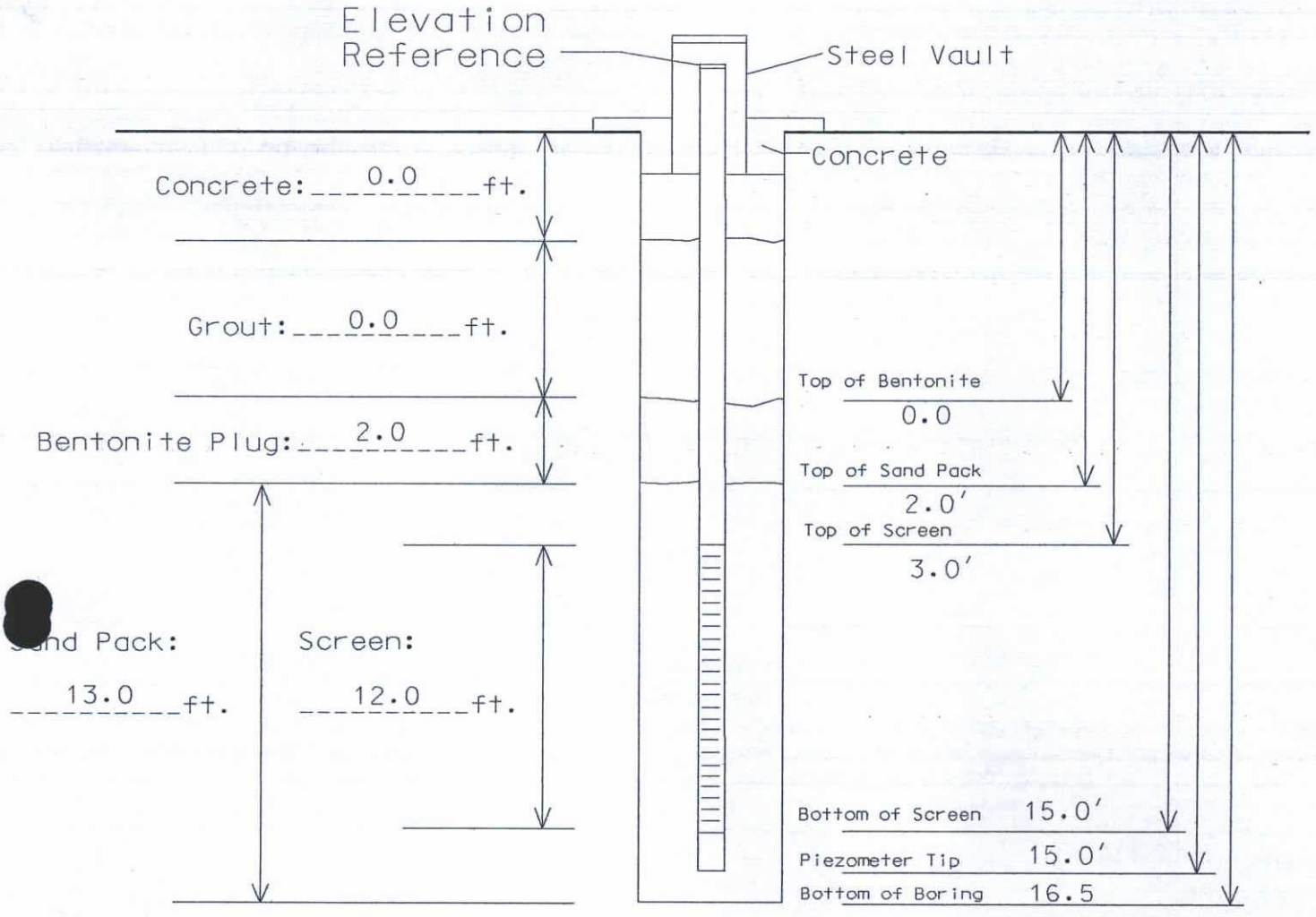
C:\bill\Projects\2005\05099GWM2-3\[GWM 2.xls]Sheet1

PRECISION ENGINEERING, INC.

505-523-7674

Installation Diagram

Monitoring Well No. GWM 3



Boring Diameter: 8 5/8"

Sand Type: 10-20 Silica

Bollards, Type/Size: NA

Bentonite: 3/8" Chips

Screen Type/Size: 2" PVC Sch. 40, 0.10" Slotted

Cement/Grout: NA

Riser Type/Size: 2" PVC Sch. 40

Water: Potable

Locking Expandable Casing Plug? Yes

Site Northing: 2233.38

Bottom Cap Used? Yes

Site Easting: 4110.05

Other:

Project #: 05-099

Project Name: Ciniza Refinery

Elevation: 6912.65

Sheet: 1 OF 1
Bore Point: NW Corner of Pond 1
Water Elevation: Not Encountered
Boring No.: GWM-3

Precision Engineering, Inc.
P.O. Box 422
Las Cruces, NM 88004
505-523-7674

File #: 05-099
Site: Giant-Ciniza

Elevation: 6912.65
Date: 9/25/2005

Log of Test Borings

LAB #	DEPTH	BLOW COUNT	PLOT	SCALE	MATERIAL CHARACTERISTICS (MOISTURE, CONDITION, COLOR,ETC.)	%M	LL	PI	CLASS.
	0.0-0.25				**Clay**, Gravelly, Hard, Red Brown, Wet				
	0.25-5.0				**Clay**, Very Silty, Sandy, Very Sandy, Wet, Red/Brown, Stiff				
				2.5					
				5.0					
	5.0-10.0				**Clay**, Very Sandy, Slightly Silty, Wet, Red/ Brown, Stiff				
				7.5					
				10.0					
	10.0-15.0				**Clay**, Wet, Red/Brown, Firm, Root Matter @ 14.5'				
				15.0					
	16.0								
	16.0-16.1				**Clay**, Sandy, Some Gravel, Very Wet,				
	16.1-16.5				Moisture on Surface, Red/Brown				
					Clay, Some Pebbles, Wet, No Free Water, Red/Brown				
	16.5				TD				
				20.0	Plug Boring with 3/8 Bentonite Chips to 15.0' 12.0' of 2" Sch. 40 PVC #10 Slot Screen, 3.0' of 2" Sch. 40 PVC Riser, Above Ground Finish with 4'x4' Concrete Pad. 10-20 Sand from 15.0' to 2.0', 3/8 Bentonite Chips from 2.0' to Surface Top of Casing ~ 3.0' Above Ground Surface				

IZE & TYPE OF BORING: 4 1/4" ID HOLLOW STEMMED AUGER LOGGED BY: WHK

Appendix B: Ciniza Field Sampling Collection and Handling Procedures

Appendix B: Ciniza Field Sampling Collection and Handling Procedures

Groundwater Elevation

All water/product levels are measured using a meter. The technician records separate phase hydrocarbon (SPH), depth to water (DTW), and total well depth using the probe.

Water Quality/Groundwater Sampling

Water quality parameters are measured using a meter. Electrical conductance, pH, and temperature are monitored during purging.

Field Procedure for Purging Monitor Wells

1. Wash probe on well depth instrument with distilled water before lowering into the well casing.
2. Measure each well for depth to water using the well depth instrument. Document the depth to water (DTW) on each well before starting the purge.
3. Connect converter power cord into outlet in the well casing.
4. Connect clear plastic hose into 55 gallon drum or bucket for purging. The quantity purged from each well is variable and so additional drums or buckets may be necessary.
5. Start generator power for the operation of the converter.
6. Converter should be in the "off" mode with the dial set at "zero".
7. Adjust the dial mode until it reaches the desired level for purging.
8. When the purge is complete, detach equipment for the next well purge.
9. Document the following information:
    a. The amount of water purged from each well.
    b. Weather conditions (dry or wet).
    c. Depth to Water (DTW).
    d. Purge date.
    e. Purge time.

Well Sampling and Sample Handling Procedures

For safety protection and sampling purity, rubber gloves must be worn and changed between each activity.

Prepare for sampling event by making out sample bottle labels and have bottles separated into plastic bags for each well to be sampled and place in ice chest ready to take into the field.

Bring along a note book and sample log.

Starting with well MW-1, document weather conditions, sample date and time.

Fill in label with location, date, time, analysis, preservative, and your name.

Start sampling by adjusting converter speed for each well.

Affix sample label and fill bottle according to lab instructions. For samples intended for VOC analysis, use bottles with septa lids, fill bottle to neck and add final amount of water with cap to form meniscus. Turn bottles upside down to examine for bubbles. If bubbles show repeat previous sentence. If no bubbles show, secure lids and pack in bubble wrap and place in cooler until sampling is completed.

For dissolved metals, sample water is poured into a jar and then extracted with a syringe. The syringe is then used to force the sample water through a field filter into the proper sample bottle to collect dissolved metals samples.

Refrigerate completed samples until shipping to lab. Be sure to check holding times and arrange the appropriate shipping.

OIL CONSERVATION DIVISION 2005 ANNUAL GROUNDWATER REPORT

Binder 2: OCD Addendum to Annual Groundwater Report

Giant Refining Company – Ciniza Refinery
McKinley County, New Mexico



August 31, 2006

EPA ID No. NMD000333211

HWB-GRCC-04-001

Discharge Permit No. GW-032

Prepared By: Jim Lieb, Environmental Engineer, Giant Refining – Ciniza Refinery

Signature: _____, Date: 8/31/06

Certified By: Ed Rios, General Manager, Giant Refining – Ciniza Refinery

Signature: _____, Date: 8-31-06

II. OCD Addendum (Binder 2)

1. Permit Condition 17B (Temporary land farm analytical results)
2. Permit Condition 19A (Weekly pond inspections)

II. OCD Addendum (Binder 2) (continued)

3. OCD Permit Condition 21:

    a. Summary of All Major Refinery Activities or Events
    b. Results of All Sampling and Monitoring Events
    c. Waste and Wastewater Disposal Summary and Pond Evaporation Balance
    d. Sump and Underground Wastewater Lines Tested
    e. Summary of All Leaks, Spills and Releases and Corrective Actions
    f. Summary of Discovery of New Groundwater Contamination
    g. Summary and Copies of EPA/NMED/RCRA Activity

II. OCD Addendum (Binder 2)

Temporary Land Farm Analysis

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

January 04, 2006

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: NE Land Tr. Area Soil 4th Qtr 2005 Order No.: 0512187

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 2 samples on 12/15/2005 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

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Client Sample ID: NE LTA #62
Lab Order: 0512187
Collection Date: 12/12/2005 2:30:00 PM
Project: NE Land Tr. Area Soil 4th Qtr 2005
Lab ID: 0512187-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	35	10		mg/Kg	1	12/21/2005 8:32:54 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/21/2005 8:32:54 AM
Surr: DNOP	90.0	60-124		%REC	1	12/21/2005 8:32:54 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/21/2005 12:38:43 AM
Surr: BFB	118	83.1-124		%REC	1	12/21/2005 12:38:43 AM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	1/3/2006
EPA METHOD 6010B: SOIL METALS						Analyst: **NMO**
Arsenic	ND	12		mg/Kg	5	12/20/2005 2:10:54 PM
Barium	340	1.0		mg/Kg	10	12/27/2005 10:55:42 AM
Cadmium	ND	0.49		mg/Kg	5	12/20/2005 2:10:54 PM
Chromium	7.6	1.5		mg/Kg	5	12/20/2005 2:10:54 PM
Lead	7.9	1.2		mg/Kg	5	12/20/2005 2:10:54 PM
Selenium	ND	12		mg/Kg	5	12/20/2005 2:10:54 PM
Silver	ND	1.2		mg/Kg	5	12/20/2005 2:10:54 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Client Sample ID: NE LTA #19
Lab Order: 0512187
Collection Date: 12/12/2005 3:00:00 PM
Project: NE Land Tr. Area Soil 4th Qtr 2005
Lab ID: 0512187-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	60	10		mg/Kg	1	12/21/2005 9:04:11 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/21/2005 9:04:11 AM
Surr: DNOP	77.2	60-124		%REC	1	12/21/2005 9:04:11 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	10		mg/Kg	2	12/21/2005 1:08:56 AM
Surr: BFB	116	83.1-124		%REC	2	12/21/2005 1:08:56 AM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	1/3/2006
EPA METHOD 6010B: SOIL METALS						Analyst: **NMO**
Arsenic	ND	12		mg/Kg	5	12/20/2005 2:13:28 PM
Barium	280	1.0		mg/Kg	10	12/27/2005 10:57:56 AM
Cadmium	ND	0.49		mg/Kg	5	12/20/2005 2:13:28 PM
Chromium	8.6	1.5		mg/Kg	5	12/20/2005 2:13:28 PM
Lead	8.6	1.2		mg/Kg	5	12/20/2005 2:13:28 PM
Selenium	ND	12		mg/Kg	5	12/20/2005 2:13:28 PM
Silver	ND	1.2		mg/Kg	5	12/20/2005 2:13:28 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Work Order: 0512187
Project: NE Land Tr. Area Soil 4th Qtr 2005

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-9409** Batch ID: **9409** Test Code: **SW8015** Units: **mg/Kg** Analysis Date: **12/15/2005 9:40:48 PM** Prep Date: **12/15/2005**
Client ID: Run ID: **FID(17A) 2_051215A** SeqNo: **432877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.35	0	10	0	104	60	124	0			

Sample ID: **mb-9416** Batch ID: **9416** Test Code: **SW8015** Units: **mg/Kg** Analysis Date: **12/20/2005 8:35:09 PM** Prep Date: **12/15/2005**
Client ID: Run ID: **PIDFID_051220A** SeqNo: **434190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	1149	0	1000	0	115	83.1	124	0			

Sample ID: **MB-9505** Batch ID: **9505** Test Code: **SW7471** Units: **mg/Kg** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103B** SeqNo: **437371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512187
Project: NE Land Tr. Area Soil 4th Qtr 2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9423** Batch ID: **9423** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **12/20/2005 11:48:02 A** Prep Date: **12/16/2005**

Client ID: Run ID: **ICP_051220A** SeqNo: **434054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	ND	0.1									
Cadmium	ND	0.1									
Chromium	ND	0.3									
Lead	ND	0.25									
Selenium	ND	2.5									
Silver	0.08266	0.25									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Work Order: 0512187
Project: NE Land Tr. Area Soil 4th Qtr 2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9409**	Batch ID: **9409**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **12/15/2005 10:13:49 P**	Prep Date: **12/15/2005**
Client ID:		Run ID: **FID(17A) 2_051215A**		SeqNo: **432879**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52.68	10	50	0	105	67.4	117	0			

Sample ID: **LCSD-9409**	Batch ID: **9409**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **12/15/2005 10:46:51 P**	Prep Date: **12/15/2005**
Client ID:		Run ID: **FID(17A) 2_051215A**		SeqNo: **432880**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58.28	10	50	0	117	67.4	117	52.68	10.1	17.4	

Sample ID: **lcs-9416**	Batch ID: **9416**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **12/20/2005 9:05:51 PM**	Prep Date: **12/15/2005**
Client ID:		Run ID: **PIDFID_051220A**		SeqNo: **434191**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27.32	5	25	0	109	84	120	0			

Sample ID: **lcsd-9416**	Batch ID: **9416**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date: **12/20/2005 9:36:23 PM**	Prep Date: **12/15/2005**
Client ID:		Run ID: **PIDFID_051220A**		SeqNo: **434192**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26.29	5	25	0	105	84	120	27.32	3.84	11.6	

Sample ID: **LCS-9505**	Batch ID: **9505**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date: **1/3/2006**	Prep Date: **1/3/2006**
Client ID:		Run ID: **MI-LA254_060103B**		SeqNo: **437372**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1844	0.033	0.1667	0	111	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512187
Project: NE Land Tr. Area Soil 4th Qtr 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9505** Batch ID: **9505** Test Code: **SW7471** Units: **mg/Kg** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103B** SeqNo: **437387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1596	0.033	0.1667	0	95.8	80	120	0.1844	14.4	20	

Sample ID: **LCS-9423** Batch ID: **9423** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **12/20/2005 11:51:04 A** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051220A** SeqNo: **434055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	26	2.5	25	0	104	80	120	0			
Barium	24.21	0.1	25	0	96.8	80	120	0			
Cadmium	24.44	0.1	25	0	97.8	80	120	0			
Chromium	24.65	0.3	25	0	98.6	80	120	0			
Lead	24.03	0.25	25	0	96.1	80	120	0			
Selenium	25.04	2.5	25	0	100	80	120	0			
Silver	25.19	0.25	25	0.08266	100	80	120	0			

Sample ID: **LCSD-9423** Batch ID: **9423** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **12/20/2005 11:53:31 A** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051220A** SeqNo: **434056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.87	2.5	25	0	99.5	80	120	26	4.43	20	
Barium	23.76	0.1	25	0	95.0	80	120	24.21	1.89	20	
Cadmium	24.04	0.1	25	0	96.2	80	120	24.44	1.63	20	
Chromium	24.18	0.3	25	0	96.7	80	120	24.65	1.93	20	
Lead	23.61	0.25	25	0	94.4	80	120	24.03	1.77	20	
Selenium	24.85	2.5	25	0	99.4	80	120	25.04	0.758	20	
Silver	24.74	0.25	25	0.08266	98.6	80	120	25.19	1.78	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 12/15/2005

Work Order Number 0512187 | Received by AT

Checklist completed by _____ (Signature) 12/15/05 (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 ☐			
[illegible]ter - VOA vials have zero headspace?	No VOA vials submitted ☑			Yes ☐		No ☐	
W[illegible] - 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: _____

[illegible]ective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package
Std ☐ Level 4 ☑
Other:

Client: Giant Refining Company-Ciniza
Address: Route 3, BOX 7 Gallup, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: Northeast Land Treatment Area Soil 4th Qtr. 2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 20

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
12/12/05	1430	Soil	NE LTA #62	2			051287-1
"	1300	"	NE LTA #19	2			-2

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
12-14-05	0900			12/15/05 12:05
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

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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
		X					X									
		X					X									

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

August 24, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: N.E. Land Treatment Area Soil Samples 8/0 Order No.: 0508099

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 2 samples on 8/10/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: NE-OCD-LTA#20
Lab Order: 0508099
Collection Date: 8/8/2005 11:30:00 AM
Project: N.E. Land Treatment Area Soil Samples 8/05
Lab ID: 0508099-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: **MAP**
Fluoride	5.5	1.5		mg/kg	5	8/17/2005
Chloride	62	1.5		mg/kg	5	8/17/2005
Nitrogen, Nitrate (As N)	6.2	1.5		mg/kg	5	8/17/2005
Sulfate	300	7.5		mg/kg	5	8/17/2005
Nitrogen, Nitrite (As N)	ND	1.5		mg/kg	5	8/17/2005
Phosphorus, Orthophosphate (As P)	ND	7.5		mg/kg	5	8/17/2005
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	260	10		mg/Kg	1	8/12/2005 11:11:06 PM
Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	8/12/2005 11:11:06 PM
Surr: DNOP	103	60-124		%REC	1	8/12/2005 11:11:06 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	8/19/2005 1:27:40 PM
Surr: BFB	93.5	83.1-124		%REC	10	8/19/2005 1:27:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	10	8/19/2005 1:27:40 PM
Benzene	ND	0.25		mg/Kg	10	8/19/2005 1:27:40 PM
Toluene	ND	0.25		mg/Kg	10	8/19/2005 1:27:40 PM
Ethylbenzene	ND	0.25		mg/Kg	10	8/19/2005 1:27:40 PM
Xylenes, Total	ND	0.25		mg/Kg	10	8/19/2005 1:27:40 PM
Surr: 4-Bromofluorobenzene	101	87.5-115		%REC	10	8/19/2005 1:27:40 PM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	8/16/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	13		mg/Kg	5	8/17/2005 3:03:17 PM
Barium	350	1.0		mg/Kg	10	8/17/2005 3:10:03 PM
Cadmium	ND	0.50		mg/Kg	5	8/17/2005 3:03:17 PM
Calcium	36000	250		mg/Kg	10	8/17/2005 3:10:03 PM
Chromium	13	1.5		mg/Kg	5	8/17/2005 3:03:17 PM
Lead	15	1.3		mg/Kg	5	8/17/2005 3:03:17 PM
Magnesium	5300	130		mg/Kg	5	8/17/2005 3:03:17 PM
Potassium	1400	250		mg/Kg	5	8/17/2005 3:03:17 PM
Selenium	ND	13		mg/Kg	5	8/17/2005 3:03:17 PM
Silver	ND	1.3		mg/Kg	5	8/17/2005 3:03:17 PM
Sodium	770	130		mg/Kg	5	8/17/2005 3:03:17 PM
EPA METHOD 150.1: PH						Analyst: **CMC**
pH	8.62	0.010		pH Units	1	8/16/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: NE-OCD-LTA#95
Lab Order: 0508099
Collection Date: 8/8/2005 11:40:00 AM
Project: N.E. Land Treatment Area Soil Samples 8/05
Lab ID: 0508099-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: **MAP**
Fluoride	1.9	1.5		mg/kg	5	8/17/2005
Chloride	49	1.5		mg/kg	5	8/17/2005
Nitrogen, Nitrate (As N)	22	1.5		mg/kg	5	8/17/2005
Sulfate	230	7.5		mg/kg	5	8/17/2005
Nitrogen, Nitrite (As N)	ND	1.5		mg/kg	5	8/17/2005
Phosphorus, Orthophosphate (As P)	ND	7.5		mg/kg	5	8/17/2005
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/12/2005 10:37:59 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/12/2005 10:37:59 PM
Surr: DNOP	103	60-124		%REC	1	8/12/2005 10:37:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/19/2005 1:58:46 PM
Surr: BFB	92.4	83.1-124		%REC	1	8/19/2005 1:58:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	8/19/2005 1:58:46 PM
Benzene	ND	0.025		mg/Kg	1	8/19/2005 1:58:46 PM
Toluene	ND	0.025		mg/Kg	1	8/19/2005 1:58:46 PM
Ethylbenzene	ND	0.025		mg/Kg	1	8/19/2005 1:58:46 PM
Xylenes, Total	ND	0.025		mg/Kg	1	8/19/2005 1:58:46 PM
Surr: 4-Bromofluorobenzene	99.8	87.5-115		%REC	1	8/19/2005 1:58:46 PM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	8/16/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	13		mg/Kg	5	8/17/2005 3:07:26 PM
Barium	240	0.50		mg/Kg	5	8/17/2005 3:07:26 PM
Cadmium	ND	0.50		mg/Kg	5	8/17/2005 3:07:26 PM
Calcium	21000	130		mg/Kg	5	8/17/2005 3:07:26 PM
Chromium	8.9	1.5		mg/Kg	5	8/17/2005 3:07:26 PM
Lead	8.5	1.3		mg/Kg	5	8/17/2005 3:07:26 PM
Magnesium	5900	130		mg/Kg	5	8/17/2005 3:07:26 PM
Potassium	1600	250		mg/Kg	5	8/17/2005 3:07:26 PM
Selenium	ND	13		mg/Kg	5	8/17/2005 3:07:26 PM
Silver	ND	1.3		mg/Kg	5	8/17/2005 3:07:26 PM
Sodium	750	130		mg/Kg	5	8/17/2005 3:07:26 PM
EPA METHOD 150.1: PH						Analyst: **CMC**
pH	8.54	0.010		pH Units	1	8/16/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508099
Project: N.E. Land Treatment Area Soil Samples 8/05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8551**	Batch ID: **8551**	Test Code: **E300**	Units: **mg/kg**	Analysis Date **8/17/2005**	Prep Date **8/17/2005**
Client ID:		Run ID: **LC_050817A**		SeqNo: **389494**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.3									
Chloride	ND	0.3									
Nitrogen, Nitrate (As N)	ND	0.3									
Sulfate	0.4086	1.5									J
Nitrogen, Nitrite (As N)	ND	0.3									
Phosphorus, Orthophosphate (As P)	ND	1.5									

Sample ID **MB-8514**	Batch ID: **8514**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **8/12/2005 6:15:10 PM**	Prep Date **8/11/2005**
Client ID:		Run ID: **FID(17A) 2_050811A**		SeqNo: **387854**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	11.15	0	10	0	112	60	124	0			

Sample ID **mb-8507**	Batch ID: **8507**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **8/17/2005 1:13:37 PM**	Prep Date **8/10/2005**
Client ID:		Run ID: **PIDFID_050817A**		SeqNo: **389586**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	1073	0	1000	0	107	83.1	124	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508099
Project: N.E. Land Treatment Area Soil Samples 8/05

QC SUMMARY REPORT
Method Blank

Sample ID **mb-8507** Batch ID: **8507** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/17/2005 1:13:37 PM** Prep Date **8/10/2005**
Client ID: Run ID: **PIDFID_050817A** SeqNo: **389535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.1									
Benzene	ND	0.025									
Toluene	ND	0.025									
Ethylbenzene	ND	0.025									
Xylenes, Total	ND	0.025									
Surr: 4-Bromofluorobenzene	1.046	0	1	0	105	87.5	115	0			

Sample ID **MB-8543** Batch ID: **8543** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/16/2005** Prep Date **8/16/2005**
Client ID: Run ID: **MI-LA254_050816A** SeqNo: **388941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID **MB-8525** Batch ID: **8525** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/17/2005 1:43:35 PM** Prep Date **8/12/2005**
Client ID: Run ID: **ICP_050817B** SeqNo: **389379**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	ND	0.1									
Cadmium	0.02085	0.1									J
Calcium	10.91	25									J
Chromium	0.06432	0.3									J
Lead	ND	0.25									
Magnesium	ND	25									
Potassium	ND	50									
Selenium	ND	2.5									
Silver	ND	0.25									
Sodium	6.783	25									J

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508099
Project: N.E. Land Treatment Area Soil Samples 8/05

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID **0508099-02a ms** Batch ID: **8507** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/19/2005 2:29:51 PM** Prep Date **8/10/2005**
Client ID: **NE-OCD-LTA#95** Run ID: **PIDFID_050819A** SeqNo: **390524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22.74	5	25	0	91.0	84	120	0			
Surr: BFB	1038	0	1000	0	104	83.1	124	0			

Sample ID **0508099-02a msd** Batch ID: **8507** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/19/2005 3:00:53 PM** Prep Date **8/10/2005**
Client ID: **NE-OCD-LTA#95** Run ID: **PIDFID_050819A** SeqNo: **390526**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24.49	5	25	0	98.0	84	120	22.74	7.41	11.6	
Surr: BFB	1044	0	1000	0	104	83.1	124	1038	0.613	0	

Sample ID **0508099-02a ms** Batch ID: **8507** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/19/2005 2:29:51 PM** Prep Date **8/10/2005**
Client ID: **NE-OCD-LTA#95** Run ID: **PIDFID_050819A** SeqNo: **390463**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.71	0.1	2	0	85.5	65	132	0			
Benzene	0.4239	0.025	0.42	0	101	85.6	116	0			
Toluene	2.088	0.025	1.9	0.01441	109	82.4	120	0			
Ethylbenzene	0.4075	0.025	0.41	0.01772	95.1	86.4	111	0			
Xylenes, Total	2.079	0.025	1.9	0	109	78.4	125	0			
Surr: 4-Bromofluorobenzene	1.075	0	1	0	108	87.5	115	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0508099
Project: N.E. Land Treatment Area Soil Samples 8/05

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID **0508099-02a msd** Batch ID: **8507** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/19/2005 3:00:53 PM** Prep Date **8/10/2005**
Client ID: **NE-OCD-LTA#95** Run ID: **PIDFID_050819A** SeqNo: **390464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.709	0.1	2	0	85.5	65	132	1.71	0.0790	28	
Benzene	0.4468	0.025	0.42	0	106	85.6	116	0.4239	5.27	27	
Toluene	2.124	0.025	1.9	0.01441	111	82.4	120	2.088	1.70	19	
Ethylbenzene	0.4311	0.025	0.41	0.01772	101	86.4	111	0.4075	5.64	10	
Xylenes, Total	2.079	0.025	1.9	0	109	78.4	125	2.079	0.0212	13	
Surr: 4-Bromofluorobenzene	1.094	0	1	0	109	87.5	115	1.075	1.77	0	

6/10

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508099
Project: N.E. Land Treatment Area Soil Samples 8/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-8551** Batch ID: **8551** Test Code: **E300** Units: **mg/kg** Analysis Date **8/17/2005** Prep Date **8/17/2005**
Client ID: Run ID: **LC_050817A** SeqNo: **389497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.54	0.3	1.5	0	103	90	110	0			
Chloride	14.73	0.3	15	0	98.2	90	110	0			
Nitrogen, Nitrate (As N)	7.567	0.3	7.5	0	101	90	110	0			
Sulfate	30.38	1.5	30	0	101	90	110	0			
Nitrogen, Nitrite (As N)	2.877	0.3	3	0	95.9	90	110	0			
Phosphorus, Orthophosphate (As P)	15	1.5	15	0	100	90	110	0			

Sample ID **LCS-8514** Batch ID: **8514** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/12/2005 6:48:14 PM** Prep Date **8/11/2005**
Client ID: Run ID: **FID(17A) 2_050811A** SeqNo: **387855**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48.96	10	50	0	97.9	67.4	117	0			

Sample ID **LCSD-8514** Batch ID: **8514** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/12/2005 7:21:20 PM** Prep Date **8/11/2005**
Client ID: Run ID: **FID(17A) 2_050811A** SeqNo: **387856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57.21	10	50	0	114	67.4	117	48.96	15.5	17.4	

Sample ID **lcs-8507** Batch ID: **8507** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/17/2005 9:47:16 PM** Prep Date **8/10/2005**
Client ID: Run ID: **PIDFID_050817A** SeqNo: **389587**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22.77	5	25	0	91.1	84	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508099
Project: N.E. Land Treatment Area Soil Samples 8/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **lcs-8507** Batch ID: **8507** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/17/2005 9:47:16 PM** Prep Date **8/10/2005**
Client ID: Run ID: **PIDFID_050817A** SeqNo: **389536**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.817	0.1	2	0	90.9	65	132	0			
Benzene	0.4549	0.025	0.42	0	108	85.6	116	0			
Toluene	1.888	0.025	1.9	0	99.4	82.4	120	0			
Ethylbenzene	0.4135	0.025	0.41	0	101	86.4	111	0			
Xylenes, Total	1.917	0.025	1.9	0	101	78.4	125	0			

Sample ID **LCS-8543** Batch ID: **8543** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/16/2005** Prep Date **8/16/2005**
Client ID: Run ID: **MI-LA254_050816A** SeqNo: **388942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1365	0.033	0.1667	0	81.9	75	125	0			

Sample ID **LCSD-8543** Batch ID: **8543** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/16/2005** Prep Date **8/16/2005**
Client ID: Run ID: **MI-LA254_050816A** SeqNo: **388956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1383	0.033	0.1667	0	83.0	75	125	0.1365	1.32	20	

8/10

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508099
Project: N.E. Land Treatment Area Soil Samples 8/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8525** Batch ID: **8525** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/17/2005 1:46:05 PM** Prep Date **8/12/2005**
Client ID: Run ID: **ICP_050817B** SeqNo: **389380**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	23.09	2.5	25	0	92.4	80	120	0			
Barium	21.7	0.1	25	0	86.8	80	120	0			
Cadmium	22.68	0.1	25	0.02085	90.6	80	120	0			
Calcium	2360	25	2500	10.91	94.0	80	120	0			
Chromium	21.66	0.3	25	0.06432	86.4	80	120	0			
Lead	21.88	0.25	25	0	87.5	80	120	0			
Magnesium	2411	25	2500	0	96.5	80	120	0			
Potassium	2513	50	2500	0	101	80	120	0			
Selenium	22.24	2.5	25	0	89.0	80	120	0			
Silver	23.79	0.25	25	0	95.2	80	120	0			
Sodium	2602	25	2500	6.783	104	80	120	0			

Sample ID **LCSD-8525** Batch ID: **8525** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/17/2005 1:49:21 PM** Prep Date **8/12/2005**
Client ID: Run ID: **ICP_050817B** SeqNo: **389381**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	23.39	2.5	25	0	93.6	80	120	23.09	1.29	20	
Barium	22.44	0.1	25	0	89.7	80	120	21.7	3.32	20	
Cadmium	23.45	0.1	25	0.02085	93.7	80	120	22.68	3.34	20	
Calcium	2646	25	2500	10.91	105	80	120	2360	11.4	20	
Chromium	22.64	0.3	25	0.06432	90.3	80	120	21.66	4.41	20	
Lead	22.52	0.25	25	0	90.1	80	120	21.88	2.89	20	
Magnesium	2696	25	2500	0	108	80	120	2411	11.2	20	
Potassium	2815	50	2500	0	113	80	120	2513	11.3	20	
Selenium	23.14	2.5	25	0	92.5	80	120	22.24	3.95	20	
Silver	24.56	0.25	25	0	98.2	80	120	23.79	3.16	20	
Sodium	2903	25	2500	6.783	116	80	120	2602	10.9	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANT REFINERY BLOOM | Date and Time Received: 8/10/2005

Work Order Number 0508099 | Received by AT

Checklist completed by _____ Signature _____ 8-10-05 Date

Matrix | Carrier name | Client drop-off

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

QA / QC Package
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Northeast Land Treatment Area Soil Sampler August, 2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 30

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
8/8/05	1130	Soil	NE-OCD-LTA #2	0				0508099 -1
8/8/05	1140	Soil	NE-OCD-LTA-#5					-2

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen. Chem.	8021 BTEX			Air Bubbles or Headspace (Y or N)
		X					X					X	X			
		X					X					X	X			

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
8/10/05	0835	Steve Morris	8/10/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

0835

Remarks: Gen. Chem. = Cations, Anions, + Soil pH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

June 20, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Northeast Land Treatment Area Soil Sampl Order No.: 0506047

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 2 samples on 6/3/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

CLIENT: Giant Refining Co
Project: Northeast Land Treatment Area Soil Samples 06
Lab Order: 0506047

CASE NARRATIVE

Method 300.0: Low recoveries for F, NO3, and PO4 in MS/MSD. High recovery for NO2 in MSD. Sample diluted due to suspended particles in aqueous extract. Possible matrix interference. IN36-05106

Hall Environmental Analysis Laboratory

Date: *20-Jun-05*

CLIENT: Giant Refining Co
Client Sample ID: NE-OCD-LTA-#24
Lab Order: 0506047
Collection Date: 6/2/2005 3:00:00 PM
Project: Northeast Land Treatment Area Soil Samples 06
Lab ID: 0506047-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: **MAP**
Fluoride	4.5	0.30		mg/kg	1	6/13/2005
Chloride	110	0.30		mg/kg	1	6/13/2005
Nitrogen, Nitrate (As N)	31	0.30		mg/kg	1	6/13/2005
Bromide	ND	0.30		mg/kg	1	6/13/2005
Sulfate	390	7.5		mg/L	5	6/14/2005
Nitrogen, Nitrite (As N)	0.42	0.30		mg/kg	1	6/13/2005
Phosphorus, Orthophosphate (As P)	ND	1.5		mg/kg	1	6/13/2005
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	74	10		mg/Kg	1	6/9/2005 9:20:24 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/9/2005 9:20:24 PM
Surr: DNOP	99.3	60-124		%REC	1	6/9/2005 9:20:24 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/9/2005 2:55:32 PM
Surr: BFB	102	78.3-120		%REC	1	6/9/2005 2:55:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/9/2005 2:55:32 PM
Benzene	ND	0.025		mg/Kg	1	6/9/2005 2:55:32 PM
Toluene	ND	0.025		mg/Kg	1	6/9/2005 2:55:32 PM
Ethylbenzene	ND	0.025		mg/Kg	1	6/9/2005 2:55:32 PM
Xylenes, Total	ND	0.025		mg/Kg	1	6/9/2005 2:55:32 PM
Surr: 4-Bromofluorobenzene	103	87.4-116		%REC	1	6/9/2005 2:55:32 PM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	6/16/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	2.5		mg/Kg	1	6/9/2005 12:29:22 PM
Barium	260	1.0		mg/Kg	10	6/14/2005 10:48:26 AM
Cadmium	ND	0.10		mg/Kg	1	6/9/2005 12:29:22 PM
Calcium	19000	250		mg/Kg	10	6/14/2005 11:52:54 AM
Chromium	8.1	0.30		mg/Kg	1	6/9/2005 12:29:22 PM
Lead	9.5	0.25		mg/Kg	1	6/9/2005 12:29:22 PM
Magnesium	7400	250		mg/Kg	10	6/14/2005 11:52:54 AM
Potassium	2000	500		mg/Kg	10	6/14/2005 11:52:54 AM
Selenium	ND	2.5		mg/Kg	1	6/9/2005 12:29:22 PM
Silver	ND	0.25		mg/Kg	1	6/9/2005 12:29:22 PM
Sodium	990	250		mg/Kg	10	6/14/2005 11:52:54 AM
EPA METHOD 150.1: PH						Analyst: **DK**
pH	8.20	0.010		pH Units	1	6/16/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Jun-05*

CLIENT: Giant Refining Co
Client Sample ID: NE-OCD-LTA-#84
Lab Order: 0506047
Collection Date: 6/2/2005 3:20:00 PM
Project: Northeast Land Treatment Area Soil Samples 06
Lab ID: 0506047-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: **MAP**
Fluoride	2.5	1.5		mg/kg	5	6/13/2005
Chloride	170	1.5		mg/kg	5	6/13/2005
Nitrogen, Nitrate (As N)	8.1	1.5		mg/kg	5	6/13/2005
Bromide	ND	1.5		mg/kg	5	6/13/2005
Sulfate	390	7.5		mg/kg	5	6/13/2005
Nitrogen, Nitrite (As N)	ND	1.5		mg/kg	5	6/13/2005
Phosphorus, Orthophosphate (As P)	ND	7.5		mg/kg	5	6/13/2005
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/9/2005 9:51:22 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/9/2005 9:51:22 PM
Surr: DNOP	96.9	60-124		%REC	1	6/9/2005 9:51:22 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/9/2005 4:29:19 PM
Surr: BFB	106	78.3-120		%REC	1	6/9/2005 4:29:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/9/2005 4:29:19 PM
Benzene	ND	0.025		mg/Kg	1	6/9/2005 4:29:19 PM
Toluene	ND	0.025		mg/Kg	1	6/9/2005 4:29:19 PM
Ethylbenzene	ND	0.025		mg/Kg	1	6/9/2005 4:29:19 PM
Xylenes, Total	ND	0.025		mg/Kg	1	6/9/2005 4:29:19 PM
Surr: 4-Bromofluorobenzene	102	87.4-116		%REC	1	6/9/2005 4:29:19 PM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	6/16/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	2.5		mg/Kg	1	6/9/2005 12:46:27 PM
Barium	280	1.0		mg/Kg	10	6/14/2005 10:53:38 AM
Cadmium	ND	0.10		mg/Kg	1	6/9/2005 12:46:27 PM
Calcium	20000	250		mg/Kg	10	6/14/2005 11:55:01 AM
Chromium	8.0	0.30		mg/Kg	1	6/9/2005 12:46:27 PM
Lead	9.3	0.25		mg/Kg	1	6/9/2005 12:46:27 PM
Magnesium	7200	250		mg/Kg	10	6/14/2005 11:55:01 AM
Potassium	2000	500		mg/Kg	10	6/14/2005 11:55:01 AM
Selenium	ND	2.5		mg/Kg	1	6/9/2005 12:46:27 PM
Silver	ND	0.25		mg/Kg	1	6/9/2005 12:46:27 PM
Sodium	1700	250		mg/Kg	10	6/14/2005 11:55:01 AM
EPA METHOD 150.1: PH						Analyst: **DK**
pH	8.45	0.010		pH Units	1	6/16/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Jun-05*

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8128**	Batch ID: **8128**	Test Code: **E300**	Units: **mg/kg**	Analysis Date **6/13/2005**	Prep Date **6/10/2005**
Client ID:		Run ID: **LC_050613A**		SeqNo: **370914**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.3									
Chloride	ND	0.3									
Nitrogen, Nitrate (As N)	ND	0.3									
Bromide	ND	0.3									
Sulfate	ND	1.5									
Nitrogen, Nitrite (As N)	ND	0.3									
Phosphorus, Orthophosphate (As P)	ND	1.5									

Sample ID **MB-8140**	Batch ID: **8140**	Test Code: **E300**	Units: **mg/L**	Analysis Date **6/14/2005**	Prep Date **6/13/2005**
Client ID:		Run ID: **LC_050614A**		SeqNo: **371547**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.3									
Chloride	ND	0.3									
Nitrogen, Nitrate (As N)	ND	0.3									
Bromide	ND	0.3									
Sulfate	ND	1.5									
Nitrogen, Nitrite (As N)	ND	0.3									
Phosphorus, Orthophosphate (As P)	ND	1.5									

Sample ID **MB-8115**	Batch ID: **8115**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **6/9/2005 6:15:24 PM**	Prep Date **6/8/2005**
Client ID:		Run ID: **FID(17A) 2_050609A**		SeqNo: **370250**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.89	0	10	0	109	60	124	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8104** Batch ID: **8104** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **6/9/2005 1:53:17 PM** Prep Date **6/6/2005**
Client ID: Run ID: **PIDFID_050609A** SeqNo: **369834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	1021	0	1000	0	102	78.3	120	0			

Sample ID **MB-8104** Batch ID: **8104** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **6/9/2005 1:53:17 PM** Prep Date **6/6/2005**
Client ID: Run ID: **PIDFID_050609A** SeqNo: **369827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.1									
Benzene	ND	0.025									
Toluene	ND	0.025									
Ethylbenzene	ND	0.025									
Xylenes, Total	ND	0.025									
Surr: 4-Bromofluorobenzene	0.9925	0	1	0	99.3	87.4	116	0			

Sample ID **MB-8161** Batch ID: **8161** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **6/16/2005** Prep Date **6/16/2005**
Client ID: Run ID: **MI-LA254_050616A** SeqNo: **372187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:02:47 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609B** SeqNo: **369876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	0.09845	0.1									J
Cadmium	ND	0.1									
Calcium	32.52	25									
Chromium	ND	0.3									
Magnesium	ND	25									
Potassium	3.913	50									J
Selenium	ND	2.5									
Silver	ND	0.25									
Sodium	ND	25									

Sample ID **MB-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:02:47 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609C** SeqNo: **370202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

6 / 14

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *20-Jun-05*

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0506047-02C DUP** Batch ID: **8140** Test Code: **E300** Units: **mg/kg** Analysis Date **6/13/2005** Prep Date **6/13/2005**
Client ID: **NE-OCD-LTA-#84** Run ID: **LC_050613A** SeqNo: **371159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.675	1.5	0	0	0	0	0	2.513	6.25	20	
Nitrogen, Nitrate (As N)	7.196	1.5	0	0	0	0	0	8.106	11.9	20	
Bromide	ND	1.5	0	0	0	0	0	0	0	20	
Sulfate	380	7.5	0	0	0	0	0	387.6	1.98	20	
Nitrogen, Nitrite (As N)	ND	1.5	0	0	0	0	0	0	0	20	
Phosphorus, Orthophosphate (As P)	ND	7.5	0	0	0	0	0	0	0	20	

7 / 14

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *20-Jun-05*

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID **0506047-02C MS** Batch ID: **8140** Test Code: **E300** Units: **mg/kg** Analysis Date **6/13/2005** Prep Date **6/13/2005**
Client ID: **NE-OCD-LTA-#84** Run ID: **LC_050613A** SeqNo: **371160**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.955	1.5	1.429	2.513	31.0	80	120	0			S
Nitrogen, Nitrate (As N)	13.3	1.5	7.143	8.106	72.7	80	120	0			S
Bromide	7.698	1.5	7.143	0	108	80	120	0			
Nitrogen, Nitrite (As N)	3.347	1.5	2.857	0	117	80	120	0			
Phosphorus, Orthophosphate (As P)	3.107	7.5	14.29	0	21.7	80	120	0			JS

Sample ID **0506047-02C MSD** Batch ID: **8140** Test Code: **E300** Units: **mg/kg** Analysis Date **6/14/2005** Prep Date **6/13/2005**
Client ID: **NE-OCD-LTA-#84** Run ID: **LC_050613A** SeqNo: **371161**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	3.458	1.5	1.429	2.513	66.1	80	120	2.955	15.7	20	S
Nitrogen, Nitrate (As N)	13.74	1.5	7.143	8.106	78.9	80	120	13.3	3.26	20	S
Bromide	7.892	1.5	7.143	0	110	80	120	7.698	2.48	20	
Nitrogen, Nitrite (As N)	3.552	1.5	2.857	0	124	80	120	3.347	5.96	20	S
Phosphorus, Orthophosphate (As P)	3.596	7.5	14.29	0	25.2	80	120	3.107	0	20	JS

Sample ID **0506047-01a ms** Batch ID: **8104** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **6/9/2005 3:26:50 PM** Prep Date **6/6/2005**
Client ID: **NE-OCD-LTA-#24** Run ID: **PIDFID_050609A** SeqNo: **369838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28.31	5	30	0	94.4	84	120	0			
Surr: BFB	1136	0	1000	0	114	78.3	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID **0506047-01a msd** Batch ID: **8104** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **6/9/2005 3:58:01 PM** Prep Date **6/6/2005**
Client ID: **NE-OCD-LTA-#24** Run ID: **PIDFID_050609A** SeqNo: **369841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28.64	5	30	0	95.5	84	120	28.31	1.16	11.6	
Surr: BFB	1135	0	1000	0	114	78.3	120	1136	0.0960	0	

Sample ID **0506047-01a ms** Batch ID: **8104** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **6/9/2005 3:26:50 PM** Prep Date **6/6/2005**
Client ID: **NE-OCD-LTA-#24** Run ID: **PIDFID_050609A** SeqNo: **369832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4915	0.025	0.504	0	97.5	83.4	113	0			
Toluene	2.225	0.025	2.28	0	97.6	86.3	118	0			
Ethylbenzene	0.4714	0.025	0.492	0	95.8	81.7	113	0			
Xylenes, Total	2.365	0.025	2.28	0	104	86.9	112	0			
Surr: 4-Bromofluorobenzene	1.121	0	1	0	112	87.4	116	0			

Sample ID **0506047-01a msd** Batch ID: **8104** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **6/9/2005 3:58:01 PM** Prep Date **6/6/2005**
Client ID: **NE-OCD-LTA-#24** Run ID: **PIDFID_050609A** SeqNo: **369833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.502	0.025	0.504	0	99.6	83.4	113	0.4915	2.10	27	
Toluene	2.382	0.025	2.28	0	104	86.3	118	2.225	6.85	19	
Ethylbenzene	0.5016	0.025	0.492	0	102	81.7	113	0.4714	6.22	10	
Xylenes, Total	2.485	0.025	2.28	0	109	86.9	112	2.365	4.96	13	
Surr: 4-Bromofluorobenzene	1.127	0	1	0	113	87.4	116	1.121	0.489	0	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-8128** Batch ID: **8128** Test Code: **E300** Units: **mg/kg** Analysis Date **6/13/2005** Prep Date **6/10/2005**
Client ID: Run ID: **LC_050613A** SeqNo: **370915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.474	0.3	1.5	0	98.2	90	110	0			
Chloride	14.33	0.3	15	0	95.6	90	110	0			
Nitrogen, Nitrate (As N)	7.27	0.3	7.5	0	96.9	90	110	0			
Bromide	7.493	0.3	7.5	0	99.9	90	110	0			
Sulfate	29.32	1.5	30	0	97.7	90	110	0			
Nitrogen, Nitrite (As N)	2.903	0.3	3	0	96.8	90	110	0			
Phosphorus, Orthophosphate (As P)	14.86	1.5	15	0	99.1	90	110	0			

Sample ID **LCS-8140** Batch ID: **8140** Test Code: **E300** Units: **mg/kg** Analysis Date **6/13/2005** Prep Date **6/13/2005**
Client ID: Run ID: **LC_050613A** SeqNo: **371147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.519	0.3	1.5	0	101	90	110	0			
Nitrogen, Nitrate (As N)	7.459	0.3	7.5	0	99.5	90	110	0			
Bromide	7.656	0.3	7.5	0	102	90	110	0			
Sulfate	30.24	1.5	30	0	101	90	110	0			
Nitrogen, Nitrite (As N)	2.988	0.3	3	0	99.6	90	110	0			
Phosphorus, Orthophosphate (As P)	15.42	1.5	15	0	103	90	110	0			

Sample ID **LCSD-8115** Batch ID: **8115** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **6/9/2005 7:17:30 PM** Prep Date **6/8/2005**
Client ID: Run ID: **FID(17A) 2_050609A** SeqNo: **370251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43.85	10	50	0	87.7	67.4	117	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8115** Batch ID: **8115** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **6/15/2005 12:09:07 PM** Prep Date **6/8/2005**
Client ID: Run ID: **FID(17A) 2_050613A** SeqNo: **371935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54.9	10	50	0	110	67.4	117	0			

Sample ID **LCS-8104** Batch ID: **8104** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **6/9/2005 2:24:26 PM** Prep Date **6/6/2005**
Client ID: Run ID: **PIDFID_050609A** SeqNo: **369835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24.09	5	25	0	96.4	84	120	0			

Sample ID **LCS-8104** Batch ID: **8104** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **6/9/2005 2:24:26 PM** Prep Date **6/6/2005**
Client ID: Run ID: **PIDFID_050609A** SeqNo: **369828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4397	0.025	0.42	0	105	83.4	113	0			
Toluene	2.073	0.025	1.9	0	109	86.3	118	0			
Ethylbenzene	0.4341	0.025	0.41	0	106	81.7	113	0			
Xylenes, Total	2.18	0.025	1.9	0	115	86.9	115	0			

Sample ID **BTEX lcs 100ng** Batch ID: **8104** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **6/10/2005 1:39:16 PM** Prep Date
Client ID: Run ID: **PIDFID_050610A** SeqNo: **370538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.938	0.1	2	0	96.9	65	132	0			
Benzene	1.029	0.025	1	0	103	83.4	113	0			
Toluene	1.057	0.025	1	0	106	86.3	118	0			
Ethylbenzene	1.049	0.025	1	0	105	81.7	113	0			
Xylenes, Total	3.153	0.025	3	0	105	86.9	112	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8161** Batch ID: **8161** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **6/16/2005** Prep Date **6/16/2005**
Client ID: Run ID: **MI-LA254_050616A** SeqNo: **372188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1683	0.033	0.1667	0	101	75	125	0			

Sample ID **LCSD-8161** Batch ID: **8161** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **6/16/2005** Prep Date **6/16/2005**
Client ID: Run ID: **MI-LA254_050616A** SeqNo: **372205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1791	0.033	0.1667	0	107	75	125	0.1683	6.20	20	

Sample ID **LCS-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:05:50 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609B** SeqNo: **369877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	27.74	2.5	25	0	111	80	120	0			
Barium	26.14	0.1	25	0.09845	104	80	120	0			
Cadmium	26.31	0.1	25	0	105	80	120	0			
Calcium	2710	25	2500	32.52	107	80	120	0			B
Chromium	26.31	0.3	25	0	105	80	120	0			
Magnesium	2792	25	2500	0	112	80	120	0			
Potassium	2757	50	2500	3.913	110	80	120	0			
Selenium	25.58	2.5	25	0	102	80	120	0			
Silver	26.53	0.25	25	0	106	80	120	0			
Sodium	2817	25	2500	0	113	80	120	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506047
Project: Northeast Land Treatment Area Soil Samples 06

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:08:49 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609B** SeqNo: **369878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	26.87	2.5	25	0	107	80	120	27.74	3.16	20	
Barium	26.21	0.1	25	0.09845	104	80	120	26.14	0.253	20	
Cadmium	26.21	0.1	25	0	105	80	120	26.31	0.371	20	
Calcium	2764	25	2500	32.52	109	80	120	2710	1.95	20	B
Chromium	26.17	0.3	25	0	105	80	120	26.31	0.545	20	
Magnesium	2872	25	2500	0	115	80	120	2792	2.81	20	
Potassium	2820	50	2500	3.913	113	80	120	2757	2.24	20	
Selenium	25.81	2.5	25	0	103	80	120	25.58	0.892	20	
Silver	26.61	0.25	25	0	106	80	120	26.53	0.319	20	
Sodium	2861	25	2500	0	114	80	120	2817	1.53	20	

Sample ID **LCS-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:05:50 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609C** SeqNo: **370203**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.82	0.25	25	0	103	80	120	0			

Sample ID **LCSD-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:08:49 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609C** SeqNo: **370204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.83	0.25	25	0	103	80	120	25.82	0.0100	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received:

Work Order Number 0506047 | Received by AMG

Checklist completed by A Gonzales 6/3/05
Signature | Date

Matrix | Carrier name Client drop-off

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 ☐		
.er - 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: _____

.orrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup NM 87301
Phone #: 505 722 3833
Fax #: 595 722 0210

Project Name: ~~ACE~~ Northeast Land Treatment area soil Sampler June 2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 3.0

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
								0506047
6/2/05	1500	Soil	NE-OCD-LTA-#24	3-4oz				-1
"	1520	"	NE-OCD-LTA-#84	"				-2

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem	8021 BTEX			Air Bubbles or Headspace (Y or N)
		X					X					X	X			
		X					X					X	X			

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
6/3/05	1500		6/3/05 1500
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: Gen Chem = Cations, Anions, + Soil pH

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

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

April 21, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: NE Land Treatment Soils March 2005 Order No.: 0504010

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 2 samples on 4/1/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *21-Apr-05*

CLIENT: Giant Refining Co
Client Sample ID: NE-0CD-LTA-#49
Lab Order: 0504010
Collection Date: 3/28/2005 2:00:00 PM
Project: NE Land Treatment Soils March 2005
Lab ID: 0504010-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: **MAP**
Fluoride	1.5	0.30		mg/Kg	1	4/14/2005
Chloride	170	1.5		mg/kg	5	4/14/2005
Nitrogen, Nitrate (As N)	31	0.30		mg/Kg	1	4/14/2005
Bromide	ND	0.30		mg/Kg	1	4/14/2005
Sulfate	1200	15		mg/Kg	10	4/15/2005
Nitrogen, Nitrite (As N)	ND	0.30		mg/Kg	1	4/14/2005
Phosphorus, Orthophosphate (As P)	ND	1.5		mg/Kg	1	4/14/2005
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/6/2005 11:01:09 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/6/2005 11:01:09 PM
Surr: DNOP	118	60-124		%REC	1	4/6/2005 11:01:09 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/4/2005 3:12:24 PM
Surr: BFB	104	78.3-120		%REC	1	4/4/2005 3:12:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	4/4/2005 3:12:24 PM
Benzene	ND	0.025		mg/Kg	1	4/4/2005 3:12:24 PM
Toluene	ND	0.025		mg/Kg	1	4/4/2005 3:12:24 PM
Ethylbenzene	ND	0.025		mg/Kg	1	4/4/2005 3:12:24 PM
Xylenes, Total	ND	0.025		mg/Kg	1	4/4/2005 3:12:24 PM
Surr: 4-Bromofluorobenzene	106	87.4-116		%REC	1	4/4/2005 3:12:24 PM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	4/7/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	2.5		mg/Kg	1	4/6/2005 9:34:54 AM
Barium	310	1.0		mg/Kg	10	4/13/2005 11:09:26 AM
Cadmium	ND	0.10		mg/Kg	1	4/5/2005 2:25:05 PM
Calcium	18000	130		mg/Kg	5	4/5/2005 3:29:37 PM
Chromium	6.3	0.30		mg/Kg	1	4/5/2005 2:25:05 PM
Lead	5.3	0.25		mg/Kg	1	4/5/2005 2:25:05 PM
Magnesium	6500	130		mg/Kg	5	4/5/2005 3:29:37 PM
Potassium	2200	250		mg/Kg	5	4/5/2005 3:29:37 PM
Selenium	ND	2.5		mg/Kg	1	4/6/2005 9:34:54 AM
Silver	ND	0.25		mg/Kg	1	4/5/2005 2:25:05 PM
Sodium	1200	130		mg/Kg	5	4/5/2005 3:29:37 PM
EPA METHOD 150.1: PH						Analyst: **CMC**
pH	8.08	0.010		pH Units	1	4/20/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *21-Apr-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	NE-0CD-LTA-#94
Lab Order:	0504010	**Collection Date:**	3/28/2005 2:30:00 PM
Project:	NE Land Treatment Soils March 2005		
Lab ID:	0504010-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: **MAP**
Fluoride	2.4	1.5		mg/Kg	5	4/14/2005
Chloride	170	1.5		mg/Kg	5	4/14/2005
Nitrogen, Nitrate (As N)	11	1.5		mg/Kg	5	4/14/2005
Bromide	ND	1.5		mg/Kg	5	4/14/2005
Sulfate	280	7.5		mg/Kg	5	4/14/2005
Nitrogen, Nitrite (As N)	ND	1.5		mg/Kg	5	4/14/2005
Phosphorus, Orthophosphate (As P)	ND	7.5		mg/Kg	5	4/14/2005
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	23	10		mg/Kg	1	4/6/2005 11:30:44 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/6/2005 11:30:44 PM
Surr: DNOP	104	60-124		%REC	1	4/6/2005 11:30:44 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/4/2005 3:42:59 PM
Surr: BFB	101	78.3-120		%REC	1	4/4/2005 3:42:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	4/4/2005 3:42:59 PM
Benzene	ND	0.025		mg/Kg	1	4/4/2005 3:42:59 PM
Toluene	ND	0.025		mg/Kg	1	4/4/2005 3:42:59 PM
Ethylbenzene	ND	0.025		mg/Kg	1	4/4/2005 3:42:59 PM
Xylenes, Total	ND	0.025		mg/Kg	1	4/4/2005 3:42:59 PM
Surr: 4-Bromofluorobenzene	106	87.4-116		%REC	1	4/4/2005 3:42:59 PM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	4/7/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	2.5		mg/Kg	1	4/6/2005 9:37:18 AM
Barium	320	1.0		mg/Kg	10	4/13/2005 11:12:19 AM
Cadmium	ND	0.10		mg/Kg	1	4/5/2005 2:31:53 PM
Calcium	24000	130		mg/Kg	5	4/5/2005 3:33:37 PM
Chromium	7.1	0.30		mg/Kg	1	4/5/2005 2:31:53 PM
Lead	8.5	0.25		mg/Kg	1	4/5/2005 2:31:53 PM
Magnesium	5900	130		mg/Kg	5	4/5/2005 3:33:37 PM
Potassium	1700	250		mg/Kg	5	4/5/2005 3:33:37 PM
Selenium	ND	2.5		mg/Kg	1	4/6/2005 9:37:18 AM
Silver	ND	0.25		mg/Kg	1	4/5/2005 2:31:53 PM
Sodium	1200	130		mg/Kg	5	4/5/2005 3:33:37 PM
EPA METHOD 150.1: PH						Analyst: **CMC**
pH	8.48	0.010		pH Units	1	4/20/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *21-Apr-05*

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT

Method Blank

Sample ID **MB-7753**	Batch ID: **7753**	Test Code: **E300**	Units: **mg/Kg**	Analysis Date **4/14/2005**	Prep Date **4/13/2005**
Client ID:		Run ID: **LC_050413A**		SeqNo: **351819**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.3									
Chloride	ND	0.3									
Nitrogen, Nitrate (As N)	ND	0.3									
Bromide	ND	0.3									
Sulfate	ND	1.5									
Nitrogen, Nitrite (As N)	ND	0.3									
Phosphorus, Orthophosphate (As P)	ND	1.5									

Sample ID **MB-7692**	Batch ID: **7692**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **4/4/2005 4:09:00 PM**	Prep Date **4/1/2005**
Client ID:		Run ID: **FID(17A) 2_050404A**		SeqNo: **349073**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	11.09	0	10	0	111	60	124	0			

Sample ID **MB-7692**	Batch ID: **7692**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **4/6/2005 9:30:41 PM**	Prep Date **4/1/2005**
Client ID:		Run ID: **FID(17A) 2_050405A**		SeqNo: **349806**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.53	0	10	0	105	60	124	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT
Method Blank

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID MB-7694 Batch ID: **7694** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **4/4/2005 2:11:28 PM** Prep Date **4/1/2005**											
Client ID: Run ID: **PIDFID_050404A** SeqNo: **348893**											
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	971	0	1000	0	97.1	78.3	120	0			
Sample ID MB-7694 Batch ID: **7694** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **4/4/2005 2:11:28 PM** Prep Date **4/1/2005**											
Client ID: Run ID: **PIDFID_050404A** SeqNo: **348957**											
Methyl tert-butyl ether (MTBE)	ND	0.1									
Benzene	ND	0.025									
Toluene	ND	0.025									
Ethylbenzene	ND	0.025									
Xylenes, Total	ND	0.025									
Surr: 4-Bromofluorobenzene	0.9996	0	1	0	100	87.4	116	0			
Sample ID MB-7724 Batch ID: **7724** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **4/7/2005** Prep Date **4/7/2005**											
Client ID: Run ID: **MI-LA254_050407A** SeqNo: **350051**											
Mercury	ND	0.033									
Sample ID MB-7699 Batch ID: **7699** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **4/6/2005 8:24:27 AM** Prep Date **4/4/2005**											
Client ID: Run ID: **ICP_050406A** SeqNo: **349622**											
Arsenic	ND	2.5									
Selenium	ND	2.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-7699** Batch ID: **7699** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **4/5/2005 1:50:48 PM** Prep Date **4/4/2005**
Client ID: Run ID: **ICP_050406A** SeqNo: **351019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	0.1									
Cadmium	0.03215	0.1									J
Calcium	21.11	25									J
Chromium	ND	0.3									
Lead	ND	0.25									
Magnesium	ND	25									
Potassium	ND	50									
Silver	ND	0.25									
Sodium	ND	25									

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Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *21-Apr-05*

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0504010-02C DUP** Batch ID: **7724** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **4/7/2005** Prep Date **4/7/2005**

Client ID: **NE-0CD-LTA-#94** Run ID: **MI-LA254_050407A** SeqNo: **350055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033	0	0	0	0	0	0	0	30	

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Qualifiers:

ND - Not Detected at the Reporting Limit

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Date: *21-Apr-05*

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID **0504010-02a ms** Batch ID: **7694** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **4/4/2005 4:13:35 PM** Prep Date **4/1/2005**
Client ID: **NE-0CD-LTA-#94** Run ID: **PIDFID_050404A** SeqNo: **348954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25.55	5	25	0	102	84	120	0			
Surr: BFB	1081	0	1000	0	108	78.3	120	0			

Sample ID **0504010-02a msd** Batch ID: **7694** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **4/4/2005 4:44:09 PM** Prep Date **4/1/2005**
Client ID: **NE-0CD-LTA-#94** Run ID: **PIDFID_050404A** SeqNo: **348955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25.32	5	25	0	101	84	120	25.55	0.904	11.6	
Surr: BFB	1101	0	1000	0	110	78.3	120	1081	1.76	0	

Sample ID **0504010-02a ms** Batch ID: **7694** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **4/4/2005 4:13:35 PM** Prep Date **4/1/2005**
Client ID: **NE-0CD-LTA-#94** Run ID: **PIDFID_050404A** SeqNo: **348961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4148	0.025	0.42	0	98.8	83.4	113	0			
Toluene	2.097	0.025	1.9	0	110	86.3	118	0			
Ethylbenzene	0.4116	0.025	0.41	0	100	81.7	113	0			
Xylenes, Total	2.054	0.025	1.9	0	108	86.9	112	0			
Surr: 4-Bromofluorobenzene	1.071	0	1	0	107	87.4	116	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID **0504010-02a msd** Batch ID: **7694** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **4/4/2005 4:44:09 PM** Prep Date **4/1/2005**
Client ID: **NE-0CD-LTA-#94** Run ID: **PIDFID_050404A** SeqNo: **348962**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4131	0.025	0.42	0	98.4	83.4	113	0.4148	0.411	27	
Toluene	2.091	0.025	1.9	0	110	86.3	118	2.097	0.315	19	
Ethylbenzene	0.4134	0.025	0.41	0	101	81.7	113	0.4116	0.451	10	
Xylenes, Total	2.061	0.025	1.9	0	108	86.9	112	2.054	0.342	13	
Surr: 4-Bromofluorobenzene	1.078	0	1	0	108	87.4	116	1.071	0.633	0	

Sample ID **0504010-02C MS** Batch ID: **7724** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **4/7/2005** Prep Date **4/7/2005**
Client ID: **NE-0CD-LTA-#94** Run ID: **MI-LA254_050407A** SeqNo: **350056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1887	0.033	0.1646	0	115	75	125	0			

Sample ID **0504010-02C MSD** Batch ID: **7724** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **4/7/2005** Prep Date **4/7/2005**
Client ID: **NE-0CD-LTA-#94** Run ID: **MI-LA254_050407A** SeqNo: **350057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1929	0.033	0.1624	0	119	75	125	0.1887	2.21	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *21-Apr-05*

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-7753**	Batch ID: **7753**	Test Code: **E300**	Units: **mg/Kg**	Analysis Date **4/14/2005**	Prep Date **4/13/2005**
Client ID:		Run ID: **LC_050413A**		SeqNo: **351820**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.416	0.3	1.5	0	94.4	90	110	0			
Chloride	14.09	0.3	15	0	94.0	90	110	0			
Nitrogen, Nitrate (As N)	7.275	0.3	7.5	0	97.0	90	110	0			
Bromide	7.596	0.3	7.5	0	101	90	110	0			
Sulfate	28.68	1.5	30	0	95.6	90	110	0			
Nitrogen, Nitrite (As N)	2.832	0.3	3	0	94.4	90	110	0			
Phosphorus, Orthophosphate (As P)	14.37	1.5	15	0	95.8	90	110	0			

Sample ID **LCS-7692**	Batch ID: **7692**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **4/4/2005 4:38:54 PM**	Prep Date **4/1/2005**
Client ID:		Run ID: **FID(17A) 2_050404A**		SeqNo: **349074**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53.27	10	50	0	107	67.4	117	0			

Sample ID **LCSD-7692**	Batch ID: **7692**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **4/4/2005 5:09:34 PM**	Prep Date **4/1/2005**
Client ID:		Run ID: **FID(17A) 2_050404A**		SeqNo: **349075**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47.33	10	50	0	94.7	67.4	117	53.27	11.8	17.4	

Sample ID **LCS-7692**	Batch ID: **7692**	Test Code: **SW8015**	Units: **mg/Kg**	Analysis Date **4/6/2005 10:00:34 PM**	Prep Date **4/1/2005**
Client ID:		Run ID: **FID(17A) 2_050405A**		SeqNo: **349808**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40.72	10	50	0	81.4	67.4	117	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-7692** Batch ID: **7692** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **4/6/2005 10:30:27 PM** Prep Date **4/1/2005**
Client ID: Run ID: **FID(17A) 2_050405A** SeqNo: **349810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43.56	10	50	0	87.1	67.4	117	40.72	6.74	17.4	

Sample ID **LCS-7694** Batch ID: **7694** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **4/4/2005 2:41:55 PM** Prep Date **4/1/2005**
Client ID: Run ID: **PIDFID_050404A** SeqNo: **348951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24.57	5	25	0	98.3	84	120	0			

Sample ID **LCS-7694** Batch ID: **7694** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **4/4/2005 2:41:55 PM** Prep Date **4/1/2005**
Client ID: Run ID: **PIDFID_050404A** SeqNo: **348958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.3952	0.025	0.42	0	94.1	83.4	113	0			
Toluene	1.935	0.025	1.9	0	102	86.3	118	0			
Ethylbenzene	0.3905	0.025	0.41	0	95.3	81.7	113	0			
Xylenes, Total	1.915	0.025	1.9	0	101	86.9	112	0			

Sample ID **LCS-7724** Batch ID: **7724** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **4/7/2005** Prep Date **4/7/2005**
Client ID: Run ID: **MI-LA254_050407A** SeqNo: **350052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.177	0.033	0.1667	0	106	75	125	0			

Sample ID **LCSD-7724** Batch ID: **7724** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **4/7/2005** Prep Date **4/7/2005**
Client ID: Run ID: **MI-LA254_050407A** SeqNo: **350058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1776	0.033	0.1667	0	107	75	125	0.177	0.361	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-7699** Batch ID: **7699** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **4/5/2005 1:40:25 PM** Prep Date **4/4/2005**
Client ID: Run ID: **ICP_050406A** SeqNo: **349582**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	23.1	0.1	25	0	92.4	80	120	0			
Cadmium	23.79	0.1	25	0.03215	95.0	80	120	0			
Calcium	2356	25	2500	21.11	93.4	80	120	0			
Chromium	23.52	0.3	25	0	94.1	80	120	0			
Lead	22.68	0.25	25	0	90.7	80	120	0			
Magnesium	2427	25	2500	0	97.1	80	120	0			
Potassium	2463	50	2500	0	98.5	80	120	0			
Silver	24.16	0.25	25	0	96.6	80	120	0			
Sodium	2591	25	2500	0	104	80	120	0			

Sample ID **LCSD-7699** Batch ID: **7699** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **4/5/2005 1:43:37 PM** Prep Date **4/4/2005**
Client ID: Run ID: **ICP_050406A** SeqNo: **349583**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	22.99	0.1	25	0	91.9	80	120	23.1	0.514	20	
Cadmium	23.37	0.1	25	0.03215	93.4	80	120	23.79	1.79	20	
Calcium	2453	25	2500	21.11	97.3	80	120	2356	4.02	20	
Chromium	23.08	0.3	25	0	92.3	80	120	23.52	1.91	20	
Lead	22.36	0.25	25	0	89.4	80	120	22.68	1.42	20	
Magnesium	2499	25	2500	0	100	80	120	2427	2.92	20	
Potassium	2533	50	2500	0	101	80	120	2463	2.80	20	
Silver	23.86	0.25	25	0	95.4	80	120	24.16	1.25	20	
Sodium	2658	25	2500	0	106	80	120	2591	2.57	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0504010
Project: NE Land Treatment Soils March 2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-7699** Batch ID: **7699** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **4/6/2005 8:26:46 AM** Prep Date **4/4/2005**
Client ID: Run ID: **ICP_050406A** SeqNo: **349623**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	25.38	2.5	25	0	102	80	120	0			
Selenium	24.58	2.5	25	0	98.3	80	120	0			

Sample ID **LCSD-7699** Batch ID: **7699** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **4/6/2005 8:29:12 AM** Prep Date **4/4/2005**
Client ID: Run ID: **ICP_050406A** SeqNo: **349624**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	25.09	2.5	25	0	100	80	120	25.38	1.18	20	
Selenium	24.66	2.5	25	0	98.6	80	120	24.58	0.305	20	

12/13

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 4/1/2005

Work Order Number 0504010 | Received by AT

Checklist completed by _____ 4/1/05
Signature | Date

Matrix | Carrier name | Client drop-off

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 ☐				
- 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: _____

rective Action _____

CHAIN-OF-CUSTODY RECORD

Accreditation Applied
NELAC ☐ USACL
Other: _____

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7
Gallup, NM 87301

Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Northeast Land Treatment Area Soil Samples March 2005
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 2

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen. Chem.	8021 BTEX ~~8015~~	~~TPH~~		Air Bubbles or Headspace (Y or N)
3/28/05	1400	Soil	NE-OCD-LTA-#1	3-4oz.			0504010-1			X					X					X	X			
3/28/05	1430	Soil	NE-OCD-LTA-#4	3-4oz.			-2			X					X					X	X			

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
4-1-05	1000		4/1/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 1000

Remarks: Gen. Chem. = Cations, Anions, and soil pH.

Examples of Weekly Pond Inspections

CINIZA REFINERY
OCD DISCHARGE PLAN GW-032
WEEKLY POND INSPECTION

DATE: 12-28-05

INSPECTED BY: JOHNNY SANCHEZ

POND #	FREEBOARD	DIKE CONDITION	IMMEDIATE ACTION NEEDED?
1	OK	OK	NONE
2			
3			
4			
5			
6a			
6b			
7			
8			
9a			
9b			
9c			
9d			
11			
12a			
12b			

COMMENTS: _____

Check all ponds weekly for dike condition and freeboards. Check also for unusual flow from or into the ponds.

CINIZA REFINERY
OCD DISCHARGE PLAN GW-032
WEEKLY POND INSPECTION

DATE: 1/5/05

INSPECTED BY: Daniel D. Gee

POND #	FREEBOARD	DIKE CONDITION	IMMEDIATE ACTION NEEDED?
1	OK	OK	none
2	OK	OK	
3	OK	OK	
4	OK	OK	
5	OK	OK	
6a	OK	OK	
6b	OK	OK	
7	OK	OK	
8	OK	OK	
9a	OK	OK	
9b	OK	OK	
9c	OK	OK	
9d	OK	OK	
11	OK	OK	
12a	OK	OK	
12b	OK	OK	

COMMENTS: _____

Check all ponds weekly for dike condition and freeboards. Check also for unusual flow from or into the ponds.

Date 12-21-05
Initials KM

DAILY DRAINAGE INSPECTION

1. OK CHECK WATER IN DIKE AT MARKETING TANK AREA.
2. _____ CONCRETE BARRIER WEST OF CRUDE TANKS.
3. _____ API SEPARATOR AREA GENERAL APPEARANCE.
4. _____ BENZENE STRIPPER AREA CONDITION.
5. _____ AERATION LAGOONS AND AERATOR PUMPS. Temp. 32V 2"
6. _____ POND ONE GENERAL APPEARANCE.
7. _____ POND 10 WATER FLOW IN AND OUT. Temp 30 V 5"
8. _____ DITCH OUT OF POND 10 TO RUNWAY
9. _____ DITCH FROM NORTH OF RUNWAY TO POND 9
10. _____ VALVES AND POND LEVELS ON PONDS 12 THRU 7
11. _____ VALVES AND POND LEVELS ON PONDS 3 THRU 9

Rain Gauge_____

Freeboard on Ponds:

#2 1'6"	**#6** 3"	**#12a** 2'2"
#3 1'9"	**#8** BM	**#12b** 1FT
#4 1'10"	**#7** BM	**#9** BM
#5 2'6"	**#11** 2'2"	

Monthly tilling of OCD landfarm _____ **Date**_____ **Signed**

Date 01-20-05
Initials LM

DAILY DRAINAGE INSPECTION

1. OK CHECK WATER IN DIKE AT MARKETING TANK AREA.
2. _____ CONCRETE BARRIER WEST OF CRUDE TANKS.
3. _____ API SEPARATOR AREA GENERAL APPEARANCE.
4. _____ BENZENE STRIPPER AREA CONDITION.
5. _____ AERATION LAGOONS AND AERATOR PUMPS. Temp. 36 V 2"
6. _____ POND ONE GENERAL APPEARANCE.
7. _____ POND 10 WATER FLOW IN AND OUT. Temp 34 V 5"
8. _____ DITCH OUT OF POND 10 TO RUNWAY
9. _____ DITCH FROM NORTH OF RUNWAY TO POND 9
10. _____ VALVES AND POND LEVELS ON PONDS 12 THRU 7
11. _____ VALVES AND POND LEVELS ON PONDS 3 THRU 9

Rain Gauge_____

Freeboard on Ponds:

#2 1'3"	**#6** 1FT	**#12a** 2'2"
#3 1'9"	**#8** BM	**#12b** 1FT
#4 1'10"	**#7** BM	**#9** BM
#5 2'4"	**#11** 2'2"	

Monthly tilling of OCD landfarm _____ **Date**_____ **Signed**

OCD Permit Condition 21:

a. Summary of all Major Refinery Activities or Events

Permit Condition 21. Annual Report

A. Summary Of All Major Refinery Activities Or Events

June- The alky unit underground sewer lines were replaced.

Tank 574 (straight run gasoline) was emptied and cleaned and a complete internal and external visual inspection of the tank shell, bottom, floating roof and all internal piping and components was conducted. A UT thickness inspection of all internal piping, tank bottom plates, tank shell plates, floating roof plates and nozzles and man ways was conducted. The tank was abrasive blasted and protective coating was applied to product side of tank. A new double seal external floating roof was installed.

July-

Tank 102 (crude oil) was emptied and cleaned and a complete internal and external visual inspection of the tank shell, bottom, floating roof and all internal piping and components was conducted. A UT thickness inspection of all internal piping, tank bottom plates, tank shell plates, floating roof plates and nozzles and man ways was conducted. The tank was abrasive blasted and protective coating was applied to product side of tank. A new double seal external floating roof was installed.

August-.The second phase of excavation at SWMU #8 Railroad Rack Lagoon was initiated in August and completed in September 2005. Approximately 207 yards of soil was removed and deposited in the central and NE OCD non hazardous onsite land farms by Fuhs Trucking.

September- OCD and NMED conducted a site visit and inspection of the oil water separator, aeration lagoons and ponds and outer process areas.

Installation of monitoring wells GWM-2 and GWM-3 near aeration lagoons 1 and 2 were completed.

The annual 8 hour HAZWOPER refresher training conducted by Rinchem was received by environmental and emergency response personnel at the refinery.

October- - On October 26 and 27, the NMED Hazardous Waste Bureau (Robert Atencio, Chris Serazio and Anna Maestas) conducted a Compliance Evaluation Inspection.

The annual groundwater sampling event of all of the Ciniza monitor wells was completed.

November- OCD and NMED conducted a site visit and meeting on November 10, in conjunction with an NPDES Storm Water Compliance Evaluation inspection conducted by Richard Powell.

Vector Engineering was onsite November 28 through December 2 to develop new drainage maps and work on updating the Ciniza Storm Water Pollution Prevention Plan (SWPPP). The annual SWPPP self compliance evaluation was also completed.

December-
The annual SPCC self audit inspection was completed.

OCD Permit Condition 21:

b. Results of All Sampling and Monitoring Events

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 07, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: RR Rock Lagoon Add. Exc. 8-30-05 Order No.: 0508346

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 10 samples on 8/31/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

CLIENT: Giant Refining Co
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab Order: 0508346

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-1-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:15:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	640	10		mg/Kg	1	9/2/2005 2:55:36 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2005 2:55:36 AM
Surr: DNOP	93.8	60-124		%REC	1	9/2/2005 2:55:36 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	102	72.9-143		%REC	1	9/4/2005
Surr: Dibromofluoromethane	103	85.2-118		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	0.56	0.20		mg/Kg	1	9/4/2005
Acenaphthylene	ND	0.20		mg/Kg	1	9/4/2005
Aniline	ND	0.20		mg/Kg	1	9/4/2005
Anthracene	ND	0.20		mg/Kg	1	9/4/2005
Azobenzene	ND	0.20		mg/Kg	1	9/4/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Benzidine	ND	0.20		mg/Kg	1	9/4/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	9/4/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	9/4/2005
Benzoic acid	ND	0.50		mg/Kg	1	9/4/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	9/4/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	9/4/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	9/4/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Carbazole	ND	0.20		mg/Kg	1	9/4/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	9/4/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	9/4/2005
Chrysene	ND	0.20		mg/Kg	1	9/4/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	9/4/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	9/4/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-1-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:15:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dibenzofuran	ND	0.50		mg/Kg	1	9/4/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	9/4/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	9/4/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
Fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Fluorene	0.91	0.20		mg/Kg	1	9/4/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	9/4/2005
Hexachloroethane	ND	0.50		mg/Kg	1	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Isophorone	ND	0.20		mg/Kg	1	9/4/2005
2-Methylnaphthalene	7.9	1.0		mg/Kg	5	9/6/2005
2-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	9/4/2005
Naphthalene	1.0	0.20		mg/Kg	1	9/4/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	9/4/2005
Nitrobenzene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	9/4/2005
Phenanthrene	3.8	0.20		mg/Kg	1	9/4/2005
Phenol	ND	0.20		mg/Kg	1	9/4/2005
Pyrene	ND	0.20		mg/Kg	1	9/4/2005
Pyridine	ND	0.50		mg/Kg	1	9/4/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
Surr: 2,4,6-Tribromophenol	98.3	35.5-141		%REC	1	9/4/2005

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-1-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:15:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorobiphenyl	107	30.4-128		%REC	1	9/4/2005
Surr: 2-Fluorophenol	76.7	28.1-129		%REC	1	9/4/2005
Surr: 4-Terphenyl-d14	78.3	34.6-151		%REC	1	9/4/2005
Surr: Nitrobenzene-d5	78.3	26.5-122		%REC	1	9/4/2005
Surr: Phenol-d6	84.5	37.6-118		%REC	1	9/4/2005

Qualifiers:
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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-2-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:30:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	1900	100		mg/Kg	10	9/3/2005 12:54:13 AM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	9/3/2005 12:54:13 AM
Surr: DNOP	105	60-124		%REC	10	9/3/2005 12:54:13 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	0.41	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	126	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	9/4/2005
Acenaphthylene	ND	0.20		mg/Kg	1	9/4/2005
Aniline	ND	0.20		mg/Kg	1	9/4/2005
Anthracene	ND	0.20		mg/Kg	1	9/4/2005
Azobenzene	ND	0.20		mg/Kg	1	9/4/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Benzidine	ND	0.20		mg/Kg	1	9/4/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	9/4/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	9/4/2005
Benzoic acid	ND	0.50		mg/Kg	1	9/4/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	9/4/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	9/4/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	9/4/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Carbazole	ND	0.20		mg/Kg	1	9/4/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	9/4/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	9/4/2005
Chrysene	ND	0.20		mg/Kg	1	9/4/2005
Di-n-butyl phthalate	0.26	0.25	B	mg/Kg	1	9/4/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	9/4/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Dibenzofuran	ND	0.50		mg/Kg	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-2-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:30:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	9/4/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dimethylphenol	0.22	0.20		mg/Kg	1	9/4/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
Fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Fluorene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	9/4/2005
Hexachloroethane	ND	0.50		mg/Kg	1	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Isophorone	ND	0.20		mg/Kg	1	9/4/2005
2-Methylnaphthalene	2.2	0.20		mg/Kg	1	9/4/2005
2-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	9/4/2005
Naphthalene	2.2	0.20		mg/Kg	1	9/4/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	9/4/2005
Nitrobenzene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	9/4/2005
Phenanthrene	1.3	0.20		mg/Kg	1	9/4/2005
Phenol	ND	0.20		mg/Kg	1	9/4/2005
Pyrene	ND	0.20		mg/Kg	1	9/4/2005
Pyridine	ND	0.50		mg/Kg	1	9/4/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
Surr: 2,4,6-Tribromophenol	91.1	35.5-141		%REC	1	9/4/2005
Surr: 2-Fluorobiphenyl	94.2	30.4-128		%REC	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-2-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:30:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	78.2	28.1-129		%REC	1	9/4/2005
Surr: 4-Terphenyl-d14	85.0	34.6-151		%REC	1	9/4/2005
Surr: Nitrobenzene-d5	82.8	26.5-122		%REC	1	9/4/2005
Surr: Phenol-d6	89.6	37.6-118		%REC	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-3-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:40:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	2900	100		mg/Kg	10	9/3/2005 1:27:00 AM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	9/3/2005 1:27:00 AM
Surr: DNOP	122	60-124		%REC	10	9/3/2005 1:27:00 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	2.8	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	97.2	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	2.0		mg/Kg	10	9/4/2005
Acenaphthylene	ND	2.0		mg/Kg	10	9/4/2005
Aniline	ND	2.0		mg/Kg	10	9/4/2005
Anthracene	ND	2.0		mg/Kg	10	9/4/2005
Azobenzene	ND	2.0		mg/Kg	10	9/4/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	9/4/2005
Benzidine	ND	2.0		mg/Kg	10	9/4/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	9/4/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	9/4/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	9/4/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	9/4/2005
Benzoic acid	ND	5.0		mg/Kg	10	9/4/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	9/4/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	9/4/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	9/4/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
Carbazole	ND	2.0		mg/Kg	10	9/4/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	9/4/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	9/4/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	9/4/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	9/4/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	9/4/2005
Chrysene	ND	2.0		mg/Kg	10	9/4/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	9/4/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	9/4/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	9/4/2005
Dibenzofuran	ND	5.0		mg/Kg	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-3-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:40:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	9/4/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	9/4/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	9/4/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	9/4/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	9/4/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	9/4/2005
Fluoranthene	ND	2.0		mg/Kg	10	9/4/2005
Fluorene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	9/4/2005
Hexachloroethane	ND	5.0		mg/Kg	10	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	9/4/2005
Isophorone	ND	2.0		mg/Kg	10	9/4/2005
2-Methylnaphthalene	11	2.0		mg/Kg	10	9/4/2005
2-Methylphenol	ND	2.0		mg/Kg	10	9/4/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	9/4/2005
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	10	9/4/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	9/4/2005
Naphthalene	2.6	2.0		mg/Kg	10	9/4/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	9/4/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	9/4/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	9/4/2005
Nitrobenzene	ND	2.0		mg/Kg	10	9/4/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	9/4/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	9/4/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	9/4/2005
Phenanthrene	4.5	2.0		mg/Kg	10	9/4/2005
Phenol	ND	2.0		mg/Kg	10	9/4/2005
Pyrene	ND	2.0		mg/Kg	10	9/4/2005
Pyridine	ND	5.0		mg/Kg	10	9/4/2005
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
Surr: 2,4,6-Tribromophenol	113	35.5-141		%REC	10	9/4/2005
Surr: 2-Fluorobiphenyl	83.6	30.4-128		%REC	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-3-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:40:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	70.0	28.1-129		%REC	10	9/4/2005
Surr: 4-Terphenyl-d14	80.6	34.6-151		%REC	10	9/4/2005
Surr: Nitrobenzene-d5	78.4	26.5-122		%REC	10	9/4/2005
Surr: Phenol-d6	66.8	37.6-118		%REC	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-4-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:50:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-04
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	4000	200		mg/Kg	20	9/3/2005 1:59:51 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	9/3/2005 1:59:51 AM
Surr: DNOP	0	60-124	S	%REC	20	9/3/2005 1:59:51 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	0.38	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	4.1	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	121	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	2.0		mg/Kg	10	9/4/2005
Acenaphthylene	ND	2.0		mg/Kg	10	9/4/2005
Aniline	ND	2.0		mg/Kg	10	9/4/2005
Anthracene	ND	2.0		mg/Kg	10	9/4/2005
Azobenzene	ND	2.0		mg/Kg	10	9/4/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	9/4/2005
Benzidine	ND	2.0		mg/Kg	10	9/4/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	9/4/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	9/4/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	9/4/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	9/4/2005
Benzoic acid	ND	5.0		mg/Kg	10	9/4/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	9/4/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	9/4/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	9/4/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
Carbazole	ND	2.0		mg/Kg	10	9/4/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	9/4/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	9/4/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	9/4/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	9/4/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	9/4/2005
Chrysene	ND	2.0		mg/Kg	10	9/4/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	9/4/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	9/4/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	9/4/2005
Dibenzofuran	ND	5.0		mg/Kg	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-4-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:50:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-04
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	9/4/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	9/4/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	9/4/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	9/4/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	9/4/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	9/4/2005
Fluoranthene	ND	2.0		mg/Kg	10	9/4/2005
Fluorene	3.2	2.0		mg/Kg	10	9/4/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	9/4/2005
Hexachloroethane	ND	5.0		mg/Kg	10	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	9/4/2005
Isophorone	ND	2.0		mg/Kg	10	9/4/2005
2-Methylnaphthalene	20	2.0		mg/Kg	10	9/4/2005
2-Methylphenol	ND	2.0		mg/Kg	10	9/4/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	9/4/2005
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	10	9/4/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	9/4/2005
Naphthalene	4.2	2.0		mg/Kg	10	9/4/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	9/4/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	9/4/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	9/4/2005
Nitrobenzene	ND	2.0		mg/Kg	10	9/4/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	9/4/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	9/4/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	9/4/2005
Phenanthrene	7.1	2.0		mg/Kg	10	9/4/2005
Phenol	ND	2.0		mg/Kg	10	9/4/2005
Pyrene	ND	2.0		mg/Kg	10	9/4/2005
Pyridine	ND	5.0		mg/Kg	10	9/4/2005
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
Surr: 2,4,6-Tribromophenol	108	35.5-141		%REC	10	9/4/2005
Surr: 2-Fluorobiphenyl	97.4	30.4-128		%REC	10	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-4-83005
Lab Order: 0508346
Collection Date: 8/30/2005 7:50:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-04
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	65.1	28.1-129		%REC	10	9/4/2005
Surr: 4-Terphenyl-d14	90.4	34.6-151		%REC	10	9/4/2005
Surr: Nitrobenzene-d5	116	26.5-122		%REC	10	9/4/2005
Surr: Phenol-d6	70.8	37.6-118		%REC	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-5-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:00:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-05
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	1000	20		mg/Kg	2	9/3/2005 2:32:52 AM
Motor Oil Range Organics (MRO)	ND	100		mg/Kg	2	9/3/2005 2:32:52 AM
Surr: DNOP	98.4	60-124		%REC	2	9/3/2005 2:32:52 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	0.33	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	97.2	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	0.29	0.20		mg/Kg	1	9/4/2005
Acenaphthylene	ND	0.20		mg/Kg	1	9/4/2005
Aniline	ND	0.20		mg/Kg	1	9/4/2005
Anthracene	ND	0.20		mg/Kg	1	9/4/2005
Azobenzene	ND	0.20		mg/Kg	1	9/4/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Benzidine	ND	0.20		mg/Kg	1	9/4/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	9/4/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	9/4/2005
Benzoic acid	ND	0.50		mg/Kg	1	9/4/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	9/4/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	9/4/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	9/4/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Carbazole	ND	0.20		mg/Kg	1	9/4/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	9/4/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	9/4/2005
Chrysene	ND	0.20		mg/Kg	1	9/4/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	9/4/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	9/4/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Dibenzofuran	ND	0.50		mg/Kg	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-5-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:00:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-05
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	9/4/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	9/4/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
Fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Fluorene	0.49	0.20		mg/Kg	1	9/4/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	9/4/2005
Hexachloroethane	ND	0.50		mg/Kg	1	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Isophorone	ND	0.20		mg/Kg	1	9/4/2005
2-Methylnaphthalene	2.7	0.20		mg/Kg	1	9/4/2005
2-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	9/4/2005
Naphthalene	0.59	0.20		mg/Kg	1	9/4/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	9/4/2005
Nitrobenzene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	9/4/2005
Phenanthrene	1.4	0.20		mg/Kg	1	9/4/2005
Phenol	ND	0.20		mg/Kg	1	9/4/2005
Pyrene	ND	0.20		mg/Kg	1	9/4/2005
Pyridine	ND	0.50		mg/Kg	1	9/4/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
Surr: 2,4,6-Tribromophenol	92.3	35.5-141		%REC	1	9/4/2005
Surr: 2-Fluorobiphenyl	91.4	30.4-128		%REC	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-5-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:00:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-05
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	78.5	28.1-129		%REC	1	9/4/2005
Surr: 4-Terphenyl-d14	80.8	34.6-151		%REC	1	9/4/2005
Surr: Nitrobenzene-d5	80.9	26.5-122		%REC	1	9/4/2005
Surr: Phenol-d6	84.3	37.6-118		%REC	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-6-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:10:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-06
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	5300	200		mg/Kg	20	9/2/2005 11:48:37 PM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	9/2/2005 11:48:37 PM
Surr: DNOP	0	60-124	S	%REC	20	9/2/2005 11:48:37 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	1.8	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	111	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	9/4/2005
Acenaphthylene	ND	0.20		mg/Kg	1	9/4/2005
Aniline	ND	0.20		mg/Kg	1	9/4/2005
Anthracene	ND	0.20		mg/Kg	1	9/4/2005
Azobenzene	ND	0.20		mg/Kg	1	9/4/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Benzidine	ND	0.20		mg/Kg	1	9/4/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	9/4/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	9/4/2005
Benzoic acid	ND	0.50		mg/Kg	1	9/4/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	9/4/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	9/4/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	9/4/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Carbazole	ND	0.20		mg/Kg	1	9/4/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	9/4/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	9/4/2005
Chrysene	ND	0.20		mg/Kg	1	9/4/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	9/4/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	9/4/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Dibenzofuran	0.68	0.50		mg/Kg	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-6-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:10:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-06
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	9/4/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	9/4/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
Fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Fluorene	0.34	0.20		mg/Kg	1	9/4/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	9/4/2005
Hexachloroethane	ND	0.50		mg/Kg	1	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Isophorone	ND	0.20		mg/Kg	1	9/4/2005
2-Methylnaphthalene	36	2.0		mg/Kg	10	9/6/2005
2-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	9/4/2005
Naphthalene	3.8	0.20		mg/Kg	1	9/4/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	9/4/2005
Nitrobenzene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	9/4/2005
Phenanthrene	8.0	2.0		mg/Kg	10	9/6/2005
Phenol	ND	0.20		mg/Kg	1	9/4/2005
Pyrene	0.41	0.20		mg/Kg	1	9/4/2005
Pyridine	ND	0.50		mg/Kg	1	9/4/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
Surr: 2,4,6-Tribromophenol	60.1	35.5-141		%REC	1	9/4/2005
Surr: 2-Fluorobiphenyl	79.0	30.4-128		%REC	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-6-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:10:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-06
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	66.9	28.1-129		%REC	1	9/4/2005
Surr: 4-Terphenyl-d14	82.2	34.6-151		%REC	1	9/4/2005
Surr: Nitrobenzene-d5	89.1	26.5-122		%REC	1	9/4/2005
Surr: Phenol-d6	78.4	37.6-118		%REC	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-7-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:20:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-07
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	9000	200		mg/Kg	20	9/3/2005 12:21:25 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	9/3/2005 12:21:25 AM
Surr: DNOP	0	60-124	S	%REC	20	9/3/2005 12:21:25 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	2.9	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	103	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	2.6	2.0		mg/Kg	10	9/4/2005
Acenaphthylene	ND	2.0		mg/Kg	10	9/4/2005
Aniline	ND	2.0		mg/Kg	10	9/4/2005
Anthracene	ND	2.0		mg/Kg	10	9/4/2005
Azobenzene	ND	2.0		mg/Kg	10	9/4/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	9/4/2005
Benzidine	ND	2.0		mg/Kg	10	9/4/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	9/4/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	9/4/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	9/4/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	9/4/2005
Benzoic acid	ND	5.0		mg/Kg	10	9/4/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	9/4/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	9/4/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	9/4/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
Carbazole	ND	2.0		mg/Kg	10	9/4/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	9/4/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	9/4/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	9/4/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	9/4/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	9/4/2005
Chrysene	ND	2.0		mg/Kg	10	9/4/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	9/4/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	9/4/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	9/4/2005
Dibenzofuran	ND	5.0		mg/Kg	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-7-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:20:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-07
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	9/4/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	9/4/2005
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	9/4/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	9/4/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	9/4/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	9/4/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	9/4/2005
Fluoranthene	ND	2.0		mg/Kg	10	9/4/2005
Fluorene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	9/4/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	9/4/2005
Hexachloroethane	ND	5.0		mg/Kg	10	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	9/4/2005
Isophorone	ND	2.0		mg/Kg	10	9/4/2005
2-Methylnaphthalene	39	2.0		mg/Kg	10	9/4/2005
2-Methylphenol	ND	2.0		mg/Kg	10	9/4/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	9/4/2005
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	10	9/4/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	9/4/2005
Naphthalene	5.0	2.0		mg/Kg	10	9/4/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	9/4/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	9/4/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	9/4/2005
Nitrobenzene	ND	2.0		mg/Kg	10	9/4/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	9/4/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	9/4/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	9/4/2005
Phenanthrene	10	2.0		mg/Kg	10	9/4/2005
Phenol	ND	2.0		mg/Kg	10	9/4/2005
Pyrene	ND	2.0		mg/Kg	10	9/4/2005
Pyridine	ND	5.0		mg/Kg	10	9/4/2005
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	9/4/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	9/4/2005
Surr: 2,4,6-Tribromophenol	115	35.5-141		%REC	10	9/4/2005
Surr: 2-Fluorobiphenyl	105	30.4-128		%REC	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-7-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:20:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-07
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	68.5	28.1-129		%REC	10	9/4/2005
Surr: 4-Terphenyl-d14	80.8	34.6-151		%REC	10	9/4/2005
Surr: Nitrobenzene-d5	125	26.5-122	S	%REC	10	9/4/2005
Surr: Phenol-d6	74.8	37.6-118		%REC	10	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-8-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:30:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-08
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/2/2005 6:12:34 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2005 6:12:34 AM
Surr: DNOP	81.0	60-124		%REC	1	9/2/2005 6:12:34 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	106	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	9/4/2005
Acenaphthylene	ND	0.20		mg/Kg	1	9/4/2005
Aniline	ND	0.20		mg/Kg	1	9/4/2005
Anthracene	ND	0.20		mg/Kg	1	9/4/2005
Azobenzene	ND	0.20		mg/Kg	1	9/4/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Benzidine	ND	0.20		mg/Kg	1	9/4/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	9/4/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	9/4/2005
Benzoic acid	ND	0.50		mg/Kg	1	9/4/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	9/4/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	9/4/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	9/4/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Carbazole	ND	0.20		mg/Kg	1	9/4/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	9/4/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	9/4/2005
Chrysene	ND	0.20		mg/Kg	1	9/4/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	9/4/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	9/4/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Dibenzofuran	ND	0.50		mg/Kg	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** RR-8-83005
Lab Order: 0508346 **Collection Date:** 8/30/2005 8:30:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-08 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	9/4/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	9/4/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
Fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Fluorene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	9/4/2005
Hexachloroethane	ND	0.50		mg/Kg	1	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Isophorone	ND	0.20		mg/Kg	1	9/4/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	9/4/2005
Naphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	9/4/2005
Nitrobenzene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	9/4/2005
Phenanthrene	ND	0.20		mg/Kg	1	9/4/2005
Phenol	ND	0.20		mg/Kg	1	9/4/2005
Pyrene	ND	0.20		mg/Kg	1	9/4/2005
Pyridine	ND	0.50		mg/Kg	1	9/4/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
Surr: 2,4,6-Tribromophenol	89.7	35.5-141		%REC	1	9/4/2005
Surr: 2-Fluorobiphenyl	67.9	30.4-128		%REC	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-8-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:30:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-08
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	60.4	28.1-129		%REC	1	9/4/2005
Surr: 4-Terphenyl-d14	87.3	34.6-151		%REC	1	9/4/2005
Surr: Nitrobenzene-d5	61.8	26.5-122		%REC	1	9/4/2005
Surr: Phenol-d6	64.5	37.6-118		%REC	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-9-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:40:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-09
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/2/2005 6:45:22 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2005 6:45:22 AM
Surr: DNOP	96.7	60-124		%REC	1	9/2/2005 6:45:22 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	115	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	9/4/2005
Acenaphthylene	ND	0.20		mg/Kg	1	9/4/2005
Aniline	ND	0.20		mg/Kg	1	9/4/2005
Anthracene	ND	0.20		mg/Kg	1	9/4/2005
Azobenzene	ND	0.20		mg/Kg	1	9/4/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Benzidine	ND	0.20		mg/Kg	1	9/4/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	9/4/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	9/4/2005
Benzoic acid	ND	0.50		mg/Kg	1	9/4/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	9/4/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	9/4/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	9/4/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Carbazole	ND	0.20		mg/Kg	1	9/4/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	9/4/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	9/4/2005
Chrysene	ND	0.20		mg/Kg	1	9/4/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	9/4/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	9/4/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Dibenzofuran	ND	0.50		mg/Kg	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: RR-9-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:40:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-09
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	9/4/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	9/4/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
Fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Fluorene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	9/4/2005
Hexachloroethane	ND	0.50		mg/Kg	1	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Isophorone	ND	0.20		mg/Kg	1	9/4/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	9/4/2005
Naphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	9/4/2005
Nitrobenzene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	9/4/2005
Phenanthrene	ND	0.20		mg/Kg	1	9/4/2005
Phenol	ND	0.20		mg/Kg	1	9/4/2005
Pyrene	ND	0.20		mg/Kg	1	9/4/2005
Pyridine	ND	0.50		mg/Kg	1	9/4/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
Surr: 2,4,6-Tribromophenol	88.3	35.5-141		%REC	1	9/4/2005
Surr: 2-Fluorobiphenyl	75.4	30.4-128		%REC	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-9-83005
Lab Order: 0508346
Collection Date: 8/30/2005 8:40:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-09
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	67.7	28.1-129		%REC	1	9/4/2005
Surr: 4-Terphenyl-d14	86.0	34.6-151		%REC	1	9/4/2005
Surr: Nitrobenzene-d5	72.5	26.5-122		%REC	1	9/4/2005
Surr: Phenol-d6	74.3	37.6-118		%REC	1	9/4/2005

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-10-83005
Lab Order: 0508346
Collection Date: 8/30/2005 9:00:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-10
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/2/2005 7:18:10 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2005 7:18:10 AM
Surr: DNOP	97.5	60-124		%REC	1	9/2/2005 7:18:10 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	9/4/2005
Toluene	ND	0.050		mg/Kg	1	9/4/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/4/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/4/2005
Surr: 4-Bromofluorobenzene	94.9	72.9-143		%REC	1	9/4/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	9/4/2005
Acenaphthylene	ND	0.20		mg/Kg	1	9/4/2005
Aniline	ND	0.20		mg/Kg	1	9/4/2005
Anthracene	ND	0.20		mg/Kg	1	9/4/2005
Azobenzene	ND	0.20		mg/Kg	1	9/4/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Benzidine	ND	0.20		mg/Kg	1	9/4/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	9/4/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	9/4/2005
Benzoic acid	ND	0.50		mg/Kg	1	9/4/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	9/4/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	9/4/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	9/4/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	9/4/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Carbazole	ND	0.20		mg/Kg	1	9/4/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	9/4/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	9/4/2005
Chrysene	ND	0.20		mg/Kg	1	9/4/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	9/4/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	9/4/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	9/4/2005
Dibenzofuran	ND	0.50		mg/Kg	1	9/4/2005

Qualifiers:
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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: RR-10-83005
Lab Order: 0508346
Collection Date: 8/30/2005 9:00:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-10
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	9/4/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	9/4/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	9/4/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	9/4/2005
Fluoranthene	ND	0.20		mg/Kg	1	9/4/2005
Fluorene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	9/4/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	9/4/2005
Hexachloroethane	ND	0.50		mg/Kg	1	9/4/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	9/4/2005
Isophorone	ND	0.20		mg/Kg	1	9/4/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	9/4/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	9/4/2005
Naphthalene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	9/4/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	9/4/2005
Nitrobenzene	ND	0.20		mg/Kg	1	9/4/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	9/4/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	9/4/2005
Phenanthrene	ND	0.20		mg/Kg	1	9/4/2005
Phenol	ND	0.20		mg/Kg	1	9/4/2005
Pyrene	ND	0.20		mg/Kg	1	9/4/2005
Pyridine	ND	0.50		mg/Kg	1	9/4/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	9/4/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	9/4/2005
Surr: 2,4,6-Tribromophenol	81.3	35.5-141		%REC	1	9/4/2005
Surr: 2-Fluorobiphenyl	66.1	30.4-128		%REC	1	9/4/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** RR-10-83005
Lab Order: 0508346 **Collection Date:** 8/30/2005 9:00:00 AM
Project: RR Rock Lagoon Add. Exc. 8-30-05
Lab ID: 0508346-10 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2-Fluorophenol	53.5	28.1-129		%REC	1	9/4/2005
Surr: 4-Terphenyl-d14	85.5	34.6-151		%REC	1	9/4/2005
Surr: Nitrobenzene-d5	61.6	26.5-122		%REC	1	9/4/2005
Surr: Phenol-d6	62.7	37.6-118		%REC	1	9/4/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508346
Project: RR Rock Lagoon Add. Exc. 8-30-05

QC SUMMARY REPORT

Method Blank

Sample ID **MB-8649** Batch ID: **8649** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **9/1/2005 9:27:29 PM** Prep Date **8/31/2005**

Client ID: Run ID: **FID(17A) 2_050901A** SeqNo: **395109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.957	0	10	0	99.6	60	124	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508346
Project: RR Rock Lagoon Add. Exc. 8-30-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8646** Batch ID: **8646** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **9/4/2005** Prep Date **8/31/2005**
Client ID: Run ID: **ELMO_050904A** SeqNo: **395725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.2									
Acenaphthylene	ND	0.2									
Aniline	ND	0.2									
Anthracene	ND	0.2									
Azobenzene	ND	0.2									
Benz(a)anthracene	ND	0.25									
Benzidine	ND	0.2									
Benzo(a)pyrene	ND	0.2									
Benzo(b)fluoranthene	ND	0.2									
Benzo(g,h,i)perylene	ND	0.3									
Benzo(k)fluoranthene	ND	0.5									
Benzoic acid	ND	0.5									
Benzyl alcohol	ND	0.5									
Bis(2-chloroethoxy)methane	ND	0.5									
Bis(2-chloroethyl)ether	ND	0.25									
Bis(2-chloroisopropyl)ether	ND	0.5									
Bis(2-ethylhexyl)phthalate	0.04733	0.2									J
4-Bromophenyl phenyl ether	ND	0.25									
Butyl benzyl phthalate	ND	0.2									
Carbazole	ND	0.2									
4-Chloro-3-methylphenol	ND	0.2									
4-Chloroaniline	ND	0.2									
2-Chloronaphthalene	ND	0.2									
2-Chlorophenol	ND	0.2									
4-Chlorophenyl phenyl ether	ND	0.2									
Chrysene	ND	0.2									
Di-n-butyl phthalate	1.756	0.25									
Di-n-octyl phthalate	ND	0.5									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508346
Project: RR Rock Lagoon Add. Exc. 8-30-05

QC SUMMARY REPORT
Method Blank

Dibenz(a,h)anthracene	ND	0.25
Dibenzofuran	ND	0.5
1,2-Dichlorobenzene	ND	0.2
1,3-Dichlorobenzene	ND	0.2
1,4-Dichlorobenzene	ND	0.2
3,3'-Dichlorobenzidine	ND	0.2
Diethyl phthalate	ND	0.2
Dimethyl phthalate	ND	0.2
2,4-Dichlorophenol	ND	0.2
2,4-Dimethylphenol	ND	0.2
4,6-Dinitro-2-methylphenol	ND	0.5
2,4-Dinitrophenol	ND	0.5
2,4-Dinitrotoluene	ND	0.2
2,6-Dinitrotoluene	ND	0.2
Fluoranthene	ND	0.2
Fluorene	ND	0.2
Hexachlorobenzene	ND	0.2
Hexachlorobutadiene	ND	0.2
Hexachlorocyclopentadiene	ND	0.25
Hexachloroethane	ND	0.5
Indeno(1,2,3-cd)pyrene	ND	0.2
Isophorone	ND	0.2
2-Methylnaphthalene	ND	0.2
2-Methylphenol	ND	0.2
3+4-Methylphenol	ND	0.2
N-Nitrosodi-n-propylamine	ND	0.2
N-Nitrosodiphenylamine	ND	0.2
Naphthalene	ND	0.2
2-Nitroaniline	ND	0.5
3-Nitroaniline	ND	0.5
4-Nitroaniline	ND	0.25
Nitrobenzene	ND	0.2
2-Nitrophenol	ND	0.2

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
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CLIENT: Giant Refining Co
Work Order: 0508346
Project: RR Rock Lagoon Add. Exc. 8-30-05

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	0.2						
Pentachlorophenol	ND	0.5						
Phenanthrene	ND	0.2						
Phenol	ND	0.2						
Pyrene	ND	0.2						
Pyridine	ND	0.5						
1,2,4-Trichlorobenzene	ND	0.2						
2,4,5-Trichlorophenol	ND	0.2						
2,4,6-Trichlorophenol	ND	0.2						
Surr: 2,4,6-Tribromophenol	2.551	0	3.33	0	76.6	35.5	141	0
Surr: 2-Fluorobiphenyl	1.208	0	1.67	0	72.3	30.4	128	0
Surr: 2-Fluorophenol	2.424	0	3.33	0	72.8	28.1	129	0
Surr: 4-Terphenyl-d14	1.411	0	1.67	0	84.5	34.6	151	0
Surr: Nitrobenzene-d5	1.161	0	1.67	0	69.5	26.5	122	0
Surr: Phenol-d6	2.484	0	3.33	0	74.6	37.6	118	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508346
Project: RR Rock Lagoon Add. Exc. 8-30-05

QC SUMMARY REPORT
Method Blank

Sample ID **mb-8648** Batch ID: **8648** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **9/3/2005** Prep Date **8/31/2005**

Client ID: Run ID: **THOR_050903A** SeqNo: **395596**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.05	0	0	0	0	0	0			
Toluene	ND	0.05	0	0	0	0	0	0			
Ethylbenzene	ND	0.05	0	0	0	0	0	0			
Xylenes, Total	ND	0.05	0	0	0	0	0	0			
Surr: 4-Bromofluorobenzene	0.5104	0	0.5	0	102	72.9	143	0			
Surr: Dibromofluoromethane	0.4749	0	0.5	0	95.0	85.2	118	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508346
Project: RR Rock Lagoon Add. Exc. 8-30-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-8649** Batch ID: **8649** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **9/1/2005 10:00:21 PM** Prep Date **8/31/2005**
Client ID: Run ID: **FID(17A) 2_050901A** SeqNo: **395110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45.26	10	50	0	90.5	67.4	117	0			

Sample ID **LCSD-8649** Batch ID: **8649** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **9/1/2005 11:05:57 PM** Prep Date **8/31/2005**
Client ID: Run ID: **FID(17A) 2_050901A** SeqNo: **395112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49.38	10	50	0	98.8	67.4	117	45.26	8.70	17.4	

Sample ID **lcs-8648** Batch ID: **8648** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **9/3/2005** Prep Date **8/31/2005**
Client ID: Run ID: **THOR_050903A** SeqNo: **395601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.8733	0.05	1	0	87.3	78	126	0			
Toluene	1.016	0.05	1	0	102	79.4	117	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0508346
Project: RR Rock Lagoon Add. Exc. 8-30-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8646** Batch ID: **8646** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **9/4/2005** Prep Date **8/31/2005**
Client ID: Run ID: **ELMO_050904A** SeqNo: **395726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	1.264	0.2	1.67	0	75.7	24	125	0			
4-Chloro-3-methylphenol	2.484	0.2	3.33	0	74.6	14.6	154	0			
2-Chlorophenol	2.206	0.2	3.33	0	66.2	13.3	149	0			
1,4-Dichlorobenzene	1.053	0.2	1.67	0	63.1	23.6	118	0			
2,4-Dinitrotoluene	1.257	0.2	1.67	0	75.2	28	136	0			
N-Nitrosodi-n-propylamine	1.099	0.2	1.67	0	65.8	28	114	0			
4-Nitrophenol	2.786	0.2	3.33	0	83.7	13.1	150	0			
Pentachlorophenol	2.67	0.5	3.33	0	80.2	20.1	139	0			
Phenol	2.236	0.2	3.33	0	67.2	17.3	141	0			
Pyrene	1.306	0.2	1.67	0	78.2	29	131	0			
1,2,4-Trichlorobenzene	1.096	0.2	1.67	0	65.6	17.9	126	0			

Sample ID **LCSD-8646** Batch ID: **8646** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **9/4/2005** Prep Date **8/31/2005**
Client ID: Run ID: **ELMO_050904A** SeqNo: **395728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	1.397	0.2	1.67	0	83.7	24	125	1.264	10.0	25	
4-Chloro-3-methylphenol	2.881	0.2	3.33	0	86.5	14.6	154	2.484	14.8	25	
2-Chlorophenol	2.495	0.2	3.33	0	74.9	13.3	149	2.206	12.3	25	
1,4-Dichlorobenzene	1.155	0.2	1.67	0	69.2	23.6	118	1.053	9.21	25	
2,4-Dinitrotoluene	1.389	0.2	1.67	0	83.2	28	136	1.257	10.0	25	
N-Nitrosodi-n-propylamine	1.241	0.2	1.67	0	74.3	28	114	1.099	12.2	25	
4-Nitrophenol	3.195	0.2	3.33	0	96.0	13.1	150	2.786	13.7	25	
Pentachlorophenol	2.888	0.5	3.33	0	86.7	20.1	139	2.67	7.85	25	
Phenol	2.534	0.2	3.33	0	76.1	17.3	141	2.236	12.5	25	
Pyrene	1.411	0.2	1.67	0	84.5	29	131	1.306	7.73	25	
1,2,4-Trichlorobenzene	1.22	0.2	1.67	0	73.1	17.9	126	1.096	10.7	25	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

[redacted] Name GIANTREFIN — Date and Time Received: 8/31/2005

Work Order Number 0508346 — Received by AT

Checklist completed by _____ 8/31/05
Signature — Date

Matrix — Carrier name Client drop-off

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 ☐			
[redacted] - 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: _____

[redacted]rective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: RR Rock Lagoon Additional Excavation 8-30-05
Project #:
Project Manager: Steve Mora
Sampler: Steve Mora
Sample Temperature: 5°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
8/30/05	0715		RR-1-83005	2-4oz			0508346-1
"	0730		RR-2-83005	"			-2
"	0740		RR-3-83005	"			-3
"	0750		RR-4-83005	"			-4
"	0800		RR-5-83005	"			-5
"	0810		RR-6-83005	"			-6
"	0829		RR-7-83005	"			-7
"	0830		RR-8-83005	"			-8
"	0840		RR-9-83005	"			-9
"	0900		RR-10-83005	"			-10

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
8/31/05	0855	Steve Mora	8/31/05 0855
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH

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)	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 ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)		8021-BTEX			Air Bubbles or Headspace (Y or N)
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			
		X									X		X			

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	North Wall
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:00:00 AM
Lab ID:	0508234-01A	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	120	100		mg/Kg	20	8/23/2005 11:21:34 PM
Surr: BFB	106	83.1-124		%REC	20	8/23/2005 11:21:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	2.0		mg/Kg	20	8/23/2005 11:21:34 PM
Benzene	0.70	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Toluene	ND	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Ethylbenzene	3.4	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Xylenes, Total	6.5	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Surr: 4-Bromofluorobenzene	109	87.5-115		%REC	20	8/23/2005 11:21:34 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	North Wall
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:00:00 AM
Lab ID:	0508234-01B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	1500	1000		mg/Kg	100	8/21/2005 6:45:24 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 6:45:24 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 6:45:24 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	0.65	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	North Wall
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:00:00 AM
Lab ID:	0508234-01B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	1.5	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	9.8	2.0		mg/Kg	10	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	0.27	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	3.1	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	2.9	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	ND	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	110	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	107	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	62.9	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	80.8	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	73.9	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	72.8	37.6-118		%REC	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S : Spike Recovery outside accepted recovery limits

R RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	South Wall
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:30:00 AM
Lab ID:	0508234-02A	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/23/2005 11:52:19 PM
Surr: BFB	98.4	83.1-124		%REC	50	8/23/2005 11:52:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/23/2005 11:52:19 PM
Benzene	ND	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Toluene	ND	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Ethylbenzene	4.5	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Xylenes, Total	15	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Surr: 4-Bromofluorobenzene	105	87.5-115		%REC	50	8/23/2005 11:52:19 PM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	South Wall
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:30:00 AM
Lab ID:	0508234-02B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	3800	1000		mg/Kg	100	8/21/2005 7:16:33 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 7:16:33 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 7:16:33 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	2.4	2.0		mg/Kg	10	8/23/2005
Acenaphthylene	ND	2.0		mg/Kg	10	8/23/2005
Aniline	ND	2.0		mg/Kg	10	8/23/2005
Anthracene	ND	2.0		mg/Kg	10	8/23/2005
Azobenzene	ND	2.0		mg/Kg	10	8/23/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Benzidine	ND	2.0		mg/Kg	10	8/23/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	8/23/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	8/23/2005
Benzoic acid	ND	5.0		mg/Kg	10	8/23/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	8/23/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	8/23/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	8/23/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Carbazole	ND	2.0		mg/Kg	10	8/23/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	8/23/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	8/23/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	8/23/2005
Chrysene	ND	2.0		mg/Kg	10	8/23/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	8/23/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	8/23/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Dibenzofuran	ND	5.0		mg/Kg	10	8/23/2005
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	8/23/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limit

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* - Value exceeds Maximum Contaminant Level

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R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	South Wall
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:30:00 AM
Lab ID:	0508234-02B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	8/23/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
Fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Fluorene	5.1	2.0		mg/Kg	10	8/23/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	8/23/2005
Hexachloroethane	ND	5.0		mg/Kg	10	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Isophorone	ND	2.0		mg/Kg	10	8/23/2005
2-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
N-Nitrosodi-n-propylamine	2.2	2.0		mg/Kg	10	8/23/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	8/23/2005
Naphthalene	11	2.0		mg/Kg	10	8/23/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	8/23/2005
Nitrobenzene	ND	2.0		mg/Kg	10	8/23/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	8/23/2005
Phenanthrene	9.8	2.0		mg/Kg	10	8/23/2005
Phenol	ND	2.0		mg/Kg	10	8/23/2005
Pyrene	ND	2.0		mg/Kg	10	8/23/2005
Pyridine	ND	5.0		mg/Kg	10	8/23/2005
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
Surr: 2,4,6-Tribromophenol	109	35.5-141		%REC	10	8/23/2005
Surr: 2-Fluorobiphenyl	73.7	30.4-128		%REC	10	8/23/2005
Surr: 2-Fluorophenol	63.2	28.1-129		%REC	10	8/23/2005
Surr: 4-Terphenyl-d14	56.9	34.6-151		%REC	10	8/23/2005
Surr: Nitrobenzene-d5	111	26.5-122		%REC	10	8/23/2005
Surr: Phenol-d6	53.4	37.6-118		%REC	10	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S : Spike Recovery outside accepted recovery limits

R : RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	North BTM.
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:15:00 AM
Lab ID:	0508234-03A	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/24/2005 12:23:04 AM
Surr: BFB	101	83.1-124		%REC	50	8/24/2005 12:23:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/24/2005 12:23:04 AM
Benzene	ND	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Toluene	ND	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Ethylbenzene	ND	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Xylenes, Total	11	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Surr: 4-Bromofluorobenzene	105	87.5-115		%REC	50	8/24/2005 12:23:04 AM

Qualifiers:

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J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	North BTM.
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:15:00 AM
Lab ID:	0508234-03B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	7000	200		mg/Kg	20	8/21/2005 9:52:45 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	8/21/2005 9:52:45 AM
Surr: DNOP	0	60-124	S	%REC	20	8/21/2005 9:52:45 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: BL
Acenaphthene	2.1	2.0		mg/Kg	10	8/23/2005
Acenaphthylene	ND	2.0		mg/Kg	10	8/23/2005
Aniline	ND	2.0		mg/Kg	10	8/23/2005
Anthracene	ND	2.0		mg/Kg	10	8/23/2005
Azobenzene	ND	2.0		mg/Kg	10	8/23/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Benzidine	ND	2.0		mg/Kg	10	8/23/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	8/23/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	8/23/2005
Benzoic acid	ND	5.0		mg/Kg	10	8/23/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	8/23/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	8/23/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	8/23/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Carbazole	ND	2.0		mg/Kg	10	8/23/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	8/23/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	8/23/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	8/23/2005
Chrysene	ND	2.0		mg/Kg	10	8/23/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	8/23/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	8/23/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Dibenzofuran	ND	5.0		mg/Kg	10	8/23/2005
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	8/23/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	North BTM.
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:15:00 AM
Lab ID:	0508234-03B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	8/23/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
Fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Fluorene	4.3	2.0		mg/Kg	10	8/23/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	8/23/2005
Hexachloroethane	ND	5.0		mg/Kg	10	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Isophorone	ND	2.0		mg/Kg	10	8/23/2005
2-Methylnaphthalene	34	2.0		mg/Kg	10	8/23/2005
2-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	10	8/23/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	8/23/2005
Naphthalene	8.2	2.0		mg/Kg	10	8/23/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	8/23/2005
Nitrobenzene	ND	2.0		mg/Kg	10	8/23/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	8/23/2005
Phenanthrene	8.1	2.0		mg/Kg	10	8/23/2005
Phenol	ND	2.0		mg/Kg	10	8/23/2005
Pyrene	ND	2.0		mg/Kg	10	8/23/2005
Pyridine	ND	5.0		mg/Kg	10	8/23/2005
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
Surr: 2,4,6-Tribromophenol	110	35.5-141		%REC	10	8/23/2005
Surr: 2-Fluorobiphenyl	69.1	30.4-128		%REC	10	8/23/2005
Surr: 2-Fluorophenol	57.2	28.1-129		%REC	10	8/23/2005
Surr: 4-Terphenyl-d14	54.7	34.6-151		%REC	10	8/23/2005
Surr: Nitrobenzene-d5	80.2	26.5-122		%REC	10	8/23/2005
Surr: Phenol-d6	51.7	37.6-118		%REC	10	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S : Spike Recovery outside accepted recovery limits

R RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	South BTM.
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:45:00 AM
Lab ID:	0508234-04A	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/24/2005 12:53:57 AM
Surr: BFB	98.0	83.1-124		%REC	1	8/24/2005 12:53:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	8/24/2005 12:53:57 AM
Benzene	ND	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Toluene	ND	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Ethylbenzene	ND	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Xylenes, Total	0.036	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Surr: 4-Bromofluorobenzene	104	87.5-115		%REC	1	8/24/2005 12:53:57 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	South BTM.
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:45:00 AM
Lab ID:	0508234-04B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	15	10		mg/Kg	1	8/21/2005 10:25:32 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/21/2005 10:25:32 AM
Surr: DNOP	117	60-124		%REC	1	8/21/2005 10:25:32 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S : Spike Recovery outside accepted recovery limits

R RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	South BTM.
Lab Order:	0508234	**Tag Number:**	
Project:	R.R. Rack Lagoon Additional SE Wall Excavati	**Collection Date:**	8/19/2005 10:45:00 AM
Lab ID:	0508234-04B	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	ND	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	93.6	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	63.9	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	62.7	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	82.0	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	66.7	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	67.9	37.6-118		%REC	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

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* - Value exceeds Maximum Contaminant Level

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HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

June 13, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Railroad Rack Lagoon SWMU

Order No.: 0506046

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 6/3/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *13-Jun-05*

CLIENT: Giant Refining Co
Client Sample ID: RRR Btm Center
Lab Order: 0506046
Collection Date: 6/3/2005 10:30:00 AM
Project: Railroad Rack Lagoon SWMU
Lab ID: 0506046-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	ND	0.033		mg/Kg	1	6/7/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Antimony	ND	0.50		mg/Kg	1	6/9/2005 12:11:33 PM
Arsenic	ND	2.5		mg/Kg	1	6/9/2005 12:11:33 PM
Beryllium	0.96	0.15		mg/Kg	1	6/9/2005 12:11:33 PM
Cadmium	ND	0.10		mg/Kg	1	6/9/2005 12:11:33 PM
Chromium	7.0	0.30		mg/Kg	1	6/9/2005 12:11:33 PM
Copper	3.6	0.30		mg/Kg	1	6/9/2005 12:11:33 PM
Lead	8.3	0.25		mg/Kg	1	6/9/2005 12:11:33 PM
Nickel	7.5	0.50		mg/Kg	1	6/9/2005 12:11:33 PM
Selenium	ND	2.5		mg/Kg	1	6/9/2005 12:11:33 PM
Silver	ND	0.25		mg/Kg	1	6/9/2005 12:11:33 PM
Thallium	ND	0.50		mg/Kg	1	6/9/2005 12:11:33 PM
Zinc	12	2.5		mg/Kg	1	6/9/2005 12:11:33 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *13-Jun-05*

CLIENT: Giant Refining Co
Work Order: 0506046
Project: Railroad Rack Lagoon SWMU

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8101**	Batch ID: **8101**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **6/7/2005**	Prep Date **6/7/2005**
Client ID:		Run ID: **MI-LA254_050607A**		SeqNo: **369149**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID **MB-8096**	Batch ID: **8096**	Test Code: **SW6010A**	Units: **mg/Kg**	Analysis Date **6/9/2005 9:02:47 AM**	Prep Date **6/6/2005**
Client ID:		Run ID: **ICP_050609B**		SeqNo: **369876**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.3867	0.5									J
Arsenic	ND	2.5									
Beryllium	ND	0.15									
Cadmium	ND	0.1									
Chromium	ND	0.3									
Copper	ND	0.3									
Nickel	0.1112	0.5									J
Selenium	ND	2.5									
Silver	ND	0.25									
Thallium	ND	0.5									
Zinc	1.036	2.5									J

Sample ID **MB-8096**	Batch ID: **8096**	Test Code: **SW6010A**	Units: **mg/Kg**	Analysis Date **6/9/2005 9:02:47 AM**	Prep Date **6/6/2005**
Client ID:		Run ID: **ICP_050609C**		SeqNo: **370202**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

CLIENT: Giant Refining Co
Work Order: 0506046
Project: Railroad Rack Lagoon SWMU

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID **LCSD-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:08:49 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609B** SeqNo: **369878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	25.75	0.5	25	0.3867	101	80	120	25.59	0.615	20	
Arsenic	26.87	2.5	25	0	107	80	120	27.74	3.16	20	
Beryllium	27.8	0.15	25	0	111	80	120	27.7	0.330	20	
Cadmium	26.21	0.1	25	0	105	80	120	26.31	0.371	20	
Chromium	26.17	0.3	25	0	105	80	120	26.31	0.545	20	
Copper	28.07	0.3	25	0	112	80	120	28.12	0.171	20	
Nickel	25.71	0.5	25	0.1112	102	80	120	25.55	0.599	20	
Selenium	25.81	2.5	25	0	103	80	120	25.58	0.892	20	
Silver	26.61	0.25	25	0	106	80	120	26.53	0.319	20	
Thallium	26.55	0.5	25	0	106	80	120	26.46	0.331	20	
Zinc	26.94	2.5	25	1.036	104	80	120	26.91	0.138	20	

Sample ID **LCS-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:05:50 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609C** SeqNo: **370203**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.82	0.25	25	0	103	80	120	0			

Sample ID **LCSD-8096** Batch ID: **8096** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **6/9/2005 9:08:49 AM** Prep Date **6/6/2005**
Client ID: Run ID: **ICP_050609C** SeqNo: **370204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.83	0.25	25	0	103	80	120	25.82	0.0100	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

[redacted]t Name GIANTREFIN | Date and Time Received: 6/3/2005

Work Order Number 0506046 | Received by AMG

Checklist completed by [signature] Signature 06/03/05 Date

Matrix | Carrier name Client drop-off

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 ☐		
[redacted]l samples received within holding time?	Yes ☑	No ☐		
[redacted]er - 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: _____

_____

_____

_____

_____

[redacted]Corrective Action _____

_____

_____

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☐ Level 4 ☐

Other:

Client: Giant Refining Company - Ciniza

Address: Route 3 Box 7 Gallup, NM 87301

Phone #: 505 722 3833

Fax #:

Project Name: Railroad Rack Lagoon SWMU

Project #:

Project Manager: Steve Morris

Sampler: Steve Morris

Sample Temperature: 3.0

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No. 0506046	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	PPL - Metals				Air Bubbles or Headspace (Y or N)
6/3/05	1030	Soil	RRR Btm Center	1-4oz				-1													X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
6/3/05	1500	[signature]	[signature] 6/3/05 1500
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: Sampled between B-1 and B-2

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 26, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: RR Rock Lagoon Add. Exc. 9/15/05 Order No.: 0509181

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 7 samples on 9/19/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	RR-1A-91505
Lab Order:	0509181	**Collection Date:**	9/15/2005 2:30:00 PM
Project:	RR Rock Lagoon Add. Exc. 9/15/05		
Lab ID:	0509181-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	210	10		mg/Kg	1	9/22/2005 11:24:47 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/22/2005 11:24:47 AM
Surr: DNOP	106	60-124		%REC	1	9/22/2005 11:24:47 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BDH
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	9/24/2005
Benzene	ND	0.050		mg/Kg	1	9/24/2005
Toluene	ND	0.050		mg/Kg	1	9/24/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/24/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/24/2005
Surr: 4-Bromofluorobenzene	109	72.9-143		%REC	1	9/24/2005

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	RR-2A-91505
Lab Order:	0509181	**Collection Date:**	9/15/2005 2:35:00 PM
Project:	RR Rock Lagoon Add. Exc. 9/15/05		
Lab ID:	0509181-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	130	10		mg/Kg	1	9/22/2005 11:57:56 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/22/2005 11:57:56 AM
Surr: DNOP	107	60-124		%REC	1	9/22/2005 11:57:56 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	9/24/2005
Benzene	ND	0.050		mg/Kg	1	9/24/2005
Toluene	ND	0.050		mg/Kg	1	9/24/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/24/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/24/2005
Surr: 4-Bromofluorobenzene	97.4	86.2-120		%REC	1	9/24/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	RR-3A-91505
Lab Order:	0509181	**Collection Date:**	9/15/2005 2:40:00 PM
Project:	RR Rock Lagoon Add. Exc. 9/15/05		
Lab ID:	0509181-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/22/2005 12:31:01 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/22/2005 12:31:01 PM
Surr: DNOP	109	60-124		%REC	1	9/22/2005 12:31:01 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	9/24/2005
Benzene	ND	0.050		mg/Kg	1	9/24/2005
Toluene	ND	0.050		mg/Kg	1	9/24/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/24/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/24/2005
Surr: 4-Bromofluorobenzene	113	86.2-120		%REC	1	9/24/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	RR-4A-91505
Lab Order:	0509181	**Collection Date:**	9/15/2005 2:45:00 PM
Project:	RR Rock Lagoon Add. Exc. 9/15/05		
Lab ID:	0509181-04	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/22/2005 1:04:05 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/22/2005 1:04:05 PM
Surr: DNOP	101	60-124		%REC	1	9/22/2005 1:04:05 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	9/24/2005
Benzene	ND	0.050		mg/Kg	1	9/24/2005
Toluene	ND	0.050		mg/Kg	1	9/24/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/24/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/24/2005
Surr: 4-Bromofluorobenzene	119	86.2-120		%REC	1	9/24/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	RR-5A-91505
Lab Order:	0509181	**Collection Date:**	9/15/2005 2:50:00 PM
Project:	RR Rock Lagoon Add. Exc. 9/15/05		
Lab ID:	0509181-05	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/22/2005 1:37:09 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/22/2005 1:37:09 PM
Surr: DNOP	102	60-124		%REC	1	9/22/2005 1:37:09 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **BDH**
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	9/24/2005
Benzene	ND	0.050		mg/Kg	1	9/24/2005
Toluene	ND	0.050		mg/Kg	1	9/24/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/24/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/24/2005
Surr: 4-Bromofluorobenzene	110	86.2-120		%REC	1	9/24/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	RR-6A-91505
Lab Order:	0509181	**Collection Date:**	9/15/2005 2:55:00 PM
Project:	RR Rock Lagoon Add. Exc. 9/15/05		
Lab ID:	0509181-06	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/22/2005 2:10:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/22/2005 2:10:14 PM
Surr: DNOP	101	60-124		%REC	1	9/22/2005 2:10:14 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BDH
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	9/24/2005
Benzene	ND	0.050		mg/Kg	1	9/24/2005
Toluene	ND	0.050		mg/Kg	1	9/24/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/24/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/24/2005
Surr: 4-Bromofluorobenzene	90.5	86.2-120		%REC	1	9/24/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	RR-7A-91505
Lab Order:	0509181	**Collection Date:**	9/15/2005 3:00:00 PM
Project:	RR Rock Lagoon Add. Exc. 9/15/05		
Lab ID:	0509181-07	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/22/2005 3:16:27 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/22/2005 3:16:27 PM
Surr: DNOP	104	60-124		%REC	1	9/22/2005 3:16:27 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BDH
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	9/24/2005
Benzene	ND	0.050		mg/Kg	1	9/24/2005
Toluene	ND	0.050		mg/Kg	1	9/24/2005
Ethylbenzene	ND	0.050		mg/Kg	1	9/24/2005
Xylenes, Total	ND	0.050		mg/Kg	1	9/24/2005
Surr: 4-Bromofluorobenzene	104	86.2-120		%REC	1	9/24/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

ENERGY LABORATORIES, INC. * 1120 S 27th St * PO Box 30916 * Billings, MT 59107-0916
Toll Free 800.735.4489 * 406.252.6325 * FAX 406.252.6069 * eli@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-001
Client Sample ID: RR-1A-91505, 0509181-01B

Report Date: 09/23/05
Collection Date: 09/20/05 14:30
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/ RL QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS						
Moisture	7.6	wt%		0.01	SW3550A	09/22/05 13:31 / mwc
SEMI-VOLATILE ORGANIC COMPOUNDS						
1,2,4-Trichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
1,2-Dichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
1,3-Dichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
1,4-Dichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
1-Methylnaphthalene	0.29	mg/kg	J	0.33	SW8270C	09/22/05 15:01 / dsm
2,4,5-Trichlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2,4,6-Trichlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2,4-Dichlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2,4-Dimethylphenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2,4-Dinitrophenol	ND	mg/kg		1.7	SW8270C	09/22/05 15:01 / dsm
2,4-Dinitrotoluene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2,6-Dinitrotoluene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2-Chloronaphthalene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2-Chlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
2-Methylnaphthalene	0.069	mg/kg	J	0.33	SW8270C	09/22/05 15:01 / dsm
2-Nitrophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
3,3'-Dichlorobenzidine	ND	mg/kg		0.67	SW8270C	09/22/05 15:01 / dsm
4,6-Dinitro-2-methylphenol	ND	mg/kg		1.7	SW8270C	09/22/05 15:01 / dsm
4-Bromophenyl phenyl ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
4-Chloro-3-methylphenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
4-Chlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
4-Chlorophenyl phenyl ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
4-Nitrophenol	ND	mg/kg		1.7	SW8270C	09/22/05 15:01 / dsm
Acenaphthene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Acenaphthylene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Anthracene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Azobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Benzidine	ND	mg/kg		0.67	SW8270C	09/22/05 15:01 / dsm
Benzo(a)anthracene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Benzo(a)pyrene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Benzo(b)fluoranthene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Benzo(g,h,i)perylene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Benzo(k)fluoranthene	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
bis(-2-chloroethoxy)Methane	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
bis(-2-chloroethyl)Ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
bis(2-chloroisopropyl)Ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
bis(2-ethylhexyl)Phthalate	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Butylbenzylphthalate	ND	mg/kg		0.33	SW8270C	09/22/05 15:01 / dsm
Chrysene	0.058	mg/kg	J	0.33	SW8270C	09/22/05 15:01 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. * 1120 S 27th St * PO Box 30916 * Billings, MT 59107-0916
Toll Free 800.735.4489 * 406.252.6325 * FAX 406.252.6069 * eli@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-001
Client Sample ID: RR-1A-91505, 0509181-01B

Report Date: 09/23/05
Collection Date: 09/20/05 14:30
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Diethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Dimethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Di-n-butyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Di-n-octyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Fluorene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Hexachlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Hexachlorobutadiene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Hexachlorocyclopentadiene	ND	mg/kg		0.67		SW8270C	09/22/05 15:01 / dsm
Hexachloroethane	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Isophorone	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
m+p-Cresols	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Naphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Nitrobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
n-Nitrosodimethylamine	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
n-Nitroso-di-n-propylamine	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
n-Nitrosodiphenylamine	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
o-Cresol	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Pentachlorophenol	ND	mg/kg		1.7		SW8270C	09/22/05 15:01 / dsm
Phenanthrene	1.6	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Phenol	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 15:01 / dsm
Pyridine	ND	mg/kg		0.67		SW8270C	09/22/05 15:01 / dsm
Surr: 2,4,6-Tribromophenol	114	%REC			19-122	SW8270C	09/22/05 15:01 / dsm
Surr: 2-Fluorobiphenyl	82.4	%REC			30-115	SW8270C	09/22/05 15:01 / dsm
Surr: 2-Fluorophenol	81.5	%REC			25-121	SW8270C	09/22/05 15:01 / dsm
Surr: Nitrobenzene-d5	75.1	%REC			23-120	SW8270C	09/22/05 15:01 / dsm
Surr: Phenol-d5	83.0	%REC			24-113	SW8270C	09/22/05 15:01 / dsm
Surr: Terphenyl-d14	102	%REC			18-137	SW8270C	09/22/05 15:01 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-002
Client Sample ID: RR-2A-91505, 050981-2B

Report Date: 09/23/05
Collection Date: 09/15/05 14:35
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	MCL/ RL QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS						
Moisture	7.9	wt%		0.01	SW3550A	09/22/05 13:31 / mwc
SEMI-VOLATILE ORGANIC COMPOUNDS						
1,2,4-Trichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
1,2-Dichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
1,3-Dichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
1,4-Dichlorobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
1-Methylnaphthalene	0.13	mg/kg	J	0.33	SW8270C	09/22/05 15:44 / dsm
2,4,5-Trichlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2,4,6-Trichlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2,4-Dichlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2,4-Dimethylphenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2,4-Dinitrophenol	ND	mg/kg		1.7	SW8270C	09/22/05 15:44 / dsm
2,4-Dinitrotoluene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2,6-Dinitrotoluene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2-Chloronaphthalene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2-Chlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
2-Methylnaphthalene	0.11	mg/kg	J	0.33	SW8270C	09/22/05 15:44 / dsm
2-Nitrophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
3,3'-Dichlorobenzidine	ND	mg/kg		0.67	SW8270C	09/22/05 15:44 / dsm
4,6-Dinitro-2-methylphenol	ND	mg/kg		1.7	SW8270C	09/22/05 15:44 / dsm
4-Bromophenyl phenyl ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
4-Chloro-3-methylphenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
4-Chlorophenol	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
4-Chlorophenyl phenyl ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
4-Nitrophenol	ND	mg/kg		1.7	SW8270C	09/22/05 15:44 / dsm
Acenaphthene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Acenaphthylene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Anthracene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Azobenzene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Benzidine	ND	mg/kg		0.67	SW8270C	09/22/05 15:44 / dsm
Benzo(a)anthracene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Benzo(a)pyrene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Benzo(b)fluoranthene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Benzo(g,h,i)perylene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Benzo(k)fluoranthene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
bis(-2-chloroethoxy)Methane	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
bis(-2-chloroethyl)Ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
bis(2-chloroisopropyl)Ether	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
bis(2-ethylhexyl)Phthalate	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Butylbenzylphthalate	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm
Chrysene	ND	mg/kg		0.33	SW8270C	09/22/05 15:44 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-002
Client Sample ID: RR-2A-91505, 050981-2B

Report Date: 09/23/05
Collection Date: 09/15/05 14:35
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Diethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Dimethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Di-n-butyl phthalate	0.13	mg/kg	J	0.33		SW8270C	09/22/05 15:44 / dsm
Di-n-octyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Fluorene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Hexachlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Hexachlorobutadiene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Hexachlorocyclopentadiene	ND	mg/kg		0.67		SW8270C	09/22/05 15:44 / dsm
Hexachloroethane	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Isophorone	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
m+p-Cresols	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Naphthalene	0.043	mg/kg	J	0.33		SW8270C	09/22/05 15:44 / dsm
Nitrobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
n-Nitrosodimethylamine	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
n-Nitroso-di-n-propylamine	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
n-Nitrosodiphenylamine	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
o-Cresol	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Pentachlorophenol	ND	mg/kg		1.7		SW8270C	09/22/05 15:44 / dsm
Phenanthrene	0.16	mg/kg	J	0.33		SW8270C	09/22/05 15:44 / dsm
Phenol	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 15:44 / dsm
Pyridine	ND	mg/kg		0.67		SW8270C	09/22/05 15:44 / dsm
Surr: 2,4,6-Tribromophenol	95.0	%REC			19-122	SW8270C	09/22/05 15:44 / dsm
Surr: 2-Fluorobiphenyl	77.5	%REC			30-115	SW8270C	09/22/05 15:44 / dsm
Surr: 2-Fluorophenol	84.0	%REC			25-121	SW8270C	09/22/05 15:44 / dsm
Surr: Nitrobenzene-d5	74.9	%REC			23-120	SW8270C	09/22/05 15:44 / dsm
Surr: Phenol-d5	84.0	%REC			24-113	SW8270C	09/22/05 15:44 / dsm
Surr: Terphenyl-d14	91.9	%REC			18-137	SW8270C	09/22/05 15:44 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-003
Client Sample ID: RR-3A-91505, 0509181-3B

Report Date: 09/23/05
Collection Date: 09/15/05 14:40
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	11	wt%		0.01		SW3550A	09/22/05 13:32 / mwc
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
1,2-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
1,3-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
1,4-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
1-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2,4,5-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2,4,6-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2,4-Dichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2,4-Dimethylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2,4-Dinitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 16:27 / dsm
2,4-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2,6-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2-Chloronaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
2-Nitrophenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
3,3'-Dichlorobenzidine	ND	mg/kg		0.67		SW8270C	09/22/05 16:27 / dsm
4,6-Dinitro-2-methylphenol	ND	mg/kg		1.7		SW8270C	09/22/05 16:27 / dsm
4-Bromophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
4-Chloro-3-methylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
4-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
4-Chlorophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
4-Nitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 16:27 / dsm
Acenaphthene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Acenaphthylene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Azobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Benzidine	ND	mg/kg		0.67		SW8270C	09/22/05 16:27 / dsm
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Benzo(g,h,i)perylene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
bis(-2-chloroethoxy)Methane	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
bis(-2-chloroethyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
bis(2-chloroisopropyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
bis(2-ethylhexyl)Phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Butylbenzylphthalate	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Chrysene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-003
Client Sample ID: RR-3A-91505, 0509181-3B

Report Date: 09/23/05
Collection Date: 09/15/05 14:40
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Diethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Dimethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Di-n-butyl phthalate	0.091	mg/kg	J	0.33		SW8270C	09/22/05 16:27 / dsm
Di-n-octyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Fluorene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Hexachlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Hexachlorobutadiene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Hexachlorocyclopentadiene	ND	mg/kg		0.67		SW8270C	09/22/05 16:27 / dsm
Hexachloroethane	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Isophorone	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
m+p-Cresols	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Naphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Nitrobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
n-Nitrosodimethylamine	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
n-Nitroso-di-n-propylamine	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
n-Nitrosodiphenylamine	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
o-Cresol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Pentachlorophenol	ND	mg/kg		1.7		SW8270C	09/22/05 16:27 / dsm
Phenanthrene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Phenol	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 16:27 / dsm
Pyridine	ND	mg/kg		0.67		SW8270C	09/22/05 16:27 / dsm
Surr: 2,4,6-Tribromophenol	99.5	%REC			19-122	SW8270C	09/22/05 16:27 / dsm
Surr: 2-Fluorobiphenyl	81.5	%REC			30-115	SW8270C	09/22/05 16:27 / dsm
Surr: 2-Fluorophenol	84.5	%REC			25-121	SW8270C	09/22/05 16:27 / dsm
Surr: Nitrobenzene-d5	79.7	%REC			23-120	SW8270C	09/22/05 16:27 / dsm
Surr: Phenol-d5	85.5	%REC			24-113	SW8270C	09/22/05 16:27 / dsm
Surr: Terphenyl-d14	95.1	%REC			18-137	SW8270C	09/22/05 16:27 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-004
Client Sample ID: RR-4A-91505, 0509181-4B

Report Date: 09/23/05
Collection Date: 09/15/05 14:45
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	9.2	wt%		0.01		SW3550A	09/22/05 13:32 / mwc
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
1,2-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
1,3-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
1,4-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
1-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2,4,5-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2,4,6-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2,4-Dichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2,4-Dimethylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2,4-Dinitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:10 / dsm
2,4-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2,6-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2-Chloronaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
2-Nitrophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
3,3'-Dichlorobenzidine	ND	mg/kg		0.67		SW8270C	09/22/05 17:10 / dsm
4,6-Dinitro-2-methylphenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:10 / dsm
4-Bromophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
4-Chloro-3-methylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
4-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
4-Chlorophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
4-Nitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:10 / dsm
Acenaphthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Acenaphthylene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Azobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Benzidine	ND	mg/kg		0.67		SW8270C	09/22/05 17:10 / dsm
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Benzo(g,h,i)perylene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
bis(-2-chloroethoxy)Methane	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
bis(-2-chloroethyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
bis(2-chloroisopropyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
bis(2-ethylhexyl)Phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Butylbenzylphthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Chrysene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-004
Client Sample ID: RR-4A-91505, 0509181-4B

Report Date: 09/23/05
Collection Date: 09/15/05 14:45
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Diethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Dimethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Di-n-butyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Di-n-octyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Fluorene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Hexachlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Hexachlorobutadiene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Hexachlorocyclopentadiene	ND	mg/kg		0.67		SW8270C	09/22/05 17:10 / dsm
Hexachloroethane	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Isophorone	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
m+p-Cresols	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Naphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Nitrobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
n-Nitrosodimethylamine	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
n-Nitroso-di-n-propylamine	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
n-Nitrosodiphenylamine	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
o-Cresol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Pentachlorophenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:10 / dsm
Phenanthrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Phenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:10 / dsm
Pyridine	ND	mg/kg		0.67		SW8270C	09/22/05 17:10 / dsm
Surr: 2,4,6-Tribromophenol	95.0	%REC			19-122	SW8270C	09/22/05 17:10 / dsm
Surr: 2-Fluorobiphenyl	77.8	%REC			30-115	SW8270C	09/22/05 17:10 / dsm
Surr: 2-Fluorophenol	78.0	%REC			25-121	SW8270C	09/22/05 17:10 / dsm
Surr: Nitrobenzene-d5	70.9	%REC			23-120	SW8270C	09/22/05 17:10 / dsm
Surr: Phenol-d5	77.5	%REC			24-113	SW8270C	09/22/05 17:10 / dsm
Surr: Terphenyl-d14	89.3	%REC			18-137	SW8270C	09/22/05 17:10 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-005
Client Sample ID: RR-5A-91505, 0509181-5B

Report Date: 09/23/05
Collection Date: 09/15/05 14:50
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	6.2	wt%		0.01		SW3550A	09/22/05 13:32 / mwc
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
1,2-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
1,3-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
1,4-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
1-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2,4,5-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2,4,6-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2,4-Dichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2,4-Dimethylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2,4-Dinitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:53 / dsm
2,4-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2,6-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2-Chloronaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
2-Nitrophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
3,3'-Dichlorobenzidine	ND	mg/kg		0.67		SW8270C	09/22/05 17:53 / dsm
4,6-Dinitro-2-methylphenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:53 / dsm
4-Bromophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
4-Chloro-3-methylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
4-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
4-Chlorophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
4-Nitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:53 / dsm
Acenaphthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Acenaphthylene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Azobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Benzidine	ND	mg/kg		0.67		SW8270C	09/22/05 17:53 / dsm
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Benzo(g,h,i)perylene	0.044	mg/kg	J	0.33		SW8270C	09/22/05 17:53 / dsm
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
bis(-2-chloroethoxy)Methane	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
bis(-2-chloroethyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
bis(2-chloroisopropyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
bis(2-ethylhexyl)Phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Butylbenzylphthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Chrysene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-005
Client Sample ID: RR-5A-91505, 0509181-5B

Report Date: 09/23/05
Collection Date: 09/15/05 14:50
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Dibenzo(a,h)anthracene	0.040	mg/kg	J	0.33		SW8270C	09/22/05 17:53 / dsm
Diethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Dimethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Di-n-butyl phthalate	0.069	mg/kg	J	0.33		SW8270C	09/22/05 17:53 / dsm
Di-n-octyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Fluorene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Hexachlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Hexachlorobutadiene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Hexachlorocyclopentadiene	ND	mg/kg		0.67		SW8270C	09/22/05 17:53 / dsm
Hexachloroethane	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Isophorone	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
m+p-Cresols	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Naphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Nitrobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
n-Nitrosodimethylamine	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
n-Nitroso-di-n-propylamine	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
n-Nitrosodiphenylamine	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
o-Cresol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Pentachlorophenol	ND	mg/kg		1.7		SW8270C	09/22/05 17:53 / dsm
Phenanthrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Phenol	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 17:53 / dsm
Pyridine	ND	mg/kg		0.67		SW8270C	09/22/05 17:53 / dsm
Surr: 2,4,6-Tribromophenol	93.0	%REC			19-122	SW8270C	09/22/05 17:53 / dsm
Surr: 2-Fluorobiphenyl	80.7	%REC			30-115	SW8270C	09/22/05 17:53 / dsm
Surr: 2-Fluorophenol	85.0	%REC			25-121	SW8270C	09/22/05 17:53 / dsm
Surr: Nitrobenzene-d5	76.3	%REC			23-120	SW8270C	09/22/05 17:53 / dsm
Surr: Phenol-d5	81.0	%REC			24-113	SW8270C	09/22/05 17:53 / dsm
Surr: Terphenyl-d14	95.5	%REC			18-137	SW8270C	09/22/05 17:53 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-006
Client Sample ID: RR-6A-91505, 0509181-6B

Report Date: 09/23/05
Collection Date: 09/15/05 14:55
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	11	wt%		0.01		SW3550A	09/22/05 13:32 / mwc
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
1,2-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
1,3-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
1,4-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
1-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2,4,5-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2,4,6-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2,4-Dichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2,4-Dimethylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2,4-Dinitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 18:36 / dsm
2,4-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2,6-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2-Chloronaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
2-Nitrophenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
3,3'-Dichlorobenzidine	ND	mg/kg		0.67		SW8270C	09/22/05 18:36 / dsm
4,6-Dinitro-2-methylphenol	ND	mg/kg		1.7		SW8270C	09/22/05 18:36 / dsm
4-Bromophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
4-Chloro-3-methylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
4-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
4-Chlorophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
4-Nitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 18:36 / dsm
Acenaphthene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Acenaphthylene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Azobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Benzidine	ND	mg/kg		0.67		SW8270C	09/22/05 18:36 / dsm
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Benzo(g,h,i)perylene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
bis(-2-chloroethoxy)Methane	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
bis(-2-chloroethyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
bis(2-chloroisopropyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
bis(2-ethylhexyl)Phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Butylbenzylphthalate	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Chrysene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-006
Client Sample ID: RR-6A-91505, 0509181-6B

Report Date: 09/23/05
Collection Date: 09/15/05 14:55
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Diethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Dimethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Di-n-butyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Di-n-octyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Fluorene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Hexachlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Hexachlorobutadiene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Hexachlorocyclopentadiene	ND	mg/kg		0.67		SW8270C	09/22/05 18:36 / dsm
Hexachloroethane	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Isophorone	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
m+p-Cresols	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Naphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Nitrobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
n-Nitrosodimethylamine	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
n-Nitroso-di-n-propylamine	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
n-Nitrosodiphenylamine	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
o-Cresol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Pentachlorophenol	ND	mg/kg		1.7		SW8270C	09/22/05 18:36 / dsm
Phenanthrene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Phenol	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 18:36 / dsm
Pyridine	ND	mg/kg		0.67		SW8270C	09/22/05 18:36 / dsm
Surr: 2,4,6-Tribromophenol	93.0	%REC			19-122	SW8270C	09/22/05 18:36 / dsm
Surr: 2-Fluorobiphenyl	84.1	%REC			30-115	SW8270C	09/22/05 18:36 / dsm
Surr: 2-Fluorophenol	88.0	%REC			25-121	SW8270C	09/22/05 18:36 / dsm
Surr: Nitrobenzene-d5	79.5	%REC			23-120	SW8270C	09/22/05 18:36 / dsm
Surr: Phenol-d5	84.0	%REC			24-113	SW8270C	09/22/05 18:36 / dsm
Surr: Terphenyl-d14	95.5	%REC			18-137	SW8270C	09/22/05 18:36 / dsm

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-007
Client Sample ID: RR-7A-91505, 0509181-7B

Report Date: 09/23/05
Collection Date: 09/15/05 15:00
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	10	wt%		0.01		SW3550A	09/22/05 13:32 / mwc
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
1,2-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
1,3-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
1,4-Dichlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
1-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2,4,5-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2,4,6-Trichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2,4-Dichlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2,4-Dimethylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2,4-Dinitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 19:19 / dsm
2,4-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2,6-Dinitrotoluene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2-Chloronaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2-Methylnaphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
2-Nitrophenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
3,3'-Dichlorobenzidine	ND	mg/kg		0.67		SW8270C	09/22/05 19:19 / dsm
4,6-Dinitro-2-methylphenol	ND	mg/kg		1.7		SW8270C	09/22/05 19:19 / dsm
4-Bromophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
4-Chloro-3-methylphenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
4-Chlorophenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
4-Chlorophenyl phenyl ether	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
4-Nitrophenol	ND	mg/kg		1.7		SW8270C	09/22/05 19:19 / dsm
Acenaphthene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Acenaphthylene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Azobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Benzidine	ND	mg/kg		0.67		SW8270C	09/22/05 19:19 / dsm
Benzo(a)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Benzo(a)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Benzo(b)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Benzo(g,h,i)perylene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Benzo(k)fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
bis(-2-chloroethoxy)Methane	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
bis(-2-chloroethyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
bis(2-chloroisopropyl)Ether	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
bis(2-ethylhexyl)Phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Butylbenzylphthalate	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Chrysene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level.
QCL - Quality control limit. ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. * 1120 S 27th St * PO Box 30916 * Billings, MT 59107-0916
Toll Free 800.735.4489 * 406.252.6325 * FAX 406.252.6069 * eli@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental-Albuquerque
Project:
Lab ID: B05091262-007
Client Sample ID: RR-7A-91505, 0509181-7B

Report Date: 09/23/05
Collection Date: 09/15/05 15:00
Date Received: 09/20/05
Matrix: Soil

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Dibenzo(a,h)anthracene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Diethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Dimethyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Di-n-butyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Di-n-octyl phthalate	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Fluoranthene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Fluorene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Hexachlorobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Hexachlorobutadiene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Hexachlorocyclopentadiene	ND	mg/kg		0.67		SW8270C	09/22/05 19:19 / dsm
Hexachloroethane	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Indeno(1,2,3-cd)pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Isophorone	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
m+p-Cresols	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Naphthalene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Nitrobenzene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
n-Nitrosodimethylamine	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
n-Nitroso-di-n-propylamine	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
n-Nitrosodiphenylamine	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
o-Cresol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Pentachlorophenol	ND	mg/kg		1.7		SW8270C	09/22/05 19:19 / dsm
Phenanthrene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Phenol	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Pyrene	ND	mg/kg		0.33		SW8270C	09/22/05 19:19 / dsm
Pyridine	ND	mg/kg		0.67		SW8270C	09/22/05 19:19 / dsm
Surr: 2,4,6-Tribromophenol	76.0	%REC			19-122	SW8270C	09/22/05 19:19 / dsm
Surr: 2-Fluorobiphenyl	73.3	%REC			30-115	SW8270C	09/22/05 19:19 / dsm
Surr: 2-Fluorophenol	74.0	%REC			25-121	SW8270C	09/22/05 19:19 / dsm
Surr: Nitrobenzene-d5	66.2	%REC			23-120	SW8270C	09/22/05 19:19 / dsm
Surr: Phenol-d5	70.0	%REC			24-113	SW8270C	09/22/05 19:19 / dsm
Surr: Terphenyl-d14	83.4	%REC			18-137	SW8270C	09/22/05 19:19 / dsm

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509181
Project: RR Rock Lagoon Add. Exc. 9/15/05

QC SUMMARY REPORT
Method Blank

Sample ID MB-8794	Batch ID: 8794	Test Code: SW8015	Units: mg/Kg	Analysis Date 9/20/2005 8:51:53 PM	Prep Date 9/20/2005
Client ID:		Run ID: FID(17A) 2_050920A		SeqNo: 402214	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.73	0	10	0	107	60	124	0			

Sample ID mb-8782	Batch ID: 8782	Test Code: SW8260B	Units: mg/Kg	Analysis Date 9/24/2005	Prep Date 9/19/2005
Client ID:		Run ID: THOR_050923A		SeqNo: 403371	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.05	0	0	0	0	0	0			
Benzene	ND	0.05	0	0	0	0	0	0			
Toluene	ND	0.05	0	0	0	0	0	0			
Ethylbenzene	ND	0.05	0	0	0	0	0	0			
Xylenes, Total	0.0457	0.05	0	0	0	0	0	0			J
Surr: 4-Bromofluorobenzene	0.6268	0	0.5	0	125	72.9	143	0			

22/26

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509181
Project: RR Rock Lagoon Add. Exc. 9/15/05

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID 0509181-03a ms Batch ID: 8782 Test Code: SW8260B Units: mg/Kg Analysis Date 9/24/2005 Prep Date 9/19/2005
Client ID: RR-3A-91505 Run ID: THOR_050923A SeqNo: 403373

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.7619	0.05	1	0	76.2	78	126	0			S
Toluene	1.144	0.05	1	0	114	79.4	117	0			
Surr: 4-Bromofluorobenzene	0.5177	0	0.5	0	104	72.9	143	0			

Sample ID 0509181-03a msd Batch ID: 8782 Test Code: SW8260B Units: mg/Kg Analysis Date 9/24/2005 Prep Date 9/19/2005
Client ID: RR-3A-91505 Run ID: THOR_050923A SeqNo: 403374

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.8462	0.05	1	0	84.6	78	126	0.7619	10.5	19	
Toluene	0.9524	0.05	1	0	95.2	79.4	117	1.144	18.3	0	
Surr: 4-Bromofluorobenzene	0.5191	0	0.5	0	104	72.9	143	0.5177	0.270	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509181
Project: RR Rock Lagoon Add. Exc. 9/15/05

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID 0509181-03a ms Batch ID: 8782 Test Code: SW8260B Units: mg/Kg Analysis Date 9/24/2005 Prep Date 9/19/2005
Client ID: RR-3A-91505 Run ID: THOR_050923A SeqNo: 403373

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.7619	0.05	1	0	76.2	78	126	0			S
Toluene	1.144	0.05	1	0	114	79.4	117	0			
Surr: 4-Bromofluorobenzene	0.5177	0	0.5	0	104	72.9	143	0			

Sample ID 0509181-03a msd Batch ID: 8782 Test Code: SW8260B Units: mg/Kg Analysis Date 9/24/2005 Prep Date 9/19/2005
Client ID: RR-3A-91505 Run ID: THOR_050923A SeqNo: 403374

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.8462	0.05	1	0	84.6	78	126	0.7619	10.5	19	
Toluene	0.9524	0.05	1	0	95.2	79.4	117	1.144	18.3	0	
Surr: 4-Bromofluorobenzene	0.5191	0	0.5	0	104	72.9	143	0.5177	0.270	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *26-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509181
Project: RR Rock Lagoon Add. Exc. 9/15/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID LCS-8794	Batch ID: 8794	Test Code: SW8015		Units: mg/Kg		Analysis Date 9/20/2005 9:24:58 PM			Prep Date 9/20/2005		
Client ID:		Run ID: FID(17A) 2_050920A				SeqNo: 402215					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44.24	10	50	0	88.5	67.4	117	0			

Sample ID LCSD-8794	Batch ID: 8794	Test Code: SW8015		Units: mg/Kg		Analysis Date 9/20/2005 9:58:02 PM			Prep Date 9/20/2005		
Client ID:		Run ID: FID(17A) 2_050920A				SeqNo: 402216					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41.68	10	50	0	83.4	67.4	117	44.24	5.96	17.4	

Sample ID lcs-8782	Batch ID: 8782	Test Code: SW8260B		Units: mg/Kg		Analysis Date 9/24/2005			Prep Date 9/19/2005		
Client ID:		Run ID: THOR_050923A				SeqNo: 403372					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.8492	0.05	1	0	84.9	78	126	0			
Toluene	1.034	0.05	1	0	103	79.4	117	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

[redacted]all Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 9/19/2005

Work Order Number 0509181 | Received by GLS

Checklist completed by [signature] 9-19-05
Signature / Date

Matrix | Carrier name Client drop-off

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 ☐			
[redacted]ll samples received within holding time?	Yes ☑	No ☐			
[redacted]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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: RR Rack Lagoon Additional Excavation 9/15/05
~~Project #:~~
Project Manager:
Sampler:
Sample Temperature: 4°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No. 050918	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021-BTEX				Air Bubbles or Headspace (Y or N)
9/15/05	1430	Soil	RR-1A-91505					1			X									X	X				
"	1435	"	RR-2A-91505					2			X									X	X				
"	1440	"	RR-3A-91505					3			X									X	X				
"	1445	"	RR-4A-91505					4			X									X	X				
"	1450	"	RR-5A-91505					5			X									X	X				
"	1455	"	RR-6A-91505					6			X									X	X				
"	1500	"	RR-7A-91505					7			X									X	X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
9/19/05	0845		9/19/05 @ 845
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH 5 DAY

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

August 26, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: R.R. Rack Lagoon Additional SE Wall Exc Order No.: 0508234

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 4 samples on 8/19/2005 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

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab Order: 0508234

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_S, SAMPLE 0508234-01B: DNOP not recovered due to dilution Analytical Comments for METHOD 8015DRO_S, SAMPLE 0508234-02B: DNOP not recovered due to dilution Analytical Comments for METHOD 8015DRO_S, SAMPLE 0508234-03B: DNOP not recovered due to dilution

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: North Wall
Lab Order: 0508234
Collection Date: 8/19/2005 10:00:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	1500	1000		mg/Kg	100	8/21/2005 6:45:24 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 6:45:24 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 6:45:24 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	120	100		mg/Kg	20	8/23/2005 11:21:34 PM
Surr: BFB	106	83.1-124		%REC	20	8/23/2005 11:21:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	2.0		mg/Kg	20	8/23/2005 11:21:34 PM
Benzene	0.70	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Toluene	ND	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Ethylbenzene	3.4	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Xylenes, Total	6.5	0.50		mg/Kg	20	8/23/2005 11:21:34 PM
Surr: 4-Bromofluorobenzene	109	87.5-115		%REC	20	8/23/2005 11:21:34 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	0.65	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: North Wall
Lab Order: 0508234
Collection Date: 8/19/2005 10:00:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	1.5	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	9.8	2.0		mg/Kg	10	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	3.1	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	2.9	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	ND	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: North Wall
Lab Order: 0508234
Collection Date: 8/19/2005 10:00:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	110	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	107	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	62.9	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	80.8	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	73.9	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	72.8	37.6-118		%REC	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: South Wall
Lab Order: 0508234
Collection Date: 8/19/2005 10:30:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	3800	1000		mg/Kg	100	8/21/2005 7:16:33 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 7:16:33 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 7:16:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/23/2005 11:52:19 PM
Surr: BFB	98.4	83.1-124		%REC	50	8/23/2005 11:52:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/23/2005 11:52:19 PM
Benzene	ND	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Toluene	ND	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Ethylbenzene	4.5	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Xylenes, Total	15	1.3		mg/Kg	50	8/23/2005 11:52:19 PM
Surr: 4-Bromofluorobenzene	105	87.5-115		%REC	50	8/23/2005 11:52:19 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	2.4	2.0		mg/Kg	10	8/23/2005
Acenaphthylene	ND	2.0		mg/Kg	10	8/23/2005
Aniline	ND	2.0		mg/Kg	10	8/23/2005
Anthracene	ND	2.0		mg/Kg	10	8/23/2005
Azobenzene	ND	2.0		mg/Kg	10	8/23/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Benzidine	ND	2.0		mg/Kg	10	8/23/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	8/23/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	8/23/2005
Benzoic acid	ND	5.0		mg/Kg	10	8/23/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	8/23/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	8/23/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	8/23/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Carbazole	ND	2.0		mg/Kg	10	8/23/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	8/23/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	8/23/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: South Wall
Lab Order: 0508234
Collection Date: 8/19/2005 10:30:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	2.0		mg/Kg	10	8/23/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	8/23/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	8/23/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Dibenzofuran	ND	5.0		mg/Kg	10	8/23/2005
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	8/23/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	8/23/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
Fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Fluorene	5.1	2.0		mg/Kg	10	8/23/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	8/23/2005
Hexachloroethane	ND	5.0		mg/Kg	10	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Isophorone	ND	2.0		mg/Kg	10	8/23/2005
2-Methylnaphthalene	49	4.0		mg/Kg	20	8/25/2005
2-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	10	8/23/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	8/23/2005
Naphthalene	11	2.0		mg/Kg	10	8/23/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	8/23/2005
Nitrobenzene	ND	2.0		mg/Kg	10	8/23/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	8/23/2005
Phenanthrene	9.8	2.0		mg/Kg	10	8/23/2005
Phenol	ND	2.0		mg/Kg	10	8/23/2005
Pyrene	ND	2.0		mg/Kg	10	8/23/2005
Pyridine	ND	5.0		mg/Kg	10	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: South Wall
Lab Order: 0508234
Collection Date: 8/19/2005 10:30:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
Surr: 2,4,6-Tribromophenol	109	35.5-141		%REC	10	8/23/2005
Surr: 2-Fluorobiphenyl	73.7	30.4-128		%REC	10	8/23/2005
Surr: 2-Fluorophenol	63.2	28.1-129		%REC	10	8/23/2005
Surr: 4-Terphenyl-d14	56.9	34.6-151		%REC	10	8/23/2005
Surr: Nitrobenzene-d5	111	26.5-122		%REC	10	8/23/2005
Surr: Phenol-d6	53.4	37.6-118		%REC	10	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: North BTM.
Lab Order: 0508234
Collection Date: 8/19/2005 10:15:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	7000	200		mg/Kg	20	8/21/2005 9:52:45 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	8/21/2005 9:52:45 AM
Surr: DNOP	0	60-124	S	%REC	20	8/21/2005 9:52:45 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/24/2005 12:23:04 AM
Surr: BFB	101	83.1-124		%REC	50	8/24/2005 12:23:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/24/2005 12:23:04 AM
Benzene	ND	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Toluene	ND	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Ethylbenzene	ND	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Xylenes, Total	11	1.3		mg/Kg	50	8/24/2005 12:23:04 AM
Surr: 4-Bromofluorobenzene	105	87.5-115		%REC	50	8/24/2005 12:23:04 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	2.1	2.0		mg/Kg	10	8/23/2005
Acenaphthylene	ND	2.0		mg/Kg	10	8/23/2005
Aniline	ND	2.0		mg/Kg	10	8/23/2005
Anthracene	ND	2.0		mg/Kg	10	8/23/2005
Azobenzene	ND	2.0		mg/Kg	10	8/23/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Benzidine	ND	2.0		mg/Kg	10	8/23/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	8/23/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	8/23/2005
Benzoic acid	ND	5.0		mg/Kg	10	8/23/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	8/23/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	8/23/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	8/23/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Carbazole	ND	2.0		mg/Kg	10	8/23/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	8/23/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	8/23/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: North BTM.
Lab Order: 0508234
Collection Date: 8/19/2005 10:15:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	2.0		mg/Kg	10	8/23/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	8/23/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	8/23/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	8/23/2005
Dibenzofuran	ND	5.0		mg/Kg	10	8/23/2005
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	8/23/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	8/23/2005
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	8/23/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	8/23/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	8/23/2005
Fluoranthene	ND	2.0		mg/Kg	10	8/23/2005
Fluorene	4.3	2.0		mg/Kg	10	8/23/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	8/23/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	8/23/2005
Hexachloroethane	ND	5.0		mg/Kg	10	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	8/23/2005
Isophorone	ND	2.0		mg/Kg	10	8/23/2005
2-Methylnaphthalene	34	2.0		mg/Kg	10	8/23/2005
2-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	8/23/2005
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	10	8/23/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	8/23/2005
Naphthalene	8.2	2.0		mg/Kg	10	8/23/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	8/23/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	8/23/2005
Nitrobenzene	ND	2.0		mg/Kg	10	8/23/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	8/23/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	8/23/2005
Phenanthrene	8.1	2.0		mg/Kg	10	8/23/2005
Phenol	ND	2.0		mg/Kg	10	8/23/2005
Pyrene	ND	2.0		mg/Kg	10	8/23/2005
Pyridine	ND	5.0		mg/Kg	10	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: North BTM.
Lab Order: 0508234
Collection Date: 8/19/2005 10:15:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	8/23/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	8/23/2005
Surr: 2,4,6-Tribromophenol	110	35.5-141		%REC	10	8/23/2005
Surr: 2-Fluorobiphenyl	69.1	30.4-128		%REC	10	8/23/2005
Surr: 2-Fluorophenol	57.2	28.1-129		%REC	10	8/23/2005
Surr: 4-Terphenyl-d14	54.7	34.6-151		%REC	10	8/23/2005
Surr: Nitrobenzene-d5	80.2	26.5-122		%REC	10	8/23/2005
Surr: Phenol-d6	51.7	37.6-118		%REC	10	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: South BTM.
Lab Order: 0508234
Collection Date: 8/19/2005 10:45:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-04
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	15	10		mg/Kg	1	8/21/2005 10:25:32 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/21/2005 10:25:32 AM
Surr: DNOP	117	60-124		%REC	1	8/21/2005 10:25:32 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/24/2005 12:53:57 AM
Surr: BFB	98.0	83.1-124		%REC	1	8/24/2005 12:53:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	8/24/2005 12:53:57 AM
Benzene	ND	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Toluene	ND	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Ethylbenzene	ND	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Xylenes, Total	0.036	0.025		mg/Kg	1	8/24/2005 12:53:57 AM
Surr: 4-Bromofluorobenzene	104	87.5-115		%REC	1	8/24/2005 12:53:57 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: South BTM.
Lab Order: 0508234
Collection Date: 8/19/2005 10:45:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-04
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	ND	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: South BTM.
Lab Order: 0508234
Collection Date: 8/19/2005 10:45:00 AM
Project: R.R. Rack Lagoon Additional SE Wall Excavati
Lab ID: 0508234-04
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	93.6	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	63.9	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	62.7	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	82.0	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	66.7	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	67.9	37.6-118		%REC	1	8/23/2005

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Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508234
Project: R.R. Rack Lagoon Additional SE Wall Excavati

QC SUMMARY REPORT

Method Blank

Sample ID MB-8573	Batch ID: 8573	Test Code: SW8015	Units: mg/Kg	Analysis Date 8/21/2005 1:58:54 AM	Prep Date 8/19/2005
Client ID:		Run ID: FID(17A) 2_050820A		SeqNo: 390355	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.5	0	10	0	105	60	124	0			

Sample ID mb-8571	Batch ID: 8571	Test Code: SW8015	Units: mg/Kg	Analysis Date 8/22/2005 6:42:39 PM	Prep Date 8/19/2005
Client ID:		Run ID: PIDFID_050822A		SeqNo: 391043	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	914.7	0	1000	0	91.5	83.1	124	0			

Sample ID mb-8571	Batch ID: 8571	Test Code: SW8021	Units: mg/Kg	Analysis Date 8/22/2005 6:42:39 PM	Prep Date 8/19/2005
Client ID:		Run ID: PIDFID_050822A		SeqNo: 391004	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.1									
Benzene	0.01303	0.025									J
Toluene	0.01188	0.025									J
Ethylbenzene	0.01603	0.025									J
Xylenes, Total	0.02385	0.025									J
Surr: 4-Bromofluorobenzene	0.9884	0	1	0	98.8	87.5	115	0			

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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508234
Project: R.R. Rack Lagoon Additional SE Wall Excavati

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8570** Batch ID: **8570** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/19/2005**
Client ID: Run ID: **ELMO_050822A** SeqNo: **391145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.2									
Acenaphthylene	ND	0.2									
Aniline	ND	0.2									
Anthracene	ND	0.2									
Azobenzene	ND	0.2									
Benz(a)anthracene	ND	0.25									
Benzidine	ND	0.2									
Benzo(a)pyrene	ND	0.2									
Benzo(b)fluoranthene	ND	0.2									
Benzo(g,h,i)perylene	0.02967	0.3									J
Benzo(k)fluoranthene	ND	0.5									
Benzoic acid	ND	0.5									
Benzyl alcohol	ND	0.5									
Bis(2-chloroethoxy)methane	ND	0.5									
Bis(2-chloroethyl)ether	ND	0.25									
Bis(2-chloroisopropyl)ether	ND	0.5									
Bis(2-ethylhexyl)phthalate	0.06733	0.2									J
4-Bromophenyl phenyl ether	ND	0.25									
Butyl benzyl phthalate	ND	0.2									
Carbazole	ND	0.2									
4-Chloro-3-methylphenol	ND	0.2									
4-Chloroaniline	ND	0.2									
2-Chloronaphthalene	ND	0.2									
2-Chlorophenol	ND	0.2									
4-Chlorophenyl phenyl ether	ND	0.2									
Chrysene	ND	0.2									
Di-n-butyl phthalate	0.257	0.25									
Di-n-octyl phthalate	ND	0.5									

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CLIENT: Giant Refining Co
Work Order: 0508234
Project: R.R. Rack Lagoon Additional SE Wall Excavati

QC SUMMARY REPORT
Method Blank

Dibenz(a,h)anthracene	ND	0.25
Dibenzofuran	ND	0.5
1,2-Dichlorobenzene	ND	0.2
1,3-Dichlorobenzene	ND	0.2
1,4-Dichlorobenzene	ND	0.2
3,3'-Dichlorobenzidine	ND	0.2
Diethyl phthalate	ND	0.2
Dimethyl phthalate	ND	0.2
2,4-Dichlorophenol	ND	0.2
2,4-Dimethylphenol	ND	0.2
4,6-Dinitro-2-methylphenol	ND	0.5
2,4-Dinitrophenol	ND	0.5
2,4-Dinitrotoluene	ND	0.2
2,6-Dinitrotoluene	ND	0.2
Fluoranthene	ND	0.2
Fluorene	ND	0.2
Hexachlorobenzene	ND	0.2
Hexachlorobutadiene	ND	0.2
Hexachlorocyclopentadiene	ND	0.25
Hexachloroethane	ND	0.5
Indeno(1,2,3-cd)pyrene	ND	0.2
Isophorone	ND	0.2
2-Methylnaphthalene	ND	0.2
2-Methylphenol	ND	0.2
3+4-Methylphenol	ND	0.2
N-Nitrosodi-n-propylamine	ND	0.2
N-Nitrosodiphenylamine	ND	0.2
Naphthalene	ND	0.2
2-Nitroaniline	ND	0.5
3-Nitroaniline	ND	0.5
4-Nitroaniline	ND	0.25
Nitrobenzene	ND	0.2
2-Nitrophenol	ND	0.2

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Qualifiers: ND - Not Detected at the Reporting Limit
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CLIENT: Giant Refining Co
Work Order: 0508234
Project: R.R. Rack Lagoon Additional SE Wall Excavati

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	0.2						
Pentachlorophenol	ND	0.5						
Phenanthrene	ND	0.2						
Phenol	ND	0.2						
Pyrene	ND	0.2						
Pyridine	ND	0.5						
1,2,4-Trichlorobenzene	ND	0.2						
2,4,5-Trichlorophenol	ND	0.2						
2,4,6-Trichlorophenol	ND	0.2						
Surr: 2,4,6-Tribromophenol	2.838	0	3.33	0	85.2	35.5	141	0
Surr: 2-Fluorobiphenyl	1.208	0	1.67	0	72.4	30.4	128	0
Surr: 2-Fluorophenol	2.164	0	3.33	0	65.0	28.1	129	0
Surr: 4-Terphenyl-d14	1.483	0	1.67	0	88.8	34.6	151	0
Surr: Nitrobenzene-d5	1.198	0	1.67	0	71.7	26.5	122	0
Surr: Phenol-d6	2.348	0	3.33	0	70.5	37.6	118	0

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Qualifiers:
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B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508234
Project: R.R. Rack Lagoon Additional SE Wall Excavati

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-8573** Batch ID: **8573** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/21/2005 2:31:43 AM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390356**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53.51	10	50	0	107	67.4	117	0			

Sample ID **LCSD-8573** Batch ID: **8573** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/21/2005 3:04:32 AM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390357**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58.49	10	50	0	117	67.4	117	53.51	8.89	17.4	

Sample ID **lcs-8571** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/22/2005 7:45:44 PM** Prep Date **8/19/2005**
Client ID: Run ID: **PIDFID_050822A** SeqNo: **391059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24.66	5	25	0	98.6	84	120	0			

Sample ID **GRO lcs 2.5ug** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/23/2005 12:52:35 PM** Prep Date
Client ID: Run ID: **PIDFID_050823A** SeqNo: **391457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22.13	5	25	0.0156	88.5	84	120	0			

Sample ID **GRO lcs 2.5ug** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/24/2005 4:49:06 PM** Prep Date
Client ID: Run ID: **PIDFID_050824A** SeqNo: **392009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22.35	5	25	0.0214	89.3	84	120	0			

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508234
Project: R.R. Rack Lagoon Additional SE Wall Excavati

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **lcs-8571** Batch ID: **8571** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/22/2005 7:45:44 PM** Prep Date **8/19/2005**
Client ID: Run ID: **PIDFID_050822A** SeqNo: **391005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	2.093	0.1	2	0	105	65	132	0			
Benzene	0.4507	0.025	0.42	0.01303	104	85.6	116	0			
Toluene	2.111	0.025	2	0.01188	105	82.4	120	0			
Ethylbenzene	0.4324	0.025	0.41	0.01603	102	86.4	111	0			
Xylenes, Total	2.185	0.025	2	0.02385	108	78.4	125	0			

Sample ID **BTEX lcs 100ng** Batch ID: **8571** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/23/2005 1:55:24 PM** Prep Date
Client ID: Run ID: **PIDFID_050823A** SeqNo: **391323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.9565	0.1	1	0	95.6	65	132	0			
Benzene	1.04	0.025	1	0	104	85.6	116	0			
Toluene	1.027	0.025	1	0	103	82.4	120	0			
Ethylbenzene	1.036	0.025	1	0	104	86.4	111	0			
Xylenes, Total	2.1	0.025	2	0	105	78.4	125	0			

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508234
Project: R.R. Rack Lagoon Additional SE Wall Excavati

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8570** Batch ID: **8570** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/19/2005**
Client ID: Run ID: **ELMO_050822A** SeqNo: **391146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	1.344	0.2	1.67	0	80.5	24	125	0			
4-Chloro-3-methylphenol	2.653	0.2	3.33	0	79.7	14.6	154	0			
2-Chlorophenol	2.177	0.2	3.33	0	65.4	13.3	149	0			
1,4-Dichlorobenzene	0.9777	0.2	1.67	0	58.5	23.6	118	0			
2,4-Dinitrotoluene	1.402	0.2	1.67	0	83.9	28	136	0			
N-Nitrosodi-n-propylamine	1.068	0.2	1.67	0	64.0	28	114	0			
4-Nitrophenol	2.711	0.2	3.33	0	81.4	13.1	150	0			
Pentachlorophenol	2.921	0.5	3.33	0	87.7	20.1	139	0			
Phenol	2.213	0.2	3.33	0	66.4	17.3	141	0			
Pyrene	1.288	0.2	1.67	0	77.1	29	131	0			
1,2,4-Trichlorobenzene	1.109	0.2	1.67	0	66.4	17.9	126	0			

Sample ID **LCSD-8570** Batch ID: **8570** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/19/2005**
Client ID: Run ID: **ELMO_050822A** SeqNo: **391147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	1.298	0.2	1.67	0	77.7	24	125	1.344	3.48	25	
4-Chloro-3-methylphenol	2.848	0.2	3.33	0	85.5	14.6	154	2.653	7.08	25	
2-Chlorophenol	2.318	0.2	3.33	0	69.6	13.3	149	2.177	6.29	25	
1,4-Dichlorobenzene	0.9963	0.2	1.67	0	59.7	23.6	118	0.9777	1.89	25	
2,4-Dinitrotoluene	1.337	0.2	1.67	0	80.1	28	136	1.402	4.70	25	
N-Nitrosodi-n-propylamine	1.11	0.2	1.67	0	66.5	28	114	1.068	3.83	25	
4-Nitrophenol	2.786	0.2	3.33	0	83.7	13.1	150	2.711	2.73	25	
Pentachlorophenol	3.056	0.5	3.33	0	91.8	20.1	139	2.921	4.53	25	
Phenol	2.304	0.2	3.33	0	69.2	17.3	141	2.213	4.06	25	
Pyrene	1.384	0.2	1.67	0	82.9	29	131	1.288	7.21	25	
1,2,4-Trichlorobenzene	1.145	0.2	1.67	0	68.5	17.9	126	1.109	3.17	25	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 8/19/2005

Work Order Number 0508234 | Received by AMF

Checklist completed by Signature B Schleppe. Date 8-19-05

Matrix | Carrier name Client drop-off

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 ☐		
[redacted]r - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 6° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

[redacted]rrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☐ Level 4 ☐

Other: _____

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 5057223833
Fax #: 5057220210

Project Name: RR Rock Lagoon Additional SE Wall Excavation
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature:

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
3/19/05	1000	Soil	North Wall	2/4oz				0508234-1
"	1030	"	South Wall	"				2
"	1015	"	North Btm-	"				3
"	1045	"	South BTM.	"				4

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021B				Air Bubbles or Headspace (Y or N)
		X									X	X				
		X									X	X				
		X									X	X				
		X									X	X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
3-19-05	1335	Steve Morris		3/19/05 13:35
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:
Rush! ASAP!

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

August 26, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Railroad Rack Lagoon SWMU-Inlet Pipe E Order No.: 0508233

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 12 samples on 8/19/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

CLIENT: Giant Refining Co
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab Order: 0508233

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe 1 WS
Lab Order: 0508233
Collection Date: 8/18/2005 2:00:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	1000	100		mg/Kg	10	8/21/2005 1:40:41 PM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	8/21/2005 1:40:41 PM
Surr: DNOP	86.8	60-124		%REC	10	8/21/2005 1:40:41 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	100		mg/Kg	20	8/22/2005 8:17:20 PM
Surr: BFB	105	83.1-124		%REC	20	8/22/2005 8:17:20 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	2.0		mg/Kg	20	8/22/2005 8:17:20 PM
Benzene	ND	0.50		mg/Kg	20	8/22/2005 8:17:20 PM
Toluene	ND	0.50		mg/Kg	20	8/22/2005 8:17:20 PM
Ethylbenzene	0.71	0.50		mg/Kg	20	8/22/2005 8:17:20 PM
Xylenes, Total	0.91	0.50		mg/Kg	20	8/22/2005 8:17:20 PM
Surr: 4-Bromofluorobenzene	108	87.5-115		%REC	20	8/22/2005 8:17:20 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	0.40	0.20		mg/Kg	1	8/22/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/22/2005
Aniline	ND	0.20		mg/Kg	1	8/22/2005
Anthracene	ND	0.20		mg/Kg	1	8/22/2005
Azobenzene	ND	0.20		mg/Kg	1	8/22/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Benzidine	ND	0.20		mg/Kg	1	8/22/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/22/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/22/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/22/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/22/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/22/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/22/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Carbazole	ND	0.20		mg/Kg	1	8/22/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/22/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe 1 WS
Lab Order: 0508233 **Collection Date:** 8/18/2005 2:00:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/22/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/22/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/22/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/22/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/22/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/22/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Fluorene	0.61	0.20		mg/Kg	1	8/22/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/22/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Isophorone	ND	0.20		mg/Kg	1	8/22/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/22/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/22/2005
Naphthalene	1.9	0.20		mg/Kg	1	8/22/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/22/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/22/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/22/2005
Phenanthrene	1.3	0.20		mg/Kg	1	8/22/2005
Phenol	ND	0.20		mg/Kg	1	8/22/2005
Pyrene	ND	0.20		mg/Kg	1	8/22/2005
Pyridine	ND	0.50		mg/Kg	1	8/22/2005

Qualifiers:
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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe 1 WS
Lab Order: 0508233
Collection Date: 8/18/2005 2:00:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
Surr: 2,4,6-Tribromophenol	110	35.5-141		%REC	1	8/22/2005
Surr: 2-Fluorobiphenyl	94.4	30.4-128		%REC	1	8/22/2005
Surr: 2-Fluorophenol	75.7	28.1-129		%REC	1	8/22/2005
Surr: 4-Terphenyl-d14	92.9	34.6-151		%REC	1	8/22/2005
Surr: Nitrobenzene-d5	77.8	26.5-122		%REC	1	8/22/2005
Surr: Phenol-d6	84.4	37.6-118		%REC	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe 1 WN
Lab Order: 0508233
Collection Date: 8/18/2005 2:10:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-02
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	3500	1000		mg/Kg	100	8/21/2005 2:13:28 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 2:13:28 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 2:13:28 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/22/2005 8:48:54 PM
Surr: BFB	100	83.1-124		%REC	50	8/22/2005 8:48:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/22/2005 8:48:54 PM
Benzene	ND	1.3		mg/Kg	50	8/22/2005 8:48:54 PM
Toluene	ND	1.3		mg/Kg	50	8/22/2005 8:48:54 PM
Ethylbenzene	ND	1.3		mg/Kg	50	8/22/2005 8:48:54 PM
Xylenes, Total	2.6	1.3		mg/Kg	50	8/22/2005 8:48:54 PM
Surr: 4-Bromofluorobenzene	106	87.5-115		%REC	50	8/22/2005 8:48:54 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	1.0		mg/Kg	5	8/22/2005
Acenaphthylene	ND	1.0		mg/Kg	5	8/22/2005
Aniline	ND	1.0		mg/Kg	5	8/22/2005
Anthracene	ND	1.0		mg/Kg	5	8/22/2005
Azobenzene	ND	1.0		mg/Kg	5	8/22/2005
Benz(a)anthracene	ND	1.3		mg/Kg	5	8/22/2005
Benzidine	ND	1.0		mg/Kg	5	8/22/2005
Benzo(a)pyrene	ND	1.0		mg/Kg	5	8/22/2005
Benzo(b)fluoranthene	ND	1.0		mg/Kg	5	8/22/2005
Benzo(g,h,i)perylene	ND	1.5		mg/Kg	5	8/22/2005
Benzo(k)fluoranthene	ND	2.5		mg/Kg	5	8/22/2005
Benzoic acid	ND	2.5		mg/Kg	5	8/22/2005
Benzyl alcohol	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-chloroethoxy)methane	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-chloroethyl)ether	ND	1.3		mg/Kg	5	8/22/2005
Bis(2-chloroisopropyl)ether	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg	5	8/22/2005
4-Bromophenyl phenyl ether	ND	1.3		mg/Kg	5	8/22/2005
Butyl benzyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
Carbazole	ND	1.0		mg/Kg	5	8/22/2005
4-Chloro-3-methylphenol	ND	1.0		mg/Kg	5	8/22/2005
4-Chloroaniline	ND	1.0		mg/Kg	5	8/22/2005
2-Chloronaphthalene	ND	1.0		mg/Kg	5	8/22/2005
2-Chlorophenol	ND	1.0		mg/Kg	5	8/22/2005
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	5	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe 1 WN
Lab Order: 0508233 **Collection Date:** 8/18/2005 2:10:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	1.0		mg/Kg	5	8/22/2005
Di-n-butyl phthalate	ND	1.3		mg/Kg	5	8/22/2005
Di-n-octyl phthalate	ND	2.5		mg/Kg	5	8/22/2005
Dibenz(a,h)anthracene	ND	1.3		mg/Kg	5	8/22/2005
Dibenzofuran	ND	2.5		mg/Kg	5	8/22/2005
1,2-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
1,3-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
1,4-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
3,3'-Dichlorobenzidine	ND	1.0		mg/Kg	5	8/22/2005
Diethyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
Dimethyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
2,4-Dichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
2,4-Dimethylphenol	ND	1.0		mg/Kg	5	8/22/2005
4,6-Dinitro-2-methylphenol	ND	2.5		mg/Kg	5	8/22/2005
2,4-Dinitrophenol	ND	2.5		mg/Kg	5	8/22/2005
2,4-Dinitrotoluene	ND	1.0		mg/Kg	5	8/22/2005
2,6-Dinitrotoluene	ND	1.0		mg/Kg	5	8/22/2005
Fluoranthene	ND	1.0		mg/Kg	5	8/22/2005
Fluorene	1.5	1.0		mg/Kg	5	8/22/2005
Hexachlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorobutadiene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorocyclopentadiene	ND	1.3		mg/Kg	5	8/22/2005
Hexachloroethane	ND	2.5		mg/Kg	5	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	1.0		mg/Kg	5	8/22/2005
Isophorone	ND	1.0		mg/Kg	5	8/22/2005
2-Methylnaphthalene	8.0	1.0		mg/Kg	5	8/22/2005
2-Methylphenol	ND	1.0		mg/Kg	5	8/22/2005
3+4-Methylphenol	ND	1.0		mg/Kg	5	8/22/2005
N-Nitrosodi-n-propylamine	ND	1.0		mg/Kg	5	8/22/2005
N-Nitrosodiphenylamine	ND	1.0		mg/Kg	5	8/22/2005
Naphthalene	ND	1.0		mg/Kg	5	8/22/2005
2-Nitroaniline	ND	2.5		mg/Kg	5	8/22/2005
3-Nitroaniline	ND	2.5		mg/Kg	5	8/22/2005
4-Nitroaniline	ND	1.3		mg/Kg	5	8/22/2005
Nitrobenzene	ND	1.0		mg/Kg	5	8/22/2005
2-Nitrophenol	ND	1.0		mg/Kg	5	8/22/2005
4-Nitrophenol	ND	1.0		mg/Kg	5	8/22/2005
Pentachlorophenol	ND	2.5		mg/Kg	5	8/22/2005
Phenanthrene	3.6	1.0		mg/Kg	5	8/22/2005
Phenol	ND	1.0		mg/Kg	5	8/22/2005
Pyrene	ND	1.0		mg/Kg	5	8/22/2005
Pyridine	ND	2.5		mg/Kg	5	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe 1 WN
Lab Order: 0508233 **Collection Date:** 8/18/2005 2:10:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
2,4,5-Trichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
2,4,6-Trichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
Surr: 2,4,6-Tribromophenol	123	35.5-141		%REC	5	8/22/2005
Surr: 2-Fluorobiphenyl	97.5	30.4-128		%REC	5	8/22/2005
Surr: 2-Fluorophenol	71.9	28.1-129		%REC	5	8/22/2005
Surr: 4-Terphenyl-d14	96.4	34.6-151		%REC	5	8/22/2005
Surr: Nitrobenzene-d5	85.0	26.5-122		%REC	5	8/22/2005
Surr: Phenol-d6	75.0	37.6-118		%REC	5	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe1 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 2:20:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	380	10		mg/Kg	1	8/20/2005 9:36:27 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2005 9:36:27 PM
Surr: DNOP	104	60-124		%REC	1	8/20/2005 9:36:27 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	8/22/2005 9:20:06 PM
Surr: BFB	104	83.1-124		%REC	10	8/22/2005 9:20:06 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	10	8/22/2005 9:20:06 PM
Benzene	ND	0.25		mg/Kg	10	8/22/2005 9:20:06 PM
Toluene	ND	0.25		mg/Kg	10	8/22/2005 9:20:06 PM
Ethylbenzene	0.34	0.25		mg/Kg	10	8/22/2005 9:20:06 PM
Xylenes, Total	ND	0.25		mg/Kg	10	8/22/2005 9:20:06 PM
Surr: 4-Bromofluorobenzene	105	87.5-115		%REC	10	8/22/2005 9:20:06 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	1.0		mg/Kg	5	8/22/2005
Acenaphthylene	ND	1.0		mg/Kg	5	8/22/2005
Aniline	ND	1.0		mg/Kg	5	8/22/2005
Anthracene	ND	1.0		mg/Kg	5	8/22/2005
Azobenzene	ND	1.0		mg/Kg	5	8/22/2005
Benz(a)anthracene	ND	1.3		mg/Kg	5	8/22/2005
Benzidine	ND	1.0		mg/Kg	5	8/22/2005
Benzo(a)pyrene	ND	1.0		mg/Kg	5	8/22/2005
Benzo(b)fluoranthene	ND	1.0		mg/Kg	5	8/22/2005
Benzo(g,h,i)perylene	ND	1.5		mg/Kg	5	8/22/2005
Benzo(k)fluoranthene	ND	2.5		mg/Kg	5	8/22/2005
Benzoic acid	ND	2.5		mg/Kg	5	8/22/2005
Benzyl alcohol	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-chloroethoxy)methane	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-chloroethyl)ether	ND	1.3		mg/Kg	5	8/22/2005
Bis(2-chloroisopropyl)ether	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg	5	8/22/2005
4-Bromophenyl phenyl ether	ND	1.3		mg/Kg	5	8/22/2005
Butyl benzyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
Carbazole	ND	1.0		mg/Kg	5	8/22/2005
4-Chloro-3-methylphenol	ND	1.0		mg/Kg	5	8/22/2005
4-Chloroaniline	ND	1.0		mg/Kg	5	8/22/2005
2-Chloronaphthalene	ND	1.0		mg/Kg	5	8/22/2005
2-Chlorophenol	ND	1.0		mg/Kg	5	8/22/2005
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	5	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe1 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 2:20:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	1.0		mg/Kg	5	8/22/2005
Di-n-butyl phthalate	2.1	1.3		mg/Kg	5	8/22/2005
Di-n-octyl phthalate	ND	2.5		mg/Kg	5	8/22/2005
Dibenz(a,h)anthracene	ND	1.3		mg/Kg	5	8/22/2005
Dibenzofuran	ND	2.5		mg/Kg	5	8/22/2005
1,2-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
1,3-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
1,4-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
3,3'-Dichlorobenzidine	ND	1.0		mg/Kg	5	8/22/2005
Diethyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
Dimethyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
2,4-Dichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
2,4-Dimethylphenol	ND	1.0		mg/Kg	5	8/22/2005
4,6-Dinitro-2-methylphenol	ND	2.5		mg/Kg	5	8/22/2005
2,4-Dinitrophenol	ND	2.5		mg/Kg	5	8/22/2005
2,4-Dinitrotoluene	ND	1.0		mg/Kg	5	8/22/2005
2,6-Dinitrotoluene	ND	1.0		mg/Kg	5	8/22/2005
Fluoranthene	ND	1.0		mg/Kg	5	8/22/2005
Fluorene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorobutadiene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorocyclopentadiene	ND	1.3		mg/Kg	5	8/22/2005
Hexachloroethane	ND	2.5		mg/Kg	5	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	1.0		mg/Kg	5	8/22/2005
Isophorone	ND	1.0		mg/Kg	5	8/22/2005
2-Methylnaphthalene	1.9	1.0		mg/Kg	5	8/22/2005
2-Methylphenol	ND	1.0		mg/Kg	5	8/22/2005
3+4-Methylphenol	ND	1.0		mg/Kg	5	8/22/2005
N-Nitrosodi-n-propylamine	ND	1.0		mg/Kg	5	8/22/2005
N-Nitrosodiphenylamine	ND	1.0		mg/Kg	5	8/22/2005
Naphthalene	ND	1.0		mg/Kg	5	8/22/2005
2-Nitroaniline	ND	2.5		mg/Kg	5	8/22/2005
3-Nitroaniline	ND	2.5		mg/Kg	5	8/22/2005
4-Nitroaniline	ND	1.3		mg/Kg	5	8/22/2005
Nitrobenzene	ND	1.0		mg/Kg	5	8/22/2005
2-Nitrophenol	ND	1.0		mg/Kg	5	8/22/2005
4-Nitrophenol	ND	1.0		mg/Kg	5	8/22/2005
Pentachlorophenol	ND	2.5		mg/Kg	5	8/22/2005
Phenanthrene	ND	1.0		mg/Kg	5	8/22/2005
Phenol	ND	1.0		mg/Kg	5	8/22/2005
Pyrene	ND	1.0		mg/Kg	5	8/22/2005
Pyridine	ND	2.5		mg/Kg	5	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe1 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 2:20:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-03
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
2,4,5-Trichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
2,4,6-Trichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
Surr: 2,4,6-Tribromophenol	106	35.5-141		%REC	5	8/22/2005
Surr: 2-Fluorobiphenyl	81.8	30.4-128		%REC	5	8/22/2005
Surr: 2-Fluorophenol	60.4	28.1-129		%REC	5	8/22/2005
Surr: 4-Terphenyl-d14	87.6	34.6-151		%REC	5	8/22/2005
Surr: Nitrobenzene-d5	67.9	26.5-122		%REC	5	8/22/2005
Surr: Phenol-d6	67.1	37.6-118		%REC	5	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe2 WS
Lab Order: 0508233
Collection Date: 8/18/2005 2:30:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-04
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2005 10:09:14 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2005 10:09:14 PM
Surr: DNOP	100	60-124		%REC	1	8/20/2005 10:09:14 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/23/2005 3:01:06 AM
Surr: BFB	94.6	83.1-124		%REC	1	8/23/2005 3:01:06 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	8/23/2005 3:01:06 AM
Benzene	ND	0.025		mg/Kg	1	8/23/2005 3:01:06 AM
Toluene	ND	0.025		mg/Kg	1	8/23/2005 3:01:06 AM
Ethylbenzene	ND	0.025		mg/Kg	1	8/23/2005 3:01:06 AM
Xylenes, Total	ND	0.025		mg/Kg	1	8/23/2005 3:01:06 AM
Surr: 4-Bromofluorobenzene	101	87.5-115		%REC	1	8/23/2005 3:01:06 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/22/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/22/2005
Aniline	ND	0.20		mg/Kg	1	8/22/2005
Anthracene	ND	0.20		mg/Kg	1	8/22/2005
Azobenzene	ND	0.20		mg/Kg	1	8/22/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Benzidine	ND	0.20		mg/Kg	1	8/22/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/22/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/22/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/22/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/22/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/22/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/22/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Carbazole	ND	0.20		mg/Kg	1	8/22/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/22/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

450

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe2 WS
Lab Order: 0508233 **Collection Date:** 8/18/2005 2:30:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-04 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/22/2005
Di-n-butyl phthalate	1.6	0.25	B	mg/Kg	1	8/22/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/22/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/22/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/22/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/22/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Fluorene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/22/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Isophorone	ND	0.20		mg/Kg	1	8/22/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/22/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/22/2005
Naphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/22/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/22/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/22/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/22/2005
Phenol	ND	0.20		mg/Kg	1	8/22/2005
Pyrene	ND	0.20		mg/Kg	1	8/22/2005
Pyridine	ND	0.50		mg/Kg	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe2 WS
Lab Order: 0508233 **Collection Date:** 8/18/2005 2:30:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-04 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
Surr: 2,4,6-Tribromophenol	90.4	35.5-141		%REC	1	8/22/2005
Surr: 2-Fluorobiphenyl	74.9	30.4-128		%REC	1	8/22/2005
Surr: 2-Fluorophenol	63.1	28.1-129		%REC	1	8/22/2005
Surr: 4-Terphenyl-d14	92.2	34.6-151		%REC	1	8/22/2005
Surr: Nitrobenzene-d5	71.8	26.5-122		%REC	1	8/22/2005
Surr: Phenol-d6	68.2	37.6-118		%REC	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe2 WN
Lab Order: 0508233
Collection Date: 8/18/2005 2:40:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-05
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2005 10:42:02 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2005 10:42:02 PM
Surr: DNOP	103	60-124		%REC	1	8/20/2005 10:42:02 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/23/2005 3:31:49 AM
Surr: BFB	90.1	83.1-124		%REC	1	8/23/2005 3:31:49 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	8/23/2005 3:31:49 AM
Benzene	ND	0.025		mg/Kg	1	8/23/2005 3:31:49 AM
Toluene	ND	0.025		mg/Kg	1	8/23/2005 3:31:49 AM
Ethylbenzene	ND	0.025		mg/Kg	1	8/23/2005 3:31:49 AM
Xylenes, Total	ND	0.025		mg/Kg	1	8/23/2005 3:31:49 AM
Surr: 4-Bromofluorobenzene	97.3	87.5-115		%REC	1	8/23/2005 3:31:49 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/22/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/22/2005
Aniline	ND	0.20		mg/Kg	1	8/22/2005
Anthracene	ND	0.20		mg/Kg	1	8/22/2005
Azobenzene	ND	0.20		mg/Kg	1	8/22/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Benzidine	ND	0.20		mg/Kg	1	8/22/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/22/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/22/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/22/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/22/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/22/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/22/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Carbazole	ND	0.20		mg/Kg	1	8/22/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/22/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe2 WN
Lab Order: 0508233
Collection Date: 8/18/2005 2:40:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-05
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/22/2005
Di-n-butyl phthalate	0.31	0.25	B	mg/Kg	1	8/22/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/22/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/22/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/22/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/22/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Fluorene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/22/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Isophorone	ND	0.20		mg/Kg	1	8/22/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/22/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/22/2005
Naphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/22/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/22/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/22/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/22/2005
Phenol	ND	0.20		mg/Kg	1	8/22/2005
Pyrene	ND	0.20		mg/Kg	1	8/22/2005
Pyridine	ND	0.50		mg/Kg	1	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe2 WN
Lab Order: 0508233 **Collection Date:** 8/18/2005 2:40:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-05 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
Surr: 2,4,6-Tribromophenol	81.1	35.5-141		%REC	1	8/22/2005
Surr: 2-Fluorobiphenyl	62.9	30.4-128		%REC	1	8/22/2005
Surr: 2-Fluorophenol	51.5	28.1-129		%REC	1	8/22/2005
Surr: 4-Terphenyl-d14	84.8	34.6-151		%REC	1	8/22/2005
Surr: Nitrobenzene-d5	62.2	26.5-122		%REC	1	8/22/2005
Surr: Phenol-d6	61.7	37.6-118		%REC	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe2 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 2:50:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-06
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	150	10		mg/Kg	1	8/20/2005 11:14:53 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/20/2005 11:14:53 PM
Surr: DNOP	102	60-124		%REC	1	8/20/2005 11:14:53 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	8/22/2005 9:51:19 PM
Surr: BFB	96.1	83.1-124		%REC	5	8/22/2005 9:51:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	5	8/22/2005 9:51:19 PM
Benzene	ND	0.13		mg/Kg	5	8/22/2005 9:51:19 PM
Toluene	ND	0.13		mg/Kg	5	8/22/2005 9:51:19 PM
Ethylbenzene	ND	0.13		mg/Kg	5	8/22/2005 9:51:19 PM
Xylenes, Total	ND	0.13		mg/Kg	5	8/22/2005 9:51:19 PM
Surr: 4-Bromofluorobenzene	101	87.5-115		%REC	5	8/22/2005 9:51:19 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe2 B+M
Lab Order: 0508233 **Collection Date:** 8/18/2005 2:50:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-06 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	ND	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe2 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 2:50:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-06
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	70.6	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	39.6	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	40.1	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	82.0	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	37.3	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	38.5	37.6-118		%REC	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe3 WS
Lab Order: 0508233
Collection Date: 8/18/2005 3:00:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-07
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	3400	1000		mg/Kg	100	8/21/2005 2:46:14 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 2:46:14 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 2:46:14 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/22/2005 10:22:37 PM
Surr: BFB	99.4	83.1-124		%REC	50	8/22/2005 10:22:37 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/22/2005 10:22:37 PM
Benzene	ND	1.3		mg/Kg	50	8/22/2005 10:22:37 PM
Toluene	ND	1.3		mg/Kg	50	8/22/2005 10:22:37 PM
Ethylbenzene	ND	1.3		mg/Kg	50	8/22/2005 10:22:37 PM
Xylenes, Total	ND	1.3		mg/Kg	50	8/22/2005 10:22:37 PM
Surr: 4-Bromofluorobenzene	102	87.5-115		%REC	50	8/22/2005 10:22:37 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/22/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/22/2005
Aniline	ND	0.20		mg/Kg	1	8/22/2005
Anthracene	ND	0.20		mg/Kg	1	8/22/2005
Azobenzene	ND	0.20		mg/Kg	1	8/22/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Benzidine	ND	0.20		mg/Kg	1	8/22/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/22/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/22/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/22/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/22/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/22/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/22/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Carbazole	ND	0.20		mg/Kg	1	8/22/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/22/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe3 WS
Lab Order: 0508233 **Collection Date:** 8/18/2005 3:00:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-07 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/22/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/22/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/22/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/22/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/22/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/22/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/22/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/22/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/22/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/22/2005
Fluorene	0.36	0.20		mg/Kg	1	8/22/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/22/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/22/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/22/2005
Isophorone	ND	0.20		mg/Kg	1	8/22/2005
2-Methylnaphthalene	7.7	1.0		mg/Kg	5	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/22/2005
N-Nitrosodi-n-propylamine	0.27	0.20		mg/Kg	1	8/22/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/22/2005
Naphthalene	ND	0.20		mg/Kg	1	8/22/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/22/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/22/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/22/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/22/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/22/2005
Phenanthrene	4.3	1.0		mg/Kg	5	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/22/2005
Pyrene	ND	0.20		mg/Kg	1	8/22/2005
Pyridine	ND	0.50		mg/Kg	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co **Client Sample ID:** Inlet Pipe3 WS
Lab Order: 0508233 **Collection Date:** 8/18/2005 3:00:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-07 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/22/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/22/2005
Surr: 2,4,6-Tribromophenol	116	35.5-141		%REC	1	8/22/2005
Surr: 2-Fluorobiphenyl	132	30.4-128	S	%REC	1	8/22/2005
Surr: 2-Fluorophenol	70.9	28.1-129		%REC	1	8/22/2005
Surr: 4-Terphenyl-d14	84.7	34.6-151		%REC	1	8/22/2005
Surr: Nitrobenzene-d5	88.4	26.5-122		%REC	1	8/22/2005
Surr: Phenol-d6	80.4	37.6-118		%REC	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe3 WN
Lab Order: 0508233
Collection Date: 8/18/2005 3:10:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-08
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	5200	1000		mg/Kg	100	8/21/2005 3:51:53 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 3:51:53 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 3:51:53 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/22/2005 10:53:42 PM
Surr: BFB	93.7	83.1-124		%REC	50	8/22/2005 10:53:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/22/2005 10:53:42 PM
Benzene	ND	1.3		mg/Kg	50	8/22/2005 10:53:42 PM
Toluene	ND	1.3		mg/Kg	50	8/22/2005 10:53:42 PM
Ethylbenzene	ND	1.3		mg/Kg	50	8/22/2005 10:53:42 PM
Xylenes, Total	ND	1.3		mg/Kg	50	8/22/2005 10:53:42 PM
Surr: 4-Bromofluorobenzene	101	87.5-115		%REC	50	8/22/2005 10:53:42 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	1.0		mg/Kg	5	8/22/2005
Acenaphthylene	ND	1.0		mg/Kg	5	8/22/2005
Aniline	ND	1.0		mg/Kg	5	8/22/2005
Anthracene	ND	1.0		mg/Kg	5	8/22/2005
Azobenzene	ND	1.0		mg/Kg	5	8/22/2005
Benz(a)anthracene	ND	1.3		mg/Kg	5	8/22/2005
Benzidine	ND	1.0		mg/Kg	5	8/22/2005
Benzo(a)pyrene	ND	1.0		mg/Kg	5	8/22/2005
Benzo(b)fluoranthene	ND	1.0		mg/Kg	5	8/22/2005
Benzo(g,h,i)perylene	ND	1.5		mg/Kg	5	8/22/2005
Benzo(k)fluoranthene	ND	2.5		mg/Kg	5	8/22/2005
Benzoic acid	ND	2.5		mg/Kg	5	8/22/2005
Benzyl alcohol	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-chloroethoxy)methane	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-chloroethyl)ether	ND	1.3		mg/Kg	5	8/22/2005
Bis(2-chloroisopropyl)ether	ND	2.5		mg/Kg	5	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg	5	8/22/2005
4-Bromophenyl phenyl ether	ND	1.3		mg/Kg	5	8/22/2005
Butyl benzyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
Carbazole	ND	1.0		mg/Kg	5	8/22/2005
4-Chloro-3-methylphenol	ND	1.0		mg/Kg	5	8/22/2005
4-Chloroaniline	ND	1.0		mg/Kg	5	8/22/2005
2-Chloronaphthalene	ND	1.0		mg/Kg	5	8/22/2005
2-Chlorophenol	ND	1.0		mg/Kg	5	8/22/2005
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	5	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe3 WN
Lab Order: 0508233
Collection Date: 8/18/2005 3:10:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-08
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	1.0		mg/Kg	5	8/22/2005
Di-n-butyl phthalate	ND	1.3		mg/Kg	5	8/22/2005
Di-n-octyl phthalate	ND	2.5		mg/Kg	5	8/22/2005
Dibenz(a,h)anthracene	ND	1.3		mg/Kg	5	8/22/2005
Dibenzofuran	ND	2.5		mg/Kg	5	8/22/2005
1,2-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
1,3-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
1,4-Dichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
3,3'-Dichlorobenzidine	ND	1.0		mg/Kg	5	8/22/2005
Diethyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
Dimethyl phthalate	ND	1.0		mg/Kg	5	8/22/2005
2,4-Dichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
2,4-Dimethylphenol	ND	1.0		mg/Kg	5	8/22/2005
4,6-Dinitro-2-methylphenol	ND	2.5		mg/Kg	5	8/22/2005
2,4-Dinitrophenol	ND	2.5		mg/Kg	5	8/22/2005
2,4-Dinitrotoluene	ND	1.0		mg/Kg	5	8/22/2005
2,6-Dinitrotoluene	ND	1.0		mg/Kg	5	8/22/2005
Fluoranthene	ND	1.0		mg/Kg	5	8/22/2005
Fluorene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorobutadiene	ND	1.0		mg/Kg	5	8/22/2005
Hexachlorocyclopentadiene	ND	1.3		mg/Kg	5	8/22/2005
Hexachloroethane	ND	2.5		mg/Kg	5	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	1.0		mg/Kg	5	8/22/2005
Isophorone	ND	1.0		mg/Kg	5	8/22/2005
2-Methylnaphthalene	ND	1.0		mg/Kg	5	8/22/2005
2-Methylphenol	ND	1.0		mg/Kg	5	8/22/2005
3+4-Methylphenol	ND	1.0		mg/Kg	5	8/22/2005
N-Nitrosodi-n-propylamine	ND	1.0		mg/Kg	5	8/22/2005
N-Nitrosodiphenylamine	ND	1.0		mg/Kg	5	8/22/2005
Naphthalene	ND	1.0		mg/Kg	5	8/22/2005
2-Nitroaniline	ND	2.5		mg/Kg	5	8/22/2005
3-Nitroaniline	ND	2.5		mg/Kg	5	8/22/2005
4-Nitroaniline	ND	1.3		mg/Kg	5	8/22/2005
Nitrobenzene	ND	1.0		mg/Kg	5	8/22/2005
2-Nitrophenol	ND	1.0		mg/Kg	5	8/22/2005
4-Nitrophenol	ND	1.0		mg/Kg	5	8/22/2005
Pentachlorophenol	ND	2.5		mg/Kg	5	8/22/2005
Phenanthrene	ND	1.0		mg/Kg	5	8/22/2005
Phenol	ND	1.0		mg/Kg	5	8/22/2005
Pyrene	ND	1.0		mg/Kg	5	8/22/2005
Pyridine	ND	2.5		mg/Kg	5	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe3 WN
Lab Order: 0508233
Collection Date: 8/18/2005 3:10:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-08
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	5	8/22/2005
2,4,5-Trichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
2,4,6-Trichlorophenol	ND	1.0		mg/Kg	5	8/22/2005
Surr: 2,4,6-Tribromophenol	110	35.5-141		%REC	5	8/22/2005
Surr: 2-Fluorobiphenyl	80.9	30.4-128		%REC	5	8/22/2005
Surr: 2-Fluorophenol	62.9	28.1-129		%REC	5	8/22/2005
Surr: 4-Terphenyl-d14	84.8	34.6-151		%REC	5	8/22/2005
Surr: Nitrobenzene-d5	77.3	26.5-122		%REC	5	8/22/2005
Surr: Phenol-d6	69.8	37.6-118		%REC	5	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe3 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 3:20:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-09
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	6400	1000		mg/Kg	100	8/21/2005 4:24:39 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	8/21/2005 4:24:39 PM
Surr: DNOP	0	60-124	S	%REC	100	8/21/2005 4:24:39 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	8/22/2005 11:24:39 PM
Surr: BFB	96.3	83.1-124		%REC	50	8/22/2005 11:24:39 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	50	8/22/2005 11:24:39 PM
Benzene	ND	1.3		mg/Kg	50	8/22/2005 11:24:39 PM
Toluene	ND	1.3		mg/Kg	50	8/22/2005 11:24:39 PM
Ethylbenzene	ND	1.3		mg/Kg	50	8/22/2005 11:24:39 PM
Xylenes, Total	5.0	1.3		mg/Kg	50	8/22/2005 11:24:39 PM
Surr: 4-Bromofluorobenzene	103	87.5-115		%REC	50	8/22/2005 11:24:39 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	2.5	2.0		mg/Kg	10	8/22/2005
Acenaphthylene	ND	2.0		mg/Kg	10	8/22/2005
Aniline	ND	2.0		mg/Kg	10	8/22/2005
Anthracene	ND	2.0		mg/Kg	10	8/22/2005
Azobenzene	ND	2.0		mg/Kg	10	8/22/2005
Benz(a)anthracene	ND	2.5		mg/Kg	10	8/22/2005
Benzidine	ND	2.0		mg/Kg	10	8/22/2005
Benzo(a)pyrene	ND	2.0		mg/Kg	10	8/22/2005
Benzo(b)fluoranthene	ND	2.0		mg/Kg	10	8/22/2005
Benzo(g,h,i)perylene	ND	3.0		mg/Kg	10	8/22/2005
Benzo(k)fluoranthene	ND	5.0		mg/Kg	10	8/22/2005
Benzoic acid	ND	5.0		mg/Kg	10	8/22/2005
Benzyl alcohol	ND	5.0		mg/Kg	10	8/22/2005
Bis(2-chloroethoxy)methane	ND	5.0		mg/Kg	10	8/22/2005
Bis(2-chloroethyl)ether	ND	2.5		mg/Kg	10	8/22/2005
Bis(2-chloroisopropyl)ether	ND	5.0		mg/Kg	10	8/22/2005
Bis(2-ethylhexyl)phthalate	ND	2.0		mg/Kg	10	8/22/2005
4-Bromophenyl phenyl ether	ND	2.5		mg/Kg	10	8/22/2005
Butyl benzyl phthalate	ND	2.0		mg/Kg	10	8/22/2005
Carbazole	ND	2.0		mg/Kg	10	8/22/2005
4-Chloro-3-methylphenol	ND	2.0		mg/Kg	10	8/22/2005
4-Chloroaniline	ND	2.0		mg/Kg	10	8/22/2005
2-Chloronaphthalene	ND	2.0		mg/Kg	10	8/22/2005
2-Chlorophenol	ND	2.0		mg/Kg	10	8/22/2005
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	10	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe3 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 3:20:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-09
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	2.0		mg/Kg	10	8/22/2005
Di-n-butyl phthalate	ND	2.5		mg/Kg	10	8/22/2005
Di-n-octyl phthalate	ND	5.0		mg/Kg	10	8/22/2005
Dibenz(a,h)anthracene	ND	2.5		mg/Kg	10	8/22/2005
Dibenzofuran	ND	5.0		mg/Kg	10	8/22/2005
1,2-Dichlorobenzene	ND	2.0		mg/Kg	10	8/22/2005
1,3-Dichlorobenzene	ND	2.0		mg/Kg	10	8/22/2005
1,4-Dichlorobenzene	ND	2.0		mg/Kg	10	8/22/2005
3,3'-Dichlorobenzidine	ND	2.0		mg/Kg	10	8/22/2005
Diethyl phthalate	ND	2.0		mg/Kg	10	8/22/2005
Dimethyl phthalate	ND	2.0		mg/Kg	10	8/22/2005
2,4-Dichlorophenol	ND	2.0		mg/Kg	10	8/22/2005
2,4-Dimethylphenol	ND	2.0		mg/Kg	10	8/22/2005
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	10	8/22/2005
2,4-Dinitrophenol	ND	5.0		mg/Kg	10	8/22/2005
2,4-Dinitrotoluene	ND	2.0		mg/Kg	10	8/22/2005
2,6-Dinitrotoluene	ND	2.0		mg/Kg	10	8/22/2005
Fluoranthene	ND	2.0		mg/Kg	10	8/22/2005
Fluorene	3.8	2.0		mg/Kg	10	8/22/2005
Hexachlorobenzene	ND	2.0		mg/Kg	10	8/22/2005
Hexachlorobutadiene	ND	2.0		mg/Kg	10	8/22/2005
Hexachlorocyclopentadiene	ND	2.5		mg/Kg	10	8/22/2005
Hexachloroethane	ND	5.0		mg/Kg	10	8/22/2005
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	10	8/22/2005
Isophorone	ND	2.0		mg/Kg	10	8/22/2005
2-Methylnaphthalene	54	4.0		mg/Kg	20	8/25/2005
2-Methylphenol	ND	2.0		mg/Kg	10	8/22/2005
3+4-Methylphenol	ND	2.0		mg/Kg	10	8/22/2005
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	10	8/22/2005
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	10	8/22/2005
Naphthalene	12	2.0		mg/Kg	10	8/22/2005
2-Nitroaniline	ND	5.0		mg/Kg	10	8/22/2005
3-Nitroaniline	ND	5.0		mg/Kg	10	8/22/2005
4-Nitroaniline	ND	2.5		mg/Kg	10	8/22/2005
Nitrobenzene	ND	2.0		mg/Kg	10	8/22/2005
2-Nitrophenol	ND	2.0		mg/Kg	10	8/22/2005
4-Nitrophenol	ND	2.0		mg/Kg	10	8/22/2005
Pentachlorophenol	ND	5.0		mg/Kg	10	8/22/2005
Phenanthrene	8.3	2.0		mg/Kg	10	8/22/2005
Phenol	ND	2.0		mg/Kg	10	8/22/2005
Pyrene	ND	2.0		mg/Kg	10	8/22/2005
Pyridine	ND	5.0		mg/Kg	10	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe3 B+M
Lab Order: 0508233
Collection Date: 8/18/2005 3:20:00 PM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-09
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	10	8/22/2005
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	10	8/22/2005
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	10	8/22/2005
Surr: 2,4,6-Tribromophenol	124	35.5-141		%REC	10	8/22/2005
Surr: 2-Fluorobiphenyl	92.6	30.4-128		%REC	10	8/22/2005
Surr: 2-Fluorophenol	77.8	28.1-129		%REC	10	8/22/2005
Surr: 4-Terphenyl-d14	79.2	34.6-151		%REC	10	8/22/2005
Surr: Nitrobenzene-d5	99.6	26.5-122		%REC	10	8/22/2005
Surr: Phenol-d6	63.6	37.6-118		%REC	10	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 WS
Lab Order: 0508233
Collection Date: 8/19/2005 7:00:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-10
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	310	10		mg/Kg	1	8/21/2005 4:57:26 PM
Motor Oil Range Organics (MRO)	230	50		mg/Kg	1	8/21/2005 4:57:26 PM
Surr: DNOP	116	60-124		%REC	1	8/21/2005 4:57:26 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	8/22/2005 11:55:41 PM
Surr: BFB	98.6	83.1-124		%REC	10	8/22/2005 11:55:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	10	8/22/2005 11:55:41 PM
Benzene	ND	0.25		mg/Kg	10	8/22/2005 11:55:41 PM
Toluene	ND	0.25		mg/Kg	10	8/22/2005 11:55:41 PM
Ethylbenzene	ND	0.25		mg/Kg	10	8/22/2005 11:55:41 PM
Xylenes, Total	ND	0.25		mg/Kg	10	8/22/2005 11:55:41 PM
Surr: 4-Bromofluorobenzene	101	87.5-115		%REC	10	8/22/2005 11:55:41 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 WS
Lab Order: 0508233
Collection Date: 8/19/2005 7:00:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-10
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	ND	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 WS
Lab Order: 0508233
Collection Date: 8/19/2005 7:00:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-10
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	90.5	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	71.7	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	75.3	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	84.4	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	69.0	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	81.4	37.6-118		%REC	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 WN
Lab Order: 0508233
Collection Date: 8/19/2005 7:10:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-11
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	540	100		mg/Kg	10	8/21/2005 5:39:51 PM
Motor Oil Range Organics (MRO)	990	500		mg/Kg	10	8/21/2005 5:39:51 PM
Surr: DNOP	74.1	60-124		%REC	10	8/21/2005 5:39:51 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	8/23/2005 12:26:38 AM
Surr: BFB	95.3	83.1-124		%REC	10	8/23/2005 12:26:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	10	8/23/2005 12:26:38 AM
Benzene	ND	0.25		mg/Kg	10	8/23/2005 12:26:38 AM
Toluene	ND	0.25		mg/Kg	10	8/23/2005 12:26:38 AM
Ethylbenzene	ND	0.25		mg/Kg	10	8/23/2005 12:26:38 AM
Xylenes, Total	ND	0.25		mg/Kg	10	8/23/2005 12:26:38 AM
Surr: 4-Bromofluorobenzene	99.5	87.5-115		%REC	10	8/23/2005 12:26:38 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 WN
Lab Order: 0508233
Collection Date: 8/19/2005 7:10:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-11
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	0.31	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 WN
Lab Order: 0508233
Collection Date: 8/19/2005 7:10:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-11
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	87.0	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	71.1	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	72.4	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	83.3	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	78.1	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	79.5	37.6-118		%REC	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 BTM
Lab Order: 0508233
Collection Date: 8/19/2005 7:20:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-12
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	100	10		mg/Kg	1	8/21/2005 6:12:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/21/2005 6:12:38 PM
Surr: DNOP	178	60-124	S	%REC	1	8/21/2005 6:12:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	8/23/2005 12:57:24 AM
Surr: BFB	99.1	83.1-124		%REC	5	8/23/2005 12:57:24 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	5	8/23/2005 12:57:24 AM
Benzene	ND	0.13		mg/Kg	5	8/23/2005 12:57:24 AM
Toluene	ND	0.13		mg/Kg	5	8/23/2005 12:57:24 AM
Ethylbenzene	ND	0.13		mg/Kg	5	8/23/2005 12:57:24 AM
Xylenes, Total	0.19	0.13		mg/Kg	5	8/23/2005 12:57:24 AM
Surr: 4-Bromofluorobenzene	103	87.5-115		%REC	5	8/23/2005 12:57:24 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	0.20		mg/Kg	1	8/23/2005
Acenaphthylene	ND	0.20		mg/Kg	1	8/23/2005
Aniline	ND	0.20		mg/Kg	1	8/23/2005
Anthracene	ND	0.20		mg/Kg	1	8/23/2005
Azobenzene	ND	0.20		mg/Kg	1	8/23/2005
Benz(a)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Benzidine	ND	0.20		mg/Kg	1	8/23/2005
Benzo(a)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Benzo(g,h,i)perylene	ND	0.30		mg/Kg	1	8/23/2005
Benzo(k)fluoranthene	ND	0.50		mg/Kg	1	8/23/2005
Benzoic acid	ND	0.50		mg/Kg	1	8/23/2005
Benzyl alcohol	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethoxy)methane	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-chloroethyl)ether	ND	0.25		mg/Kg	1	8/23/2005
Bis(2-chloroisopropyl)ether	ND	0.50		mg/Kg	1	8/23/2005
Bis(2-ethylhexyl)phthalate	ND	0.20		mg/Kg	1	8/23/2005
4-Bromophenyl phenyl ether	ND	0.25		mg/Kg	1	8/23/2005
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Carbazole	ND	0.20		mg/Kg	1	8/23/2005
4-Chloro-3-methylphenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chloroaniline	ND	0.20		mg/Kg	1	8/23/2005
2-Chloronaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Chlorophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg	1	8/23/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 BTM
Lab Order: 0508233
Collection Date: 8/19/2005 7:20:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-12
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Chrysene	ND	0.20		mg/Kg	1	8/23/2005
Di-n-butyl phthalate	ND	0.25		mg/Kg	1	8/23/2005
Di-n-octyl phthalate	ND	0.50		mg/Kg	1	8/23/2005
Dibenz(a,h)anthracene	ND	0.25		mg/Kg	1	8/23/2005
Dibenzofuran	ND	0.50		mg/Kg	1	8/23/2005
1,2-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,3-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
1,4-Dichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg	1	8/23/2005
Diethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
Dimethyl phthalate	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4-Dimethylphenol	ND	0.20		mg/Kg	1	8/23/2005
4,6-Dinitro-2-methylphenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrophenol	ND	0.50		mg/Kg	1	8/23/2005
2,4-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
2,6-Dinitrotoluene	ND	0.20		mg/Kg	1	8/23/2005
Fluoranthene	ND	0.20		mg/Kg	1	8/23/2005
Fluorene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorobutadiene	ND	0.20		mg/Kg	1	8/23/2005
Hexachlorocyclopentadiene	ND	0.25		mg/Kg	1	8/23/2005
Hexachloroethane	ND	0.50		mg/Kg	1	8/23/2005
Indeno(1,2,3-cd)pyrene	ND	0.20		mg/Kg	1	8/23/2005
Isophorone	ND	0.20		mg/Kg	1	8/23/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
3+4-Methylphenol	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodi-n-propylamine	ND	0.20		mg/Kg	1	8/23/2005
N-Nitrosodiphenylamine	ND	0.20		mg/Kg	1	8/23/2005
Naphthalene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
3-Nitroaniline	ND	0.50		mg/Kg	1	8/23/2005
4-Nitroaniline	ND	0.25		mg/Kg	1	8/23/2005
Nitrobenzene	ND	0.20		mg/Kg	1	8/23/2005
2-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
4-Nitrophenol	ND	0.20		mg/Kg	1	8/23/2005
Pentachlorophenol	ND	0.50		mg/Kg	1	8/23/2005
Phenanthrene	ND	0.20		mg/Kg	1	8/23/2005
Phenol	ND	0.20		mg/Kg	1	8/23/2005
Pyrene	ND	0.20		mg/Kg	1	8/23/2005
Pyridine	ND	0.50		mg/Kg	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: Inlet Pipe4 BTM
Lab Order: 0508233
Collection Date: 8/19/2005 7:20:00 AM
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav
Lab ID: 0508233-12
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	8/23/2005
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	8/23/2005
Surr: 2,4,6-Tribromophenol	94.1	35.5-141		%REC	1	8/23/2005
Surr: 2-Fluorobiphenyl	72.9	30.4-128		%REC	1	8/23/2005
Surr: 2-Fluorophenol	67.8	28.1-129		%REC	1	8/23/2005
Surr: 4-Terphenyl-d14	88.8	34.6-151		%REC	1	8/23/2005
Surr: Nitrobenzene-d5	71.1	26.5-122		%REC	1	8/23/2005
Surr: Phenol-d6	74.4	37.6-118		%REC	1	8/23/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8572** Batch ID: **8572** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/20/2005 6:54:01 PM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390347**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.35	0	10	0	103	60	124	0			

Sample ID **MB-8573** Batch ID: **8573** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/21/2005 1:58:54 AM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390355**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.5	0	10	0	105	60	124	0			

Sample ID **mb-8571** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/22/2005 6:42:39 PM** Prep Date **8/19/2005**
Client ID: Run ID: **PIDFID_050822A** SeqNo: **391043**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	914.7	0	1000	0	91.5	83.1	124	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Method Blank

Sample ID **mb-8571** Batch ID: **8571** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/22/2005 6:42:39 PM** Prep Date **8/19/2005**
Client ID: Run ID: **PIDFID_050822A** SeqNo: **391004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.1									
Benzene	0.01303	0.025									J
Toluene	0.01188	0.025									J
Ethylbenzene	0.01603	0.025									J
Xylenes, Total	0.02385	0.025									J
Surr: 4-Bromofluorobenzene	0.9884	0	1	0	98.8	87.5	115	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8570** Batch ID: **8570** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/19/2005**
Client ID: Run ID: **ELMO_050822A** SeqNo: **391145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.2									
Acenaphthylene	ND	0.2									
Aniline	ND	0.2									
Anthracene	ND	0.2									
Azobenzene	ND	0.2									
Benz(a)anthracene	ND	0.25									
Benzidine	ND	0.2									
Benzo(a)pyrene	ND	0.2									
Benzo(b)fluoranthene	ND	0.2									
Benzo(g,h,i)perylene	0.02967	0.3									J
Benzo(k)fluoranthene	ND	0.5									
Benzoic acid	ND	0.5									
Benzyl alcohol	ND	0.5									
Bis(2-chloroethoxy)methane	ND	0.5									
Bis(2-chloroethyl)ether	ND	0.25									
Bis(2-chloroisopropyl)ether	ND	0.5									
Bis(2-ethylhexyl)phthalate	0.06733	0.2									J
4-Bromophenyl phenyl ether	ND	0.25									
Butyl benzyl phthalate	ND	0.2									
Carbazole	ND	0.2									
4-Chloro-3-methylphenol	ND	0.2									
4-Chloroaniline	ND	0.2									
2-Chloronaphthalene	ND	0.2									
2-Chlorophenol	ND	0.2									
4-Chlorophenyl phenyl ether	ND	0.2									
Chrysene	ND	0.2									
Di-n-butyl phthalate	0.257	0.25									
Di-n-octyl phthalate	ND	0.5									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Method Blank

Dibenz(a,h)anthracene	ND	0.25
Dibenzofuran	ND	0.5
1,2-Dichlorobenzene	ND	0.2
1,3-Dichlorobenzene	ND	0.2
1,4-Dichlorobenzene	ND	0.2
3,3'-Dichlorobenzidine	ND	0.2
Diethyl phthalate	ND	0.2
Dimethyl phthalate	ND	0.2
2,4-Dichlorophenol	ND	0.2
2,4-Dimethylphenol	ND	0.2
4,6-Dinitro-2-methylphenol	ND	0.5
2,4-Dinitrophenol	ND	0.5
2,4-Dinitrotoluene	ND	0.2
2,6-Dinitrotoluene	ND	0.2
Fluoranthene	ND	0.2
Fluorene	ND	0.2
Hexachlorobenzene	ND	0.2
Hexachlorobutadiene	ND	0.2
Hexachlorocyclopentadiene	ND	0.25
Hexachloroethane	ND	0.5
Indeno(1,2,3-cd)pyrene	ND	0.2
Isophorone	ND	0.2
2-Methylnaphthalene	ND	0.2
2-Methylphenol	ND	0.2
3+4-Methylphenol	ND	0.2
N-Nitrosodi-n-propylamine	ND	0.2
N-Nitrosodiphenylamine	ND	0.2
Naphthalene	ND	0.2
2-Nitroaniline	ND	0.5
3-Nitroaniline	ND	0.5
4-Nitroaniline	ND	0.25
Nitrobenzene	ND	0.2
2-Nitrophenol	ND	0.2

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	0.2						
Pentachlorophenol	ND	0.5						
Phenanthrene	ND	0.2						
Phenol	ND	0.2						
Pyrene	ND	0.2						
Pyridine	ND	0.5						
1,2,4-Trichlorobenzene	ND	0.2						
2,4,5-Trichlorophenol	ND	0.2						
2,4,6-Trichlorophenol	ND	0.2						
Surr: 2,4,6-Tribromophenol	2.838	0	3.33	0	85.2	35.5	141	0
Surr: 2-Fluorobiphenyl	1.208	0	1.67	0	72.4	30.4	128	0
Surr: 2-Fluorophenol	2.164	0	3.33	0	65.0	28.1	129	0
Surr: 4-Terphenyl-d14	1.483	0	1.67	0	88.8	34.6	151	0
Surr: Nitrobenzene-d5	1.198	0	1.67	0	71.7	26.5	122	0
Surr: Phenol-d6	2.348	0	3.33	0	70.5	37.6	118	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID **0508233-04a ms** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/23/2005 4:02:38 AM** Prep Date **8/19/2005**
Client ID: **Inlet Pipe2 WS** Run ID: **PIDFID_050822A** SeqNo: **391088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24.03	5	25	0	96.1	84	120	0			
Surr: BFB	977.8	0	1000	0	97.8	83.1	124	0			

Sample ID **0508233-04a msd** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/23/2005 4:33:21 AM** Prep Date **8/19/2005**
Client ID: **Inlet Pipe2 WS** Run ID: **PIDFID_050822A** SeqNo: **391094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26.35	5	25	0	105	84	120	24.03	9.21	11.6	
Surr: BFB	1057	0	1000	0	106	83.1	124	977.8	7.79	0	

Sample ID **0508233-04a ms** Batch ID: **8571** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/23/2005 4:02:38 AM** Prep Date **8/19/2005**
Client ID: **Inlet Pipe2 WS** Run ID: **PIDFID_050822A** SeqNo: **391022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	2.051	0.1	2	0	103	65	132	0			
Benzene	0.4318	0.025	0.42	0	103	85.6	116	0			
Toluene	2.055	0.025	2	0.01523	102	82.4	120	0			
Ethylbenzene	0.4198	0.025	0.41	0.02055	97.4	86.4	111	0			
Xylenes, Total	2.147	0.025	2	0	107	78.4	125	0			
Surr: 4-Bromofluorobenzene	1.054	0	1	0	105	87.5	115	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID **0508233-04a msd** Batch ID: **8571** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/23/2005 4:33:21 AM** Prep Date **8/19/2005**
Client ID: **Inlet Pipe2 WS** Run ID: **PIDFID_050822A** SeqNo: **391025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	2.027	0.1	2	0	101	65	132	2.051	1.16	28	
Benzene	0.409	0.025	0.42	0	97.4	85.6	116	0.4318	5.41	27	
Toluene	2.014	0.025	2	0.01523	99.9	82.4	120	2.055	2.02	19	
Ethylbenzene	0.43	0.025	0.41	0.02055	99.9	86.4	111	0.4198	2.41	10	
Xylenes, Total	2.173	0.025	2	0	109	78.4	125	2.147	1.17	13	
Surr: 4-Bromofluorobenzene	1.069	0	1	0	107	87.5	115	1.054	1.40	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *26-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-8572** Batch ID: **8572** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/20/2005 7:26:49 PM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390348**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46.27	10	50	0	92.5	67.4	117	0			

Sample ID **LCSD-8572** Batch ID: **8572** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/20/2005 7:59:32 PM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390349**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48.26	10	50	0	96.5	67.4	117	46.27	4.21	17.4	

Sample ID **LCS-8573** Batch ID: **8573** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/21/2005 2:31:43 AM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390356**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53.51	10	50	0	107	67.4	117	0			

Sample ID **LCSD-8573** Batch ID: **8573** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/21/2005 3:04:32 AM** Prep Date **8/19/2005**
Client ID: Run ID: **FID(17A) 2_050820A** SeqNo: **390357**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58.49	10	50	0	117	67.4	117	53.51	8.89	17.4	

Sample ID **lcs-8571** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/22/2005 7:45:44 PM** Prep Date **8/19/2005**
Client ID: Run ID: **PIDFID_050822A** SeqNo: **391059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24.66	5	25	0	98.6	84	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **GRO lcs 2.5ug** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/23/2005 12:52:35 PM** Prep Date
Client ID: Run ID: **PIDFID_050823A** SeqNo: **391457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22.13	5	25	0.0156	88.5	84	120	0			

Sample ID **GRO lcs 2.5ug** Batch ID: **8571** Test Code: **SW8015** Units: **mg/Kg** Analysis Date **8/24/2005 4:49:06 PM** Prep Date
Client ID: Run ID: **PIDFID_050824A** SeqNo: **392009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22.35	5	25	0.0214	89.3	84	120	0			

Sample ID **lcs-8571** Batch ID: **8571** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/22/2005 7:45:44 PM** Prep Date **8/19/2005**
Client ID: Run ID: **PIDFID_050822A** SeqNo: **391005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	2.093	0.1	2	0	105	65	132	0			
Benzene	0.4507	0.025	0.42	0.01303	104	85.6	116	0			
Toluene	2.111	0.025	2	0.01188	105	82.4	120	0			
Ethylbenzene	0.4324	0.025	0.41	0.01603	102	86.4	111	0			
Xylenes, Total	2.185	0.025	2	0.02385	108	78.4	125	0			

Sample ID **BTEX lcs 100ng** Batch ID: **8571** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/23/2005 1:55:24 PM** Prep Date
Client ID: Run ID: **PIDFID_050823A** SeqNo: **391323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.9565	0.1	1	0	95.6	65	132	0			
Benzene	1.04	0.025	1	0	104	85.6	116	0			
Toluene	1.027	0.025	1	0	103	82.4	120	0			
Ethylbenzene	1.036	0.025	1	0	104	86.4	111	0			
Xylenes, Total	2.1	0.025	2	0	105	78.4	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508233
Project: Railroad Rack Lagoon SWMU-Inlet Pipe Excav

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8570** Batch ID: **8570** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/19/2005**
Client ID: Run ID: **ELMO_050822A** SeqNo: **391146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	1.344	0.2	1.67	0	80.5	24	125	0			
4-Chloro-3-methylphenol	2.653	0.2	3.33	0	79.7	14.6	154	0			
2-Chlorophenol	2.177	0.2	3.33	0	65.4	13.3	149	0			
1,4-Dichlorobenzene	0.9777	0.2	1.67	0	58.5	23.6	118	0			
2,4-Dinitrotoluene	1.402	0.2	1.67	0	83.9	28	136	0			
N-Nitrosodi-n-propylamine	1.068	0.2	1.67	0	64.0	28	114	0			
4-Nitrophenol	2.711	0.2	3.33	0	81.4	13.1	150	0			
Pentachlorophenol	2.921	0.5	3.33	0	87.7	20.1	139	0			
Phenol	2.213	0.2	3.33	0	66.4	17.3	141	0			
Pyrene	1.288	0.2	1.67	0	77.1	29	131	0			
1,2,4-Trichlorobenzene	1.109	0.2	1.67	0	66.4	17.9	126	0			

Sample ID **LCSD-8570** Batch ID: **8570** Test Code: **SW8270C** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/19/2005**
Client ID: Run ID: **ELMO_050822A** SeqNo: **391147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	1.298	0.2	1.67	0	77.7	24	125	1.344	3.48	25	
4-Chloro-3-methylphenol	2.848	0.2	3.33	0	85.5	14.6	154	2.653	7.08	25	
2-Chlorophenol	2.318	0.2	3.33	0	69.6	13.3	149	2.177	6.29	25	
1,4-Dichlorobenzene	0.9963	0.2	1.67	0	59.7	23.6	118	0.9777	1.89	25	
2,4-Dinitrotoluene	1.337	0.2	1.67	0	80.1	28	136	1.402	4.70	25	
N-Nitrosodi-n-propylamine	1.11	0.2	1.67	0	66.5	28	114	1.068	3.83	25	
4-Nitrophenol	2.786	0.2	3.33	0	83.7	13.1	150	2.711	2.73	25	
Pentachlorophenol	3.056	0.5	3.33	0	91.8	20.1	139	2.921	4.53	25	
Phenol	2.304	0.2	3.33	0	69.2	17.3	141	2.213	4.06	25	
Pyrene	1.384	0.2	1.67	0	82.9	29	131	1.288	7.21	25	
1,2,4-Trichlorobenzene	1.145	0.2	1.67	0	68.5	17.9	126	1.109	3.17	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 8/19/2005

Work Order Number 0508233 | Received by AMF

Checklist completed by _____ Signature _____ Date 8-19-05

Matrix | Carrier name Client drop-off

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? **6°** *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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 5057223833
Fax #: 5057220210

Project Name: Railroad Rock Lagoon SWMU - Inlet Pipe Excavation
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 6°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: $HgCl_2$	Preservative: HNO_3	Preservative: None	HEAL No.
7-18-05	1400	Soil	Inlet Pipe 1WS	2/4oz			✓	058233 1
"	1410	"	" " 1WN	"			✓	2
"	1420	"	" " 1Btm	"			✓	3
"	1430	"	" " 2WS	"			✓	4
"	1440	"	" " 2WN	"			✓	5
"	1450	"	" " 2Btm	"			✓	6
"	1500	"	" " 3WS	"			✓	7
"	1510	"	" " 3WN	"			✓	8
"	1520	"	" " 3Btm	"			✓	9
7-19-05	0700	"	" " 4WS	"			✓	10
"	0710	"	" " 4WN	"			✓	11
"	0720	"	" " 4Btm	"			✓	12

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
7/19/05	1535	Steve Morris	8/19 13:35
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021B				Air Bubbles or Headspace (Y or N)
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				
		✓									✓	✓				

Remarks: Series 1 nearest lagoon, 2 + 3 every 50 ft. and series 4 taken nearest manhole at start of pipe run - Ditch - ASAP 11

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 06, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Soil Samples From 8/15/05 Event Order No.: 0508182

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 8/17/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: Soil 8 15 05
Lab Order: 0508182
Collection Date: 8/16/2005 11:30:00 AM
Project: Soil Samples From 8/15/05 Event
Lab ID: 0508182-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	0.071	0.050		mg/Kg	1	8/22/2005
Toluene	0.32	0.050		mg/Kg	1	8/22/2005
Ethylbenzene	0.13	0.050		mg/Kg	1	8/22/2005
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	8/22/2005
1,2,4-Trimethylbenzene	0.46	0.050		mg/Kg	1	8/22/2005
1,3,5-Trimethylbenzene	0.11	0.050		mg/Kg	1	8/22/2005
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	8/22/2005
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	8/22/2005
Naphthalene	0.13	0.10		mg/Kg	1	8/22/2005
1-Methylnaphthalene	0.20	0.20		mg/Kg	1	8/22/2005
2-Methylnaphthalene	ND	0.20		mg/Kg	1	8/22/2005
Acetone	ND	0.50		mg/Kg	1	8/22/2005
Bromobenzene	ND	0.050		mg/Kg	1	8/22/2005
Bromochloromethane	ND	0.050		mg/Kg	1	8/22/2005
Bromodichloromethane	ND	0.050		mg/Kg	1	8/22/2005
Bromoform	ND	0.050		mg/Kg	1	8/22/2005
Bromomethane	ND	0.10		mg/Kg	1	8/22/2005
2-Butanone	ND	0.50		mg/Kg	1	8/22/2005
Carbon disulfide	ND	0.50		mg/Kg	1	8/22/2005
Carbon tetrachloride	ND	0.10		mg/Kg	1	8/22/2005
Chlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
Chloroethane	ND	0.10		mg/Kg	1	8/22/2005
Chloroform	ND	0.050		mg/Kg	1	8/22/2005
Chloromethane	ND	0.050		mg/Kg	1	8/22/2005
2-Chlorotoluene	ND	0.050		mg/Kg	1	8/22/2005
4-Chlorotoluene	ND	0.050		mg/Kg	1	8/22/2005
cis-1,2-DCE	ND	0.050		mg/Kg	1	8/22/2005
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/22/2005
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	8/22/2005
Dibromochloromethane	ND	0.050		mg/Kg	1	8/22/2005
Dibromomethane	ND	0.10		mg/Kg	1	8/22/2005
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	8/22/2005
1,1-Dichloroethane	ND	0.050		mg/Kg	1	8/22/2005
1,1-Dichloroethene	ND	0.050		mg/Kg	1	8/22/2005
1,2-Dichloropropane	ND	0.050		mg/Kg	1	8/22/2005
1,3-Dichloropropane	ND	0.050		mg/Kg	1	8/22/2005
2,2-Dichloropropane	ND	0.050		mg/Kg	1	8/22/2005
1,1-Dichloropropene	ND	0.050		mg/Kg	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: Soil 8 15 05
Lab Order: 0508182
Collection Date: 8/16/2005 11:30:00 AM
Project: Soil Samples From 8/15/05 Event
Lab ID: 0508182-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	0.050		mg/Kg	1	8/22/2005
2-Hexanone	ND	0.50		mg/Kg	1	8/22/2005
Isopropylbenzene	ND	0.050		mg/Kg	1	8/22/2005
4-Isopropyltoluene	ND	0.050		mg/Kg	1	8/22/2005
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	8/22/2005
Methylene chloride	ND	0.15		mg/Kg	1	8/22/2005
n-Butylbenzene	0.062	0.050		mg/Kg	1	8/22/2005
n-Propylbenzene	ND	0.050		mg/Kg	1	8/22/2005
sec-Butylbenzene	ND	0.050		mg/Kg	1	8/22/2005
Styrene	ND	0.050		mg/Kg	1	8/22/2005
tert-Butylbenzene	ND	0.050		mg/Kg	1	8/22/2005
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/22/2005
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/22/2005
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	8/22/2005
trans-1,2-DCE	ND	0.050		mg/Kg	1	8/22/2005
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/22/2005
1,2,3-Trichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	8/22/2005
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	8/22/2005
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	8/22/2005
Trichlorofluoromethane	ND	0.050		mg/Kg	1	8/22/2005
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	8/22/2005
Vinyl chloride	ND	0.050		mg/Kg	1	8/22/2005
Xylenes, Total	1.4	0.050		mg/Kg	1	8/22/2005
Surr: 1,2-Dichloroethane-d4	98.5	82.3-110		%REC	1	8/22/2005
Surr: 4-Bromofluorobenzene	103	87.4-120		%REC	1	8/22/2005
Surr: Dibromofluoromethane	102	82.8-110		%REC	1	8/22/2005
Surr: Toluene-d8	91.5	81.5-114		%REC	1	8/22/2005
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	0.091	0.033		mg/Kg	1	8/22/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	2.5		mg/Kg	1	8/24/2005 3:09:46 PM
Barium	450	1.0		mg/Kg	10	8/26/2005 4:51:35 PM
Cadmium	ND	0.10		mg/Kg	1	8/24/2005 3:09:46 PM
Chromium	7.7	0.30		mg/Kg	1	8/24/2005 3:09:46 PM
Lead	5.2	0.25		mg/Kg	1	8/24/2005 3:09:46 PM
Selenium	ND	2.5		mg/Kg	1	8/24/2005 3:09:46 PM
Silver	ND	0.25		mg/Kg	1	8/24/2005 3:09:46 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508182
Project: Soil Samples From 8/15/05 Event

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8591**	Batch ID: **8591**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **8/22/2005**	Prep Date **8/22/2005**
Client ID:		Run ID: **MI-LA254_050822B**		SeqNo: **390821**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID **MB-8583**	Batch ID: **8583**	Test Code: **SW6010A**	Units: **mg/Kg**	Analysis Date **8/24/2005 2:00:56 PM**	Prep Date **8/22/2005**
Client ID:		Run ID: **ICP_050824A**		SeqNo: **392723**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	ND	0.1									
Cadmium	ND	0.1									
Chromium	ND	0.3									
Lead	ND	0.25									
Selenium	ND	2.5									
Silver	ND	0.25									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508182
Project: Soil Samples From 8/15/05 Event

QC SUMMARY REPORT
Method Blank

Sample ID **mb-8554** Batch ID: **8554** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/18/2005**

Client ID: Run ID: **THOR_050822A** SeqNo: **390910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0162	0.05									J
Toluene	0.0186	0.05									J
Ethylbenzene	0.0119	0.05									J
Methyl tert-butyl ether (MTBE)	ND	0.05									
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	0.0168	0.05									J
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	0.5									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	ND	0.1									
2-Butanone	0.4807	0.5									J
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508182
Project: Soil Samples From 8/15/05 Event

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	0.05	
1,2-Dibromo-3-chloropropane	ND	0.1	
Dibromochloromethane	ND	0.05	
Dibromomethane	ND	0.1	
1,2-Dichlorobenzene	ND	0.05	
1,3-Dichlorobenzene	ND	0.05	
1,4-Dichlorobenzene	ND	0.05	
Dichlorodifluoromethane	ND	0.05	
1,1-Dichloroethane	ND	0.05	
1,1-Dichloroethene	ND	0.05	
1,2-Dichloropropane	0.0162	0.05	J
1,3-Dichloropropane	ND	0.05	
2,2-Dichloropropane	ND	0.05	
1,1-Dichloropropene	ND	0.05	
Hexachlorobutadiene	ND	0.05	
2-Hexanone	ND	0.5	
Isopropylbenzene	ND	0.05	
4-Isopropyltoluene	ND	0.05	
4-Methyl-2-pentanone	0.0973	0.5	J
Methylene chloride	ND	0.15	
n-Butylbenzene	ND	0.05	
n-Propylbenzene	ND	0.05	
sec-Butylbenzene	ND	0.05	
Styrene	ND	0.05	
tert-Butylbenzene	ND	0.05	
1,1,1,2-Tetrachloroethane	ND	0.05	
1,1,2,2-Tetrachloroethane	ND	0.05	
Tetrachloroethene (PCE)	0.0231	0.05	J
trans-1,2-DCE	ND	0.05	
trans-1,3-Dichloropropene	ND	0.05	
1,2,3-Trichlorobenzene	ND	0.05	
1,2,4-Trichlorobenzene	0.0057	0.05	J
1,1,1-Trichloroethane	ND	0.05	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508182
Project: Soil Samples From 8/15/05 Event

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	0.05						
Trichloroethene (TCE)	ND	0.05						
Trichlorofluoromethane	ND	0.05						
1,2,3-Trichloropropane	ND	0.1						
Vinyl chloride	ND	0.05						
Xylenes, Total	ND	0.05						
Surr: 1,2-Dichloroethane-d4	0.5414	0	0.5	0	108	82.3	110	0
Surr: 4-Bromofluorobenzene	0.5253	0	0.5	0	105	87.4	120	0
Surr: Dibromofluoromethane	0.5481	0	0.5	0	110	82.8	110	0
Surr: Toluene-d8	0.4536	0	0.5	0	90.7	81.5	114	0

6/10

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508182
Project: Soil Samples From 8/15/05 Event

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0508182-01B DUP** Batch ID: **8583** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/24/2005 3:12:14 PM** Prep Date **8/22/2005**

Client ID: **Soil 8 15 05** Run ID: **ICP_050824A** SeqNo: **392739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.005	2.4	0	0	0	0	0	1.832	0	30	J
Cadmium	ND	0.097	0	0	0	0	0	0	0	30	
Chromium	6.18	0.29	0	0	0	0	0	7.707	22.0	30	
Lead	3.836	0.24	0	0	0	0	0	5.232	30.8	30	R
Selenium	ND	2.4	0	0	0	0	0	0	0	30	
Silver	ND	0.24	0	0	0	0	0	0	0	30	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508182
Project: Soil Samples From 8/15/05 Event

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **lcs-8554**	Batch ID: **8554**	Test Code: **SW8260B**	Units: **mg/Kg**	Analysis Date **8/22/2005**	Prep Date **8/18/2005**
Client ID:		Run ID: **THOR_050822A**		SeqNo: **390944**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.9753	0.05	1	0.0162	95.9	84	119	0			
Toluene	0.9313	0.05	1	0.0186	91.3	88.4	124	0			
Chlorobenzene	1.105	0.05	1	0	110	93.2	120	0			
1,1-Dichloroethene	0.9496	0.05	1	0	95.0	59	122	0			
Trichloroethene (TCE)	0.7693	0.05	1	0	76.9	69.4	120	0			

Sample ID **lcsd-8554**	Batch ID: **8554**	Test Code: **SW8260B**	Units: **mg/Kg**	Analysis Date **8/22/2005**	Prep Date **8/18/2005**
Client ID:		Run ID: **THOR_050822A**		SeqNo: **390946**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.011	0.05	1	0.0162	99.5	84	119	0.9753	3.61	20	
Toluene	0.9179	0.05	1	0.0186	89.9	88.4	124	0.9313	1.45	20	
Chlorobenzene	1.001	0.05	1	0	100	93.2	120	1.105	9.85	20	
1,1-Dichloroethene	0.941	0.05	1	0	94.1	59	122	0.9496	0.910	20	
Trichloroethene (TCE)	0.7953	0.05	1	0	79.5	69.4	120	0.7693	3.32	20	

Sample ID **LCS-8591**	Batch ID: **8591**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **8/22/2005**	Prep Date **8/22/2005**
Client ID:		Run ID: **MI-LA254_050822B**		SeqNo: **390822**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1532	0.033	0.1667	0	91.9	75	125	0			

Sample ID **LCSD-8591**	Batch ID: **8591**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **8/22/2005**	Prep Date **8/22/2005**
Client ID:		Run ID: **MI-LA254_050822B**		SeqNo: **390837**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1558	0.033	0.1667	0	93.5	75	125	0.1532	1.70	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508182
Project: Soil Samples From 8/15/05 Event

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8583** Batch ID: **8583** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/24/2005 2:03:59 PM** Prep Date **8/22/2005**
Client ID: Run ID: **ICP_050824A** SeqNo: **392724**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.43	2.5	25	0	97.7	80	120	0			
Barium	22.41	0.1	25	0	89.6	80	120	0			
Cadmium	23.64	0.1	25	0	94.6	80	120	0			
Chromium	22.99	0.3	25	0	92.0	80	120	0			
Lead	23.06	0.25	25	0	92.2	80	120	0			
Selenium	23.5	2.5	25	0	94.0	80	120	0			
Silver	24.55	0.25	25	0	98.2	80	120	0			

Sample ID **LCSD-8583** Batch ID: **8583** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/24/2005 2:07:14 PM** Prep Date **8/22/2005**
Client ID: Run ID: **ICP_050824A** SeqNo: **392725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.85	2.5	25	0	99.4	80	120	24.43	1.70	20	
Barium	22.84	0.1	25	0	91.4	80	120	22.41	1.92	20	
Cadmium	23.89	0.1	25	0	95.6	80	120	23.64	1.04	20	
Chromium	23.21	0.3	25	0	92.8	80	120	22.99	0.939	20	
Lead	23.15	0.25	25	0	92.6	80	120	23.06	0.401	20	
Selenium	23.61	2.5	25	0	94.4	80	120	23.5	0.468	20	
Silver	24.89	0.25	25	0	99.5	80	120	24.55	1.38	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 8/17/2005

Work Order Number 0508182 | Received by SSB

Checklist completed by Signature [signature] Date 8-17-05

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 [redacted]3833
Fax #: 505 722 0210

Project Name: Soil Samples from 8-15-05 event
Project #:
Project Manager: Steve Moses
Sampler: Steve Moses
Sample Temperature: 5°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
8/16/05	1130	soil	Soil 81505					0508182 -1

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
8/17/05	0800	Steve Moses	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 8/17/05 08:07

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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)	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 ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
							X			X						

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 06, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Soil Sample From 8/3/05 Event

Order No.: 0508180

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 8/17/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: Soil 8 3 05
Lab Order: 0508180
Collection Date: 8/16/2005 11:00:00 AM
Project: Soil Sample From 8/3/05 Event
Lab ID: 0508180-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	8/22/2005
Toluene	ND	0.050		mg/Kg	1	8/22/2005
Ethylbenzene	ND	0.050		mg/Kg	1	8/22/2005
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	8/22/2005
1,2,4-Trimethylbenzene	0.18	0.050		mg/Kg	1	8/22/2005
1,3,5-Trimethylbenzene	0.10	0.050		mg/Kg	1	8/22/2005
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	8/22/2005
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	8/22/2005
Naphthalene	0.15	0.10		mg/Kg	1	8/22/2005
1-Methylnaphthalene	0.65	0.20		mg/Kg	1	8/22/2005
2-Methylnaphthalene	0.47	0.20		mg/Kg	1	8/22/2005
Acetone	ND	0.50		mg/Kg	1	8/22/2005
Bromobenzene	ND	0.050		mg/Kg	1	8/22/2005
Bromochloromethane	ND	0.050		mg/Kg	1	8/22/2005
Bromodichloromethane	ND	0.050		mg/Kg	1	8/22/2005
Bromoform	ND	0.050		mg/Kg	1	8/22/2005
Bromomethane	ND	0.10		mg/Kg	1	8/22/2005
2-Butanone	ND	0.50		mg/Kg	1	8/22/2005
Carbon disulfide	ND	0.50		mg/Kg	1	8/22/2005
Carbon tetrachloride	ND	0.10		mg/Kg	1	8/22/2005
Chlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
Chloroethane	ND	0.10		mg/Kg	1	8/22/2005
Chloroform	ND	0.050		mg/Kg	1	8/22/2005
Chloromethane	ND	0.050		mg/Kg	1	8/22/2005
2-Chlorotoluene	ND	0.050		mg/Kg	1	8/22/2005
4-Chlorotoluene	ND	0.050		mg/Kg	1	8/22/2005
cis-1,2-DCE	ND	0.050		mg/Kg	1	8/22/2005
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/22/2005
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	8/22/2005
Dibromochloromethane	ND	0.050		mg/Kg	1	8/22/2005
Dibromomethane	ND	0.10		mg/Kg	1	8/22/2005
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	8/22/2005
1,1-Dichloroethane	ND	0.050		mg/Kg	1	8/22/2005
1,1-Dichloroethene	ND	0.050		mg/Kg	1	8/22/2005
1,2-Dichloropropane	ND	0.050		mg/Kg	1	8/22/2005
1,3-Dichloropropane	ND	0.050		mg/Kg	1	8/22/2005
2,2-Dichloropropane	ND	0.050		mg/Kg	1	8/22/2005
1,1-Dichloropropene	ND	0.050		mg/Kg	1	8/22/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: Soil 8 3 05
Lab Order: 0508180
Collection Date: 8/16/2005 11:00:00 AM
Project: Soil Sample From 8/3/05 Event
Lab ID: 0508180-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	0.050		mg/Kg	1	8/22/2005
2-Hexanone	ND	0.50		mg/Kg	1	8/22/2005
Isopropylbenzene	ND	0.050		mg/Kg	1	8/22/2005
4-Isopropyltoluene	ND	0.050		mg/Kg	1	8/22/2005
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	8/22/2005
Methylene chloride	ND	0.15		mg/Kg	1	8/22/2005
n-Butylbenzene	0.16	0.050		mg/Kg	1	8/22/2005
n-Propylbenzene	ND	0.050		mg/Kg	1	8/22/2005
sec-Butylbenzene	0.051	0.050		mg/Kg	1	8/22/2005
Styrene	ND	0.050		mg/Kg	1	8/22/2005
tert-Butylbenzene	ND	0.050		mg/Kg	1	8/22/2005
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/22/2005
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/22/2005
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	8/22/2005
trans-1,2-DCE	ND	0.050		mg/Kg	1	8/22/2005
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/22/2005
1,2,3-Trichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	8/22/2005
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	8/22/2005
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	8/22/2005
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	8/22/2005
Trichlorofluoromethane	ND	0.050		mg/Kg	1	8/22/2005
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	8/22/2005
Vinyl chloride	ND	0.050		mg/Kg	1	8/22/2005
Xylenes, Total	0.055	0.050		mg/Kg	1	8/22/2005
Surr: 1,2-Dichloroethane-d4	101	82.3-110		%REC	1	8/22/2005
Surr: 4-Bromofluorobenzene	105	87.4-120		%REC	1	8/22/2005
Surr: Dibromofluoromethane	106	82.8-110		%REC	1	8/22/2005
Surr: Toluene-d8	89.1	81.5-114		%REC	1	8/22/2005
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	0.14	0.033		mg/Kg	1	8/22/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	2.5		mg/Kg	1	8/24/2005 3:07:11 PM
Barium	460	1.0		mg/Kg	10	8/26/2005 4:49:12 PM
Cadmium	ND	0.10		mg/Kg	1	8/24/2005 3:07:11 PM
Chromium	7.3	0.30		mg/Kg	1	8/24/2005 3:07:11 PM
Lead	6.3	0.25		mg/Kg	1	8/24/2005 3:07:11 PM
Selenium	ND	2.5		mg/Kg	1	8/24/2005 3:07:11 PM
Silver	ND	0.25		mg/Kg	1	8/24/2005 3:07:11 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508180
Project: Soil Sample From 8/3/05 Event

QC SUMMARY REPORT

Method Blank

Sample ID **MB-8591**	Batch ID: **8591**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **8/22/2005**	Prep Date **8/22/2005**
Client ID:		Run ID: **MI-LA254_050822B**		SeqNo: **390821**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID **MB-8583**	Batch ID: **8583**	Test Code: **SW6010A**	Units: **mg/Kg**	Analysis Date **8/24/2005 2:00:56 PM**	Prep Date **8/22/2005**
Client ID:		Run ID: **ICP_050824A**		SeqNo: **392723**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	ND	0.1									
Cadmium	ND	0.1									
Chromium	ND	0.3									
Lead	ND	0.25									
Selenium	ND	2.5									
Silver	ND	0.25									

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Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508180
Project: Soil Sample From 8/3/05 Event

QC SUMMARY REPORT
Method Blank

Sample ID **mb-8554** Batch ID: **8554** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/18/2005**
Client ID: Run ID: **THOR_050822A** SeqNo: **390910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0162	0.05									J
Toluene	0.0186	0.05									J
Ethylbenzene	0.0119	0.05									J
Methyl tert-butyl ether (MTBE)	ND	0.05									
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	0.0168	0.05									J
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	0.5									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	ND	0.1									
2-Butanone	0.4807	0.5									J
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0508180
Project: Soil Sample From 8/3/05 Event

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	0.05	
1,2-Dibromo-3-chloropropane	ND	0.1	
Dibromochloromethane	ND	0.05	
Dibromomethane	ND	0.1	
1,2-Dichlorobenzene	ND	0.05	
1,3-Dichlorobenzene	ND	0.05	
1,4-Dichlorobenzene	ND	0.05	
Dichlorodifluoromethane	ND	0.05	
1,1-Dichloroethane	ND	0.05	
1,1-Dichloroethene	ND	0.05	
1,2-Dichloropropane	0.0162	0.05	J
1,3-Dichloropropane	ND	0.05	
2,2-Dichloropropane	ND	0.05	
1,1-Dichloropropene	ND	0.05	
Hexachlorobutadiene	ND	0.05	
2-Hexanone	ND	0.5	
Isopropylbenzene	ND	0.05	
4-Isopropyltoluene	ND	0.05	
4-Methyl-2-pentanone	0.0973	0.5	J
Methylene chloride	ND	0.15	
n-Butylbenzene	ND	0.05	
n-Propylbenzene	ND	0.05	
sec-Butylbenzene	ND	0.05	
Styrene	ND	0.05	
tert-Butylbenzene	ND	0.05	
1,1,1,2-Tetrachloroethane	ND	0.05	
1,1,2,2-Tetrachloroethane	ND	0.05	
Tetrachloroethene (PCE)	0.0231	0.05	J
trans-1,2-DCE	ND	0.05	
trans-1,3-Dichloropropene	ND	0.05	
1,2,3-Trichlorobenzene	ND	0.05	
1,2,4-Trichlorobenzene	0.0057	0.05	J
1,1,1-Trichloroethane	ND	0.05	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508180
Project: Soil Sample From 8/3/05 Event

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	0.05						
Trichloroethene (TCE)	ND	0.05						
Trichlorofluoromethane	ND	0.05						
1,2,3-Trichloropropane	ND	0.1						
Vinyl chloride	ND	0.05						
Xylenes, Total	ND	0.05						
Surr: 1,2-Dichloroethane-d4	0.5414	0	0.5	0	108	82.3	110	0
Surr: 4-Bromofluorobenzene	0.5253	0	0.5	0	105	87.4	120	0
Surr: Dibromofluoromethane	0.5481	0	0.5	0	110	82.8	110	0
Surr: Toluene-d8	0.4536	0	0.5	0	90.7	81.5	114	0

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508180
Project: Soil Sample From 8/3/05 Event

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **lcs-8554** Batch ID: **8554** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/18/2005**
Client ID: Run ID: **THOR_050822A** SeqNo: **390944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.9753	0.05	1	0.0162	95.9	84	119	0			
Toluene	0.9313	0.05	1	0.0186	91.3	88.4	124	0			
Chlorobenzene	1.105	0.05	1	0	110	93.2	120	0			
1,1-Dichloroethene	0.9496	0.05	1	0	95.0	59	122	0			
Trichloroethene (TCE)	0.7693	0.05	1	0	76.9	69.4	120	0			

Sample ID **lcsd-8554** Batch ID: **8554** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/18/2005**
Client ID: Run ID: **THOR_050822A** SeqNo: **390946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.011	0.05	1	0.0162	99.5	84	119	0.9753	3.61	20	
Toluene	0.9179	0.05	1	0.0186	89.9	88.4	124	0.9313	1.45	20	
Chlorobenzene	1.001	0.05	1	0	100	93.2	120	1.105	9.85	20	
1,1-Dichloroethene	0.941	0.05	1	0	94.1	59	122	0.9496	0.910	20	
Trichloroethene (TCE)	0.7953	0.05	1	0	79.5	69.4	120	0.7693	3.32	20	

Sample ID **LCS-8591** Batch ID: **8591** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/22/2005**
Client ID: Run ID: **MI-LA254_050822B** SeqNo: **390822**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1532	0.033	0.1667	0	91.9	75	125	0			

Sample ID **LCSD-8591** Batch ID: **8591** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/22/2005** Prep Date **8/22/2005**
Client ID: Run ID: **MI-LA254_050822B** SeqNo: **390837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1558	0.033	0.1667	0	93.5	75	125	0.1532	1.70	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508180
Project: Soil Sample From 8/3/05 Event

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8583** Batch ID: **8583** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/24/2005 2:03:59 PM** Prep Date **8/22/2005**
Client ID: Run ID: **ICP_050824A** SeqNo: **392724**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.43	2.5	25	0	97.7	80	120	0			
Barium	22.41	0.1	25	0	89.6	80	120	0			
Cadmium	23.64	0.1	25	0	94.6	80	120	0			
Chromium	22.99	0.3	25	0	92.0	80	120	0			
Lead	23.06	0.25	25	0	92.2	80	120	0			
Selenium	23.5	2.5	25	0	94.0	80	120	0			
Silver	24.55	0.25	25	0	98.2	80	120	0			

Sample ID **LCSD-8583** Batch ID: **8583** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/24/2005 2:07:14 PM** Prep Date **8/22/2005**
Client ID: Run ID: **ICP_050824A** SeqNo: **392725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.85	2.5	25	0	99.4	80	120	24.43	1.70	20	
Barium	22.84	0.1	25	0	91.4	80	120	22.41	1.92	20	
Cadmium	23.89	0.1	25	0	95.6	80	120	23.64	1.04	20	
Chromium	23.21	0.3	25	0	92.8	80	120	22.99	0.939	20	
Lead	23.15	0.25	25	0	92.6	80	120	23.06	0.401	20	
Selenium	23.61	2.5	25	0	94.4	80	120	23.5	0.468	20	
Silver	24.89	0.25	25	0	99.5	80	120	24.55	1.38	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANT REFINERY BLOOM | Date and Time Received: 8/17/2005

Work Order Number 0508180 | Received by SSB

Checklist completed by _____ Signature _____ Date 8-17-05

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Soil Samples from 8-3-05 event
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 5.0

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
8/16/05	1100	Soil	Soil 8305					0508160 -1

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
							X			X	HOLD					

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
8/17/05	0800	Steve Morris	David O'Brien
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 8/17/05 07:58

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 02, 2005

Steve Moris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: S Outfall S.W. from 8/15/05 event

Order No.: 0508177

Dear Steve Moris:

Hall Environmental Analysis Laboratory received 1 sample on 8/17/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *02-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: South Outfall 8/16/05
Lab Order: 0508177
Collection Date: 8/16/2005 10:00:00 AM
Project: S Outfall S.W. from 8/15/05 event
Lab ID: 0508177-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/17/2005
Nitrogen, Nitrate (As N)	1.1	0.10		mg/L	1	8/17/2005
EPA METHOD 413.2: OIL AND GREASE						Analyst: **JAT**
Oil & Grease, Total Recoverable	1.4	1.1		mg/L	1	8/26/2005
EPA METHOD 420.3: TOTAL PHENOLICS						Analyst: **JAT**
Phenolics, Total Recoverable	7.6	3.0		µg/L	1	8/23/2005
EPA METHOD 351.3: TKN						Analyst: **DK**
Nitrogen, Kjeldahl, Total	2.2	1.0		mg/L	1	6/29/2005
EPA METHOD 160.2: TSS						Analyst: **DK**
Suspended Solids	ND	10		mg/L	1	8/22/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

ASSAIGAI
ANALYTICAL
LABORATORIES, INC.
4301 Masthead NE • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259
3332 Wedgewood, Ste. N • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820
127 Eastgate Drive, 212-C • Los Alamos, New Mexico 87544 • (505) 662-2558

Explanation of codes	
B	Analyte Detected in Method Blank
E	Result is Estimated
H	Analyzed Out of Hold Time
N	Tentatively Identified Compound
S	Subcontracted
1-9	See Footnote

HALL ENVIRONMENTAL
attn: ANDY FREEMAN
4901 HAWKINS NE, SUITE D
ALBUQUERQUE NM 87109-4372

STANDARD

Assaigai Analytical Laboratories, Inc.

Certificate of Analysis

All samples are reported on an "as received" basis, unless otherwise noted (i.e. - Dry Weight).

Client: HALL ENVIRONMENTAL
Project: 0508177
Order: 0508400 HAL03 Receipt: 08-17-05

William P. Biava: President of Assaigai Analytical Laboratories, Inc.

Sample: *SOUTH OUTFALL* Collected: *08-16-05 10:00:00* By:
Matrix: *AQUEOUS*

QC Group	Run Sequence	CAS #	Analyte	Result	Units	Dilution Factor	Detection Limit	Code	Prep Date	Run Date
0508400-01A		EPA 405.1 Biochemical Oxygen Demand						By: NJL		
BOD05100	WC.2005.2304.6	10-26-4	Biochemical Oxygen Demand	21.0	mg/L	1	2		08-18-05	08-23-05

Unless otherwise noted, all samples were received in acceptable condition and all sampling was performed by client or client representative. Sample result of ND indicates Not Detected, ie result is less than the sample specific Detection Limit. Sample specific Detection Limit is determined by multiplying the sample Dilution Factor by the listed Reporting Detection Limit. All results relate only to the items tested. Any miscellaneous workorder information or foonotes will appear below.

Analytical results are not corrected for method blank or field blank contamination.

REPRODUCTION OF THIS REPORT IN LESS THAN FULL, REQUIRES THE WRITTEN CONSENT OF AAL.
THIS REPORT MAY NOT BE USED IN ANY MANNER BY THE CLIENT OR ANY OTHER THIRD PARTY TO CLAIM
PRODUCT ENDORSEMENT BY THE NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM.

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: 0508177
Lab ID: C05080861-001
Client Sample ID: South Outfall

Report Date: 09/02/05
Collection Date: 08/16/05 10:00
Date Received: 08/18/05
Matrix: Aqueous

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Phosphorus, Total as	0.241	mg/L		0.004		E365.1	08/26/05 15:34 eli-b
PHYSICAL PROPERTIES							
Oxygen Demand, Chemical (COD)	92.0	mg/L		1.0		HACH 8000	08/25/05 10:59 jal

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected a he reporting limit.

QA/QC Summary Report

Client: Hall Environmental
Project: 0508177

Report Date: 09/02/05
Work Order: C05080861

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E365.1									Batch: B_082605T1-3
Sample ID: MBLK	Method Blank								08/26/05 14:36
Phosphorus, Total as	ND	mg/L	0.004						
Sample ID: B05081731-001AMS	Matrix Spike								08/26/05 15:09
Phosphorus, Total as	0.107	mg/L	0.010	97.9	90	110			
Sample ID: B05081731-001AMSD	Matrix Spike Duplicate								08/26/05 15:10
Phosphorus, Total as	0.108	mg/L	0.010	99	90	110	1.0	10	
Sample ID: B05081874-002CMS	Matrix Spike								08/26/05 15:21
Phosphorus, Total as	0.123	mg/L	0.010	103	90	110			
Sample ID: B05081874-002CMSD	Matrix Spike Duplicate								08/26/05 15:22
Phosphorus, Total as	0.124	mg/L	0.010	104	90	110	0.6	10	
Sample ID: B05081895-004DMS	Matrix Spike								08/26/05 14:47
Phosphorus, Total as	0.110	mg/L	0.010	101	90	110			
Sample ID: B05081895-004DMSD	Matrix Spike Duplicate								08/26/05 14:48
Phosphorus, Total as	0.112	mg/L	0.010	103	90	110	1.9	10	
Sample ID: B05081979-002AMS	Matrix Spike								08/26/05 14:54
Phosphorus, Total as	0.137	mg/L	0.010	105	90	110			
Sample ID: B05081979-002AMSD	Matrix Spike Duplicate								08/26/05 14:55
Phosphorus, Total as	0.138	mg/L	0.010	106	90	110	0.9	10	
Method: HACH 8000									Batch: A2005-08-25_6_COD_01
Sample ID: MBLK-1	Method Blank								08/25/05 10:52
Oxygen Demand, Chemical (COD)	ND	mg/L	1						
Sample ID: C05080809-001BMS	Matrix Spike								08/25/05 10:57
Oxygen Demand, Chemical (COD)	536	mg/L	1.0	103	85	115			
Sample ID: C05080809-001BMSD	Matrix Spike Duplicate								08/25/05 10:57
Oxygen Demand, Chemical (COD)	520	mg/L	1.0	99.6	85	115	3.0	15	
Sample ID: C05080324-001ADUP	Sample Duplicate								08/25/05 11:26
Oxygen Demand, Chemical (COD)	40.0	mg/L	1.0				7.8	15	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected a he reporting limit.

Hall Environmental Analysis Laboratory

Date: *02-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508177
Project: S Outfall S.W. from 8/15/05 event

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R16340** Test Code: **E300** Units: **mg/L** Analysis Date **8/17/2005** Prep Date
Client ID: Run ID: **LC_050817A** SeqNo: **389472**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									

Sample ID **MB-8596** Batch ID: **8596** Test Code: **E413.2** Units: **mg/L** Analysis Date **8/26/2005** Prep Date **8/23/2005**
Client ID: Run ID: **BUCK IR_050826A** SeqNo: **392549**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease, Total Recoverable	ND	1									

Sample ID **MB-8581** Batch ID: **8598** Test Code: **E420.3** Units: **µg/L** Analysis Date **8/23/2005** Prep Date **8/23/2005**
Client ID: Run ID: **PHENOL SPEC._05082** SeqNo: **392114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable	ND	3									

Sample ID **MB-8629** Batch ID: **8629** Test Code: **E351.3** Units: **mg/L** Analysis Date **6/29/2005** Prep Date **8/26/2005**
Client ID: Run ID: **WC_050629G** SeqNo: **393207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1									

Sample ID **MB-R16437** Batch ID: **R16437** Test Code: **E160.2** Units: **mg/L** Analysis Date **8/22/2005** Prep Date
Client ID: Run ID: **WC_050822J** SeqNo: **392199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Suspended Solids	ND	10									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Date: *02-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508177
Project: S Outfall S.W. from 8/15/05 event

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0508177-01C DUP** Batch ID: **R16340** Test Code: **E300** Units: **mg/L** Analysis Date **8/17/2005** Prep Date

Client ID: **South Outfall** Run ID: **LC_050817A** SeqNo: **389477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.043	0.1	0	0	0	0	0	0.038	0	20	J
Nitrogen, Nitrate (As N)	1.051	0.1	0	0	0	0	0	1.064	1.24	20	

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Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *02-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508177
Project: S Outfall S.W. from 8/15/05 event

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID **0508177-01C MS** Batch ID: **R16340** Test Code: **E300** Units: **mg/L** Analysis Date **8/17/2005** Prep Date
Client ID: **South Outfall** Run ID: **LC_050817A** SeqNo: **389478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.981	0.1	1	0.038	94.3	80	120	0			
Nitrogen, Nitrate (As N)	3.75	0.1	2.5	1.064	107	80	120	0			

Sample ID **0508177-01C MSD** Batch ID: **R16340** Test Code: **E300** Units: **mg/L** Analysis Date **8/17/2005** Prep Date
Client ID: **South Outfall** Run ID: **LC_050817A** SeqNo: **389479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	1.004	0.1	1	0.038	96.6	80	120	0			
Nitrogen, Nitrate (As N)	3.838	0.1	2.5	1.064	111	80	120	0			

7 / 9

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *02-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508177
Project: S Outfall S.W. from 8/15/05 event

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS**	Batch ID: **R16340**	Test Code: **E300**	Units: **mg/L**	Analysis Date **8/17/2005**	Prep Date
Client ID:		Run ID: **LC_050817A**		SeqNo: **389473**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.9562	0.1	1	0	95.6	90	110	0			
Nitrogen, Nitrate (As N)	2.437	0.1	2.5	0	97.5	90	110	0			

Sample ID **LCS-8596**	Batch ID: **8596**	Test Code: **E413.2**	Units: **mg/L**	Analysis Date **8/26/2005**	Prep Date **8/23/2005**
Client ID:		Run ID: **BUCK IR_050826A**		SeqNo: **392550**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease, Total Recoverable	5.17	1	5	0	103	76.7	111	0			

Sample ID **LCSD-8596**	Batch ID: **8596**	Test Code: **E413.2**	Units: **mg/L**	Analysis Date **8/26/2005**	Prep Date **8/23/2005**
Client ID:		Run ID: **BUCK IR_050826A**		SeqNo: **392556**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease, Total Recoverable	4.76	1	5	0	95.2	76.7	111	5.17	8.26	20	

Sample ID **LCS-8581**	Batch ID: **8598**	Test Code: **E420.3**	Units: **µg/L**	Analysis Date **8/23/2005**	Prep Date **8/23/2005**
Client ID:		Run ID: **PHENOL SPEC._05082**		SeqNo: **392113**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics, Total Recoverable	16.7	3	20	0	83.5	70	130	0			

Sample ID **LCS-8629**	Batch ID: **8629**	Test Code: **E351.3**	Units: **mg/L**	Analysis Date **6/29/2005**	Prep Date **8/26/2005**
Client ID:		Run ID: **WC_050629G**		SeqNo: **393208**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	20.44	1	20	0	102	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 8/17/2005

Work Order Number 0508177 | Received by AT

Checklist completed by _____ (Signature) 8/17/05 (Date)

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: South Outfall Stormwater Sample from 8-15-05 event
Project #:
Project Manager: Steve Mona
Sampler: Steve Mona
Sample Temperature: 5°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	BOD, COD, NO_2 NO_3, TKN	TSS, Phenols	Total Phosphorous	Oil & Grease	Air Bubbles or Headspace (Y or N)
8/16/05	1000	H_2O	So. Outfall 81605				0508177-1													X	X	X	X	

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
8/17/05	0800	Steve Mona	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
			8/17/05 0758

Remarks:

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

LABORATORY REPORT

Client
Giant Refining Company (Gallup)
Route 3, Box 7
Gallup, NM 87301

Order Number
0512107

Project Number
Pilot Eff 4th Qtr 2005

Issued
Thursday, January 05, 2006

Total Number of Pages
7

Approved By:

Bassam Youssef
Laboratory Manager

NELAC Accreditation #E87688

A2LA ISO/IEC 17025 Accreditation #0724.01

Sample Summary

Client: Giant Refining Company (Gallup)
Order Number: 0512107

Laboratory ID	Client ID	Matrix	Sampling Date
0512107-01	Pilot Eff 4th Qtr	Liquid	12/28/05

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Report Narrative

Client: Giant Refining Company (Gallup)
Order Number: 0512107

No problems were encountered during analysis of this order number, except as noted.

The test results meet the requirements of the NELAC and A2LA standards, except where noted.
The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the client. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the client for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

January 05, 2006

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 12/28/05
Date Received: 12/29/05
Project #: Pilot Eff 4th Qtr 2005
Client ID #: Pilot Eff 4th Qtr
Laboratory ID #: 0512107-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 12/30/05

TCLP Metals

Parameter	Reporting Limit (mg/L)	Results (mg/L)	Regulatory Level (mg/L)
Arsenic	0.50	<0.5	5.0
Barium	5.0	<5.0	100.0
Cadmium	0.10	<0.1	1.0
Chromium	0.20	<0.2	5.0
Lead	0.50	<0.5	5.0
Mercury	0.0020	<0.002	0.20
Selenium	0.50	<0.5	1.0
Silver	0.50	<0.5	5.0

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

January 05, 2006

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 12/28/05
Date Received: 12/29/05
Project #: Pilot Eff 4th Qtr 2005
Client ID #: Pilot Eff 4th Qtr
Laboratory ID #: 0512107-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 12/30/05

TCLP Volatiles

Parameter	Reporting Limit (mg/L)	Results (mg/L)	Regulatory Level (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon Tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

January 05, 2006

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 12/28/05
Date Received: 12/29/05
Project #: Pilot Eff 4th Qtr 2005
Client ID #: Pilot Eff 4th Qtr
Laboratory ID #: 0512107-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 1/4/06

TCLP BNA

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6-Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	5.0	<5.0	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

January 05, 2006

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 12/28/05
Date Received: 12/29/05
Project #: Pilot Eff 4th Qtr 2005
Client ID #: Pilot Eff 4th Qtr
Laboratory ID #: 0512107-01
Matrix: Liquid
Analyst: KMG

Parameter	Date of Analysis	Results	Units	Reporting Limit	Method
Biochemical Oxygen	12/30/05	4100.0	mg/L	5.0	EPA 405.1

Summit Environmental Technologies, Inc.
Cooler Receipt Form

Client: Grant

Order Number: 05/2107

Date Received: 12-29-05

Time Received: 9am

Number of Coolers/Boxes/Envelopes: 1

Logged in by: LM

Shipper (circle): FED EX UPS DHL Airborne US Postal Courier Walk-in Pickup Other:

Packaging (circle): Peanuts Bubble Wrap Paper Foam None Other:

				Sample ID	pH	Sample ID	pH
Tape on cooler/box:	(Y)	N	N/A				
Custody Seals intact:	Y	N	(N/A)				
C-O-C in plastic:	(Y)	N	N/A				
Ice (Blue ice) present:	Y	N	N/A				
Temperature:	5 °C		N/A				
C-O-C filled out properly:	(Y)	N	N/A				
Samples in separate bags:	(Y)	N	N/A				
Sample containers intact*:	(Y)	N	N/A				
Sample label(s) complete (ID, date, time, etc.):	(Y)	N	N/A				
Label(s) agree with C-O-C:	(Y)	N	N/A				
Correct containers used:	(Y)	N	N/A				
Samples preserved properly:	Y	N	(N/A)				
Sufficient sample received:	(Y)	N	N/A				
Bubbles present in 40 mL vials:	Y	N	(N/A)				

*If no, list broken sample(s):

Was client contacted about samples: Y N

Will client send new samples: Y N

Client contact:

Date/Time:

Comments:

Rev. 5

Environmentally Hazardous Substances

Infectious Material

Summit Environmental Technologies, Inc.
595 East Tallmadge Avenue
Akron, Ohio 44310 Tel: 330.253.8211 Fax: 330.253.4489

Analysis Request/Chain

For Summit Environmental Technologies, I

Page 1 of 1

Client Name: Giant Refining Company	Project Name: Pilot Eff. 4th QTR 2005
Client Address: Route 3 Box 7 Gallup, NM 87301	Project Address:
Client Phone No.: 505 722 3833	Report to:
Client Fax No.: 505 722 0210 Please Fax Results ✓ ☐	PO#:
Contact Person: Steve Morris	Quote No.:
Sampled by:	Check if Ohio VAP samples ✓ ☐

#	Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: S=Solid, L=Liquid, O=Oil SL=Sludge, A=Air	Preservative	Number of Containers	Analytic: TCLP Vola. Semivol.
1.	Pilot Effluent 4th QTR.	12/28/05	0830	X		L			X

Relinquished by:	Date	Time	Received by:	Date	Time
Steve Morris	12-28-05	0900			

Received in lab by:	Date	Time
Linda Moore	12-29-05	9am

Rush Requested: _____ Days
Must be approved by lab manager

Notes/Comments: Caution Sewage

White and yellow pages should accompany samples to the laboratory. The client retains the pink page.

Summit Environmental Technologies, Inc.
595 East Tallmadge Avenue
Akron, Ohio 44310 Tel: 330.253.8211 Fax: 330.253.4489

Analysis Request/Chain of Custody

For Summit Environmental Technologies, Inc. use only

Page 1 of 1. SET No.

Client Name: Giant Refining Company	Project Name: Pilot Eff. 4th QTR 2005
Client Address: Route 3 Box 7 Gallup, NM 87301	Project Address:
Client Phone No.: 505 722 3833	Report to:
Client Fax No.: 505 722 0210 Please Fax Results ✓ ☐	PO#:
Contact Person: Steve Morris	Quote No.:
Sampled by:	Check if Ohio VAP samples ✓ ☐

#	Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: S=Solid, L=Liquid, O=Oil SL=Sludge, A=Air	Preservative	Number of Containers	Analytical Parameters and Methods: TCLP Vols. + Semivols + Metals	Analytical Parameters and Methods: BOD
1.	Pilot Effluent 4th QTR.	12/28/05	0830	X		L			X	X

0512107.01

Relinquished by:	Date	Time	Received by:	Date	Time
Steve Morris	12-28-05	0900			

Received in lab by:	Date	Time	Rush Requested: _____ Days
Linda Moore	12-29-05	9am	Must be approved by lab manager

Notes/Comments: Caution: Domestic Sewage

White and yellow pages should accompany samples to the laboratory. The client retains the pink page.

20558

SUMMIT ENVIRONMENTAL TECHNOLOGIES
555 E. Tallmadge Avenue
Akron OH 44310

Phone No. (330) 253-8211

INVOICE

Invoice	06-0592
Date	1/10/2006
Page	1

Bill To:

Giant Refining Company (Gallup)
Route 3 Box 7
Gallup NM 87301

Purchase Order No.	Salesperson ID	Project Name	Lab ID	Payment Terms
S.Morris	-	Pilot Eff 4th Qtr 2005	Set (0512107-01, 592)	Net 30

Qty	Description	Unit Price	Ext. Price
1	BOD, TCLP BNA, TCLP Metals, & TCLP Volatiles	$585.00	$585.00
		Total	$585.00

This account is subject to a 1.5% per month late charge on any past due invoices

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 20, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Pilot Station Effluent 12-1-2005 Order No.: 0512010

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/1/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: Pilot Effluent
Lab Order: 0512010
Collection Date: 12/1/2005 9:00:00 AM
Project: Pilot Station Effluent 12-1-2005
Lab ID: 0512010-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						Analyst: **CKL**
Petroleum Hydrocarbons, TR	5.8	2.0		mg/L	1	12/7/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	6.2	3.0		mg/L	1	12/9/2005 12:45:02 PM
Motor Oil Range Organics (MRO)	ND	15		mg/L	1	12/9/2005 12:45:02 PM
Surr: DNOP	116	58-140		%REC	1	12/9/2005 12:45:02 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.095	0.050		mg/L	1	12/14/2005 3:18:29 PM
Surr: BFB	116	79.7-118		%REC	1	12/14/2005 3:18:29 PM
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	1.5	1.0		µg/L	1	12/7/2005
Toluene	6.8	1.0		µg/L	1	12/7/2005
Ethylbenzene	ND	1.0		µg/L	1	12/7/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/7/2005
1,2,4-Trimethylbenzene	1.1	1.0		µg/L	1	12/7/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/7/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/7/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/7/2005
Naphthalene	ND	2.0		µg/L	1	12/7/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	12/7/2005
2-Methylnaphthalene	4.3	4.0		µg/L	1	12/7/2005
Acetone	ND	10		µg/L	1	12/7/2005
Bromobenzene	ND	1.0		µg/L	1	12/7/2005
Bromochloromethane	ND	1.0		µg/L	1	12/7/2005
Bromodichloromethane	ND	1.0		µg/L	1	12/7/2005
Bromoform	ND	1.0		µg/L	1	12/7/2005
Bromomethane	ND	2.0		µg/L	1	12/7/2005
2-Butanone	ND	10		µg/L	1	12/7/2005
Carbon disulfide	ND	10		µg/L	1	12/7/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	12/7/2005
Chlorobenzene	ND	1.0		µg/L	1	12/7/2005
Chloroethane	ND	2.0		µg/L	1	12/7/2005
Chloroform	4.2	1.0		µg/L	1	12/7/2005
Chloromethane	ND	1.0		µg/L	1	12/7/2005
2-Chlorotoluene	ND	1.0		µg/L	1	12/7/2005
4-Chlorotoluene	ND	1.0		µg/L	1	12/7/2005
cis-1,2-DCE	ND	1.0		µg/L	1	12/7/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/7/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/7/2005
Dibromochloromethane	ND	1.0		µg/L	1	12/7/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: Pilot Effluent
Lab Order: 0512010
Collection Date: 12/1/2005 9:00:00 AM
Project: Pilot Station Effluent 12-1-2005
Lab ID: 0512010-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dibromomethane	ND	2.0		µg/L	1	12/7/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/7/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/7/2005
1,1-Dichloroethane	ND	2.0		µg/L	1	12/7/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	12/7/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	12/7/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	12/7/2005
2,2-Dichloropropane	ND	2.0		µg/L	1	12/7/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	12/7/2005
Hexachlorobutadiene	ND	2.0		µg/L	1	12/7/2005
2-Hexanone	ND	10		µg/L	1	12/7/2005
Isopropylbenzene	ND	1.0		µg/L	1	12/7/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	12/7/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	12/7/2005
Methylene Chloride	ND	3.0		µg/L	1	12/7/2005
n-Butylbenzene	ND	1.0		µg/L	1	12/7/2005
n-Propylbenzene	ND	1.0		µg/L	1	12/7/2005
sec-Butylbenzene	ND	1.0		µg/L	1	12/7/2005
Styrene	ND	1.0		µg/L	1	12/7/2005
tert-Butylbenzene	ND	1.0		µg/L	1	12/7/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/7/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/7/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/7/2005
trans-1,2-DCE	ND	1.0		µg/L	1	12/7/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/7/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/7/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/7/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/7/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/7/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	12/7/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/7/2005
Vinyl chloride	ND	1.0		µg/L	1	12/7/2005
Xylenes, Total	7.1	1.0		µg/L	1	12/7/2005
Surr: 1,2-Dichloroethane-d4	89.7	69.9-130		%REC	1	12/7/2005
Surr: 4-Bromofluorobenzene	91.6	71.2-123		%REC	1	12/7/2005
Surr: Dibromofluoromethane	98.4	73.9-134		%REC	1	12/7/2005
Surr: Toluene-d8	92.9	81.9-122		%REC	1	12/7/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	12/14/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: Pilot Effluent
Lab Order: 0512010
Collection Date: 12/1/2005 9:00:00 AM
Project: Pilot Station Effluent 12-1-2005
Lab ID: 0512010-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Acenaphthylene	ND	50		µg/L	1	12/14/2005
Aniline	ND	100		µg/L	1	12/14/2005
Anthracene	ND	50		µg/L	1	12/14/2005
Azobenzene	ND	50		µg/L	1	12/14/2005
Benz(a)anthracene	ND	75		µg/L	1	12/14/2005
Benzo(a)pyrene	ND	75		µg/L	1	12/14/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	12/14/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	12/14/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	12/14/2005
Benzoic acid	ND	250		µg/L	1	12/14/2005
Benzyl alcohol	ND	100		µg/L	1	12/14/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	12/14/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	12/14/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	12/14/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	12/14/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	12/14/2005
Butyl benzyl phthalate	ND	75		µg/L	1	12/14/2005
Carbazole	ND	50		µg/L	1	12/14/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	12/14/2005
4-Chloroaniline	ND	100		µg/L	1	12/14/2005
2-Chloronaphthalene	ND	50		µg/L	1	12/14/2005
2-Chlorophenol	ND	50		µg/L	1	12/14/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	12/14/2005
Chrysene	ND	75		µg/L	1	12/14/2005
Di-n-butyl phthalate	ND	50		µg/L	1	12/14/2005
Di-n-octyl phthalate	ND	75		µg/L	1	12/14/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	12/14/2005
Dibenzofuran	ND	50		µg/L	1	12/14/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	12/14/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	12/14/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	12/14/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	12/14/2005
Diethyl phthalate	ND	50		µg/L	1	12/14/2005
Dimethyl phthalate	ND	50		µg/L	1	12/14/2005
2,4-Dichlorophenol	ND	50		µg/L	1	12/14/2005
2,4-Dimethylphenol	ND	50		µg/L	1	12/14/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	12/14/2005
2,4-Dinitrophenol	ND	250		µg/L	1	12/14/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	12/14/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	12/14/2005
Fluoranthene	ND	50		µg/L	1	12/14/2005
Fluorene	ND	50		µg/L	1	12/14/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: Pilot Effluent
Lab Order: 0512010
Collection Date: 12/1/2005 9:00:00 AM
Project: Pilot Station Effluent 12-1-2005
Lab ID: 0512010-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobenzene	ND	50		µg/L	1	12/14/2005
Hexachlorobutadiene	ND	50		µg/L	1	12/14/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	12/14/2005
Hexachloroethane	ND	50		µg/L	1	12/14/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	12/14/2005
Isophorone	ND	50		µg/L	1	12/14/2005
2-Methylnaphthalene	ND	50		µg/L	1	12/14/2005
2-Methylphenol	ND	75		µg/L	1	12/14/2005
3+4-Methylphenol	250	100		µg/L	1	12/14/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	12/14/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	12/14/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	12/14/2005
Naphthalene	ND	50		µg/L	1	12/14/2005
2-Nitroaniline	ND	250		µg/L	1	12/14/2005
3-Nitroaniline	ND	250		µg/L	1	12/14/2005
4-Nitroaniline	ND	100		µg/L	1	12/14/2005
Nitrobenzene	ND	50		µg/L	1	12/14/2005
2-Nitrophenol	ND	75		µg/L	1	12/14/2005
4-Nitrophenol	ND	250		µg/L	1	12/14/2005
Pentachlorophenol	ND	250		µg/L	1	12/14/2005
Phenanthrene	ND	50		µg/L	1	12/14/2005
Phenol	ND	50		µg/L	1	12/14/2005
Pyrene	ND	75		µg/L	1	12/14/2005
Pyridine	ND	150		µg/L	1	12/14/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	12/14/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	12/14/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	12/14/2005
Surr: 2,4,6-Tribromophenol	89.3	16.6-150		%REC	1	12/14/2005
Surr: 2-Fluorobiphenyl	79.0	19.6-134		%REC	1	12/14/2005
Surr: 2-Fluorophenol	53.7	9.54-113		%REC	1	12/14/2005
Surr: 4-Terphenyl-d14	89.1	22.7-145		%REC	1	12/14/2005
Surr: Nitrobenzene-d5	72.6	14.6-134		%REC	1	12/14/2005
Surr: Phenol-d5	39.8	10.7-80.3		%REC	1	12/14/2005
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
1-Methylnaphthalene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
2-Methylnaphthalene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
Acenaphthylene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
Acenaphthene	ND	2.5		µg/L	1	12/12/2005 4:38:28 PM
Fluorene	ND	0.80		µg/L	1	12/12/2005 4:38:28 PM
Phenanthrene	ND	0.60		µg/L	1	12/12/2005 4:38:28 PM
Anthracene	ND	0.60		µg/L	1	12/12/2005 4:38:28 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: Pilot Effluent
Lab Order: 0512010
Collection Date: 12/1/2005 9:00:00 AM
Project: Pilot Station Effluent 12-1-2005
Lab ID: 0512010-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Fluoranthene	ND	0.30		µg/L	1	12/12/2005 4:38:28 PM
Pyrene	ND	0.30		µg/L	1	12/12/2005 4:38:28 PM
Benz(a)anthracene	ND	0.020		µg/L	1	12/12/2005 4:38:28 PM
Chrysene	ND	0.20		µg/L	1	12/12/2005 4:38:28 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	12/12/2005 4:38:28 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	12/12/2005 4:38:28 PM
Benzo(a)pyrene	0.020	0.020		µg/L	1	12/12/2005 4:38:28 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	12/12/2005 4:38:28 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	12/12/2005 4:38:28 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	12/12/2005 4:38:28 PM
Surr: Benzo(e)pyrene	54.3	54-102		%REC	1	12/12/2005 4:38:28 PM
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	12/7/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	12/6/2005 12:33:53 PM
Barium	0.046	0.020		mg/L	1	12/6/2005 12:33:53 PM
Cadmium	ND	0.0020		mg/L	1	12/6/2005 12:33:53 PM
Chromium	ND	0.0060		mg/L	1	12/6/2005 12:33:53 PM
Lead	ND	0.0050		mg/L	1	12/6/2005 12:33:53 PM
Selenium	ND	0.050		mg/L	1	12/6/2005 12:33:53 PM
Silver	ND	0.0050		mg/L	1	12/6/2005 12:33:53 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

ASSAIGAI
ANALYTICAL
LABORATORIES, INC.
4301 Masthead NE, Ste. A • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259
3332 Wedgewood, Ste. N • El Paso, Texas 79925 • (915) 593-6000 • FAX (915) 593-7820
127 Eastgate Drive, 212-C • Los Alamos, New Mexico 87544 • (505) 662-2558

Explanation of codes	
B	*Analyte Detected in Method Blank*
E	*Result is Estimated*
H	*Analyzed Out of Hold Time*
N	*Tentatively Identified Compound*
S	*Subcontracted*
1-9	*See Footnote*

HALL ENVIRONMENTAL
attn: **ANDY FREEMAN**
4901 HAWKINS NE, SUITE D
ALBUQUERQUE NM 87109-4372

STANDARD

Assaigai Analytical Laboratories, Inc.

Certificate of Analysis

All samples are reported on an "as received" basis, unless otherwise noted (i.e. - Dry Weight).

Client: **HALL ENVIRONMENTAL**
Project: **0512010**
Order: **0512020 HAL03** Receipt: **12-01-05**

William P. Biava: President of Assaigai Analytical Laboratories, Inc.

Sample: ***PILOT EFFLUENT*** Collected: *12-01-05 9:00:00* By:
Matrix: ***AQUEOUS***

QC Group	Run Sequence	CAS #	Analyte	Result	Units	Dilution Factor	Detection Limit	Code	Prep Date	Run Date
0512020-0001A		**EPA 405.1 Biochemical Oxygen Demand**					By:	MKM		
BOD05148	WC.2005.3272.9	10-26-4	Biochemical Oxygen Demand	504	mg/L	1	2		12-02-05	12-07-05
0512020-0001B		**EPA 410.1 Chemical Oxygen Demand**					By:	MKM		
WC05.3215	WC.2005.3217.6	C-004	Chemical Oxygen Demand	828	mg/L	1	10		12-06-05	12-06-05

Unless otherwise noted, all samples were received in acceptable condition and all sampling was performed by client or client representative. Sample result of ND indicates Not Detected, ie result is less than the sample specific Detection Limit. Sample specific Detection Limit is determined by multiplying the sample Dilution Factor by the listed Reporting Detection Limit. All results relate only to the items tested. Any miscellaneous workorder information or foonotes will appear below.

Analytical results are not corrected for method blank or field blank contamination.

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PRODUCT ENDORSEMENT BY THE NATIONAL V[illegible] LABORATORY ACCREDITATION PROGRAM

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512010
Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9320** Batch ID: **9320** Test Code: **E418.1** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date: **12/2/2005**
Client ID: Run ID: **BUCK IR_051207A** SeqNo: **429683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	1									

Sample ID: **MB-9336** Batch ID: **9336** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/6/2005 2:02:14 PM** Prep Date: **12/6/2005**
Client ID: Run ID: **FID(17A) 2_051206A** SeqNo: **429110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.029	0	1	0	103	58	140	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17607** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/14/2005 9:37:13 AM** Prep Date:
Client ID: Run ID: **PIDFID_051214A** SeqNo: **432398**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.0116	0.05									J
Surr: BFB	22.73	0	20	0	114	79.7	118	0			

7/22

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0512010
Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9345** Batch ID: **9345** Test Code: **SW8270C** Units: **µg/L** Analysis Date: **12/14/2005** Prep Date: **12/7/2005**
Client ID: Run ID: **ELMO_051213B** SeqNo: **433048**

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									

Qualifiers:
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J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512010
Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT
Method Blank

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
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

9/22

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512010
Project: Pilot Station Effluent 12-1-2005

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50						
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						
Surr: 2,4,6-Tribromophenol	77.26	0	200	0	38.6	16.6	150	0
Surr: 2-Fluorobiphenyl	67.26	0	100	0	67.3	19.6	134	0
Surr: 2-Fluorophenol	155.4	0	200	0	77.7	9.54	113	0
Surr: 4-Terphenyl-d14	82.32	0	100	0	82.3	22.7	145	0
Surr: Nitrobenzene-d5	72.52	0	100	0	72.5	14.6	134	0
Surr: Phenol-d5	124.8	0	200	0	62.4	10.7	80.3	0

10/22

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Analytical Laboratories

LABORATORY REPORT

Client
Giant Refining Company (Gallup)
Route 3, Box 7
Gallup, NM 87301

Order Number
0505106

Project Number
Pilot TC Eff.

Issued
Tuesday, June 21, 2005

Total Number of Pages
7

Approved By :

Bassam Youssef
Laboratory Manager

NELAC Accreditation #E87688

A2LA ISO/IEC 17025 Accreditation #0724.01

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Analytical Laboratories

2

Sample Summary

Client: Giant Refining Company (Gallup)
Order Number: 0505106

Laboratory ID	Client ID	Matrix	Sampling Date
0505106-01	2Q05	Liquid	6/9/05

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Analytical Laboratories

Report Narrative

Client: Giant Refining Company (Gallup)
Order Number: 0505106

No problems were encountered during analysis of this order number, except as noted.

The test results meet the requirements of the NELAC and A2LA standards, except where noted.
The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the client. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the client for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

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4

June 21, 2005

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 6/14/05

TCLP Metals

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
Arsenic	0.50	<0.5	5.0
Barium	5.0	<5.0	100.0
Cadmium	0.10	<0.1	1.0
Chromium	0.20	<0.2	5.0
Lead	0.50	<0.5	5.0
Mercury	0.020	<0.02	0.20
Selenium	0.50	<0.5	1.0
Silver	0.50	<0.5	5.0

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Analytical Laboratories

5

June 21, 2005

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 6/14/05

TCLP Volatiles

Parameter	Reporting Limit (mg/L)	Results (mg/L)	Regulatory Level (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon Tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

550

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June 21, 2005 6

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Extraction Method: 1311
Date of Analysis: 6/15/05

TCLP BNA

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6--Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	5.0	<5.0	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

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Analytical Laboratories

June 21, 2005

7

Client: Giant Refining Company (Gallup)
Address: Route 3, Box 7
Gallup, NM 87301

Date Collected: 6/9/05
Date Received: 6/10/05
Project #: Pilot TC Eff.
Client ID #: 2Q05
Laboratory ID #: 0505106-01
Matrix: Liquid
Analyst: BY

Parameter	Date of Analysis	Reporting Limit (mg/L)	Results (mg/L)	Method
Biochemical Oxygen Dema	6/11/05	5.0	2850.0	EPA 405.1

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
595 EAST TALLMADGE AVENUE
AKRON, OHIO 44310
TEL: 330/253-8211; FAX: 330/253-4489

CHAIN OF CUSTODY

A2LA CERTIFICATION #: 0724-01

s.e.t.

PROJECT NAME: Pilot TC Effluent PROJECT LOCATION: Giant-Ciniza Refinery PO#:

CLIENT NAME: Giant Steve Morris CLIENT ADDRESS: Route 3 Box 7 Gallup NM 87301

CONTACT PERSON: Steve Morris PHONE #: 505 722 3833 FAX #: 505 722 0210 SAMPLED BY: Steve Morris

#	SAMPLE ID#	MEDIA	TIME	DATE	BTEX 8020	GRO 8015M	DRO 8015M	TPH 418.1	TCLP METALS	TCLP VOCS	TCLP BNAS	TCLP PEST/HERB	OTHERS
1	Pilot TC Effluent 2005	H_2O	0900	6/9/05									TCLP Vols, Semivols, and Metals BOD

0505106 01

SPECIAL INSTRUCTIONS: TCLP Vols, Semivols, + Metals – BOD

RELINQUISHED BY: Steve Morris DATE: 6-8-05 RECEIVED BY: _____ DATE: _____

RECEIVED AT THE LAB BY: Linda Moore DATE: 6/10/05 930

2005/JUN/21/TUE 01:37 PM SUMMIT ENVIRONMENT FAX No. 330 253 4489 P. 009/009

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

January 04, 2006

Ed Riege
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 12/19/2005 Order No.: 0512255

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 1 sample on 12/21/2005 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

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0512255
Collection Date: 12/19/2005 2:00:00 PM
Project: AL-2 to EP-1 Week of 12/19/2005
Lab ID: 0512255-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	160	10		mg/L	10	12/22/2005 12:22:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/L	10	12/22/2005 12:22:36 PM
Surr: DNOP	131	58-140		%REC	10	12/22/2005 12:22:36 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.69	0.50		mg/L	10	12/23/2005 2:15:07 PM
Surr: BFB	111	79.7-118		%REC	10	12/23/2005 2:15:07 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	10	12/23/2005 2:15:07 PM
Benzene	31	10		µg/L	10	12/23/2005 2:15:07 PM
Toluene	110	10		µg/L	10	12/23/2005 2:15:07 PM
Ethylbenzene	18	10		µg/L	10	12/23/2005 2:15:07 PM
Xylenes, Total	140	30		µg/L	10	12/23/2005 2:15:07 PM
Surr: 4-Bromofluorobenzene	110	82.2-119		%REC	10	12/23/2005 2:15:07 PM
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0049	0.00020		mg/L	1	1/3/2006
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	12/29/2005 10:50:04 AM
Barium	0.084	0.020		mg/L	1	12/29/2005 10:50:04 AM
Cadmium	ND	0.0020		mg/L	1	12/29/2005 10:50:04 AM
Chromium	0.0093	0.0060		mg/L	1	12/29/2005 10:50:04 AM
Lead	0.0057	0.0050		mg/L	1	12/29/2005 10:50:04 AM
Selenium	ND	0.050		mg/L	1	12/29/2005 10:50:04 AM
Silver	ND	0.0050		mg/L	1	12/29/2005 10:50:04 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Work Order: 0512255
Project: AL-2 to EP-1 Week of 12/19/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9446** Batch ID: **9446** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/22/2005 10:44:08 A** Prep Date: **12/22/2005**
Client ID: Run ID: **FID(17A) 2_051222A** SeqNo: **434873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.189	0	1	0	119	58	140	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17712** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/23/2005 9:01:35 AM** Prep Date:
Client ID: Run ID: **PIDFID_051223A** SeqNo: **435345**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	21.83	0	20	0	109	79.7	118	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17712** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/23/2005 9:01:35 AM** Prep Date:
Client ID: Run ID: **PIDFID_051223A** SeqNo: **435318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Xylenes, Total	ND	3									
Surr: 4-Bromofluorobenzene	20.76	0	20	0	104	82.2	119	0			

Sample ID: **MB-9499** Batch ID: **9499** Test Code: **SW7470** Units: **mg/L** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103A** SeqNo: **437349**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512255
Project: AL-2 to EP-1 Week of 12/19/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9470** Batch ID: **9470** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/29/2005 10:28:56 A** Prep Date: **12/28/2005**
Client ID: Run ID: **ICP_051229A** SeqNo: **436445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	0.000459	0.02									J
Cadmium	0.0005448	0.002									J
Chromium	ND	0.006									
Lead	0.004693	0.005									J
Selenium	ND	0.05									
Silver	0.002002	0.005									J

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Work Order: 0512255
Project: AL-2 to EP-1 Week of 12/19/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9446** Batch ID: **9446** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/22/2005 11:17:11 A** Prep Date: **12/22/2005**
Client ID: Run ID: **FID(17A) 2_051222A** SeqNo: **434874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.863	1	5	0	137	81.2	149	0			

Sample ID: **LCSD-9446** Batch ID: **9446** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/22/2005 11:49:54 A** Prep Date: **12/22/2005**
Client ID: Run ID: **FID(17A) 2_051222A** SeqNo: **435128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.922	1	5	0	138	81.2	149	6.863	0.855	23	

Sample ID: **GRO lcs 2.5ug** Batch ID: **R17712** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/24/2005 1:58:11 AM** Prep Date:
Client ID: Run ID: **PIDFID_051223A** SeqNo: **435346**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.482	0.05	0.5	0	96.4	82.6	114	0			

Sample ID: **GRO lcsd 2.5ug** Batch ID: **R17712** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/24/2005 2:28:22 AM** Prep Date:
Client ID: Run ID: **PIDFID_051223A** SeqNo: **435347**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4652	0.05	0.5	0	93.0	82.6	114	0.482	3.55	8.39	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512255
Project: AL-2 to EP-1 Week of 12/19/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **BTEX lcs 100ng** Batch ID: **R17712** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/23/2005 1:35:08 PM** Prep Date:
Client ID: Run ID: **PIDFID_051223A** SeqNo: **435319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21.3	2.5	20	0	106	64.5	133	0			
Benzene	19.41	1	20	0	97.0	88.5	114	0			
Toluene	19.71	1	20	0	98.5	87.2	114	0			
Ethylbenzene	20.08	1	20	0	100	88.6	113	0			
Xylenes, Total	40.78	3	40	0	102	83.3	114	0			

Sample ID: **LCS-9499** Batch ID: **9499** Test Code: **SW7470** Units: **mg/L** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103A** SeqNo: **437350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004489	0.0002	0.005	0	89.8	80	120	0			

Sample ID: **LCSD-9499** Batch ID: **9499** Test Code: **SW7470** Units: **mg/L** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103A** SeqNo: **437370**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004712	0.0002	0.005	0	94.2	80	120	0.004489	4.84	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512255
Project: AL-2 to EP-1 Week of 12/19/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9470** Batch ID: **9470** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/29/2005 10:31:17 A** Prep Date: **12/28/2005**
Client ID: Run ID: **ICP_051229A** SeqNo: **436446**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4794	0.02	0.5	0	95.9	80	120	0			
Barium	0.4626	0.02	0.5	0.000459	92.4	80	120	0			
Cadmium	0.4505	0.002	0.5	0.0005448	90.0	80	120	0			
Chromium	0.4619	0.006	0.5	0	92.4	80	120	0			
Lead	0.4595	0.005	0.5	0.004693	91.0	80	120	0			
Selenium	0.4357	0.05	0.5	0	87.1	80	120	0			
Silver	0.4731	0.005	0.5	0.002002	94.2	80	120	0			

Sample ID: **LCSD-9470** Batch ID: **9470** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/29/2005 10:34:32 A** Prep Date: **12/28/2005**
Client ID: Run ID: **ICP_051229A** SeqNo: **436447**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4852	0.02	0.5	0	97.0	80	120	0.4794	1.21	20	
Barium	0.4681	0.02	0.5	0.000459	93.5	80	120	0.4626	1.19	20	
Cadmium	0.451	0.002	0.5	0.0005448	90.1	80	120	0.4505	0.104	20	
Chromium	0.4652	0.006	0.5	0	93.0	80	120	0.4619	0.709	20	
Lead	0.4637	0.005	0.5	0.004693	91.8	80	120	0.4595	0.912	20	
Selenium	0.432	0.05	0.5	0	86.4	80	120	0.4357	0.860	20	
Silver	0.4748	0.005	0.5	0.002002	94.6	80	120	0.4731	0.350	20	

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Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 12/21/2005

Work Order Number 0512255 | Received by GLS

Checklist completed by Signature [signature] Date 12/21/05

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: GIANT REFINING
COMPANY - CINIZA
Address: ROUTE 3 BOX 7
GALLUP, NM 87301

Project Name: AL-2 TO EP-1
WEEK OF 12-19-05
Project #:
Project Manager: ED RIEGE

Phone #: 505-722-3833
Fax #: 505-722-0210

Sampler: JOHNNY SANCHEZ
Sample Temperature: 4°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
12-19-05	2:00 PM	H_2O	AL-2 to EP-1					0512255 -1

BTEX + MTBE + [illegible] (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 (totals)	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
X		X					X									

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
12-20-05	0900	Johnny Sanchez		
				12-21-05 @ 1320
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

January 04, 2006

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 12/12/2005 Order No.: 0512189

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/15/2005 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

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Project: AL-2 to EP-1 Week of 12/12/2005
Lab Order: 0512189

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0512189
Collection Date: 12/13/2005 10:00:00 AM
Project: AL-2 to EP-1 Week of 12/12/2005
Lab ID: 0512189-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	3300	75		mg/L	25	12/21/2005 5:49:02 AM
Motor Oil Range Organics (MRO)	ND	380		mg/L	25	12/21/2005 5:49:02 AM
Surr: DNOP	0	58-140	S	%REC	25	12/21/2005 5:49:02 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	2.5	1.0		mg/L	20	12/22/2005 6:04:10 PM
Surr: BFB	136	79.7-118	S	%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	97	50		µg/L	20	12/22/2005 6:04:10 PM
Benzene	34	20		µg/L	20	12/22/2005 6:04:10 PM
Toluene	120	20		µg/L	20	12/22/2005 6:04:10 PM
Ethylbenzene	33	20		µg/L	20	12/22/2005 6:04:10 PM
Xylenes, Total	290	60		µg/L	20	12/22/2005 6:04:10 PM
Surr: 4-Bromofluorobenzene	115	82.2-119		%REC	20	12/22/2005 6:04:10 PM
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0047	0.00020		mg/L	1	1/3/2006
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	12/27/2005 1:59:36 PM
Arsenic	ND	0.020		mg/L	1	12/27/2005 1:59:36 PM
Beryllium	ND	0.0030		mg/L	1	12/27/2005 1:59:36 PM
Cadmium	ND	0.0020		mg/L	1	12/27/2005 1:59:36 PM
Chromium	0.014	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Copper	0.060	0.0060		mg/L	1	12/27/2005 1:59:36 PM
Lead	0.018	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Nickel	0.031	0.010		mg/L	1	12/27/2005 1:59:36 PM
Selenium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Silver	ND	0.0050		mg/L	1	12/27/2005 1:59:36 PM
Thallium	ND	0.050		mg/L	1	12/27/2005 1:59:36 PM
Zinc	3.8	0.50		mg/L	10	12/27/2005 3:31:49 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9435** Batch ID: **9435** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/20/2005 1:01:49 PM** Prep Date: **12/20/2005**
Client ID: Run ID: **FID(17A) 2_051219A** SeqNo: **434124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.202	0	1	0	120	58	140	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17704** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/22/2005 9:00:09 AM** Prep Date:
Client ID: Run ID: **PIDFID_051222A** SeqNo: **435099**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	21.79	0	20	0	109	79.7	118	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17704** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/22/2005 9:00:09 AM** Prep Date:
Client ID: Run ID: **PIDFID_051222A** SeqNo: **435104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Xylenes, Total	ND	3									
Surr: 4-Bromofluorobenzene	20.79	0	20	0	104	82.2	119	0			

Sample ID: **MB-9499** Batch ID: **9499** Test Code: **SW7470** Units: **mg/L** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103A** SeqNo: **437349**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9422** Batch ID: **9422** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/27/2005 1:35:00 PM** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051227A** SeqNo: **435745**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	0.0003774	0.002									J
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	0.0005253	0.005									J
Thallium	ND	0.05									
Zinc	0.004124	0.05									J

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *04-Jan-06*

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9435** Batch ID: **9435** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/20/2005 1:34:36 PM** Prep Date: **12/20/2005**
Client ID: Run ID: **FID(17A) 2_051219A** SeqNo: **434125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.334	1	5	0	127	81.2	149	0			

Sample ID: **LCSD-9435** Batch ID: **9435** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/20/2005 2:07:19 PM** Prep Date: **12/20/2005**
Client ID: Run ID: **FID(17A) 2_051219A** SeqNo: **434161**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.393	1	5	0	128	81.2	149	6.334	0.915	23	

Sample ID: **GRO lcs 2.5ug** Batch ID: **R17704** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/22/2005 10:30:33 A** Prep Date:
Client ID: Run ID: **PIDFID_051222A** SeqNo: **435100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5288	0.05	0.5	0	106	82.6	114	0			

Sample ID: **GRO lcsd 2.5ug** Batch ID: **R17704** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/22/2005 11:00:45 A** Prep Date:
Client ID: Run ID: **PIDFID_051222A** SeqNo: **435101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5524	0.05	0.5	0	110	82.6	114	0.5288	4.37	8.39	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **BTEX lcs 100ng** Batch ID: **R17704** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/22/2005 11:30:58 A** Prep Date:
Client ID: Run ID: **PIDFID_051222A** SeqNo: **435105**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22.01	2.5	20	0	110	64.5	133	0			
Benzene	19.71	1	20	0	98.5	88.5	114	0			
Toluene	19.68	1	20	0	98.4	87.2	114	0			
Ethylbenzene	20.63	1	20	0	103	88.6	113	0			
Xylenes, Total	40.68	3	40	0	102	83.3	114	0			

Sample ID: **LCS-9499** Batch ID: **9499** Test Code: **SW7470** Units: **mg/L** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103A** SeqNo: **437350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004489	0.0002	0.005	0	89.8	80	120	0			

Sample ID: **LCSD-9499** Batch ID: **9499** Test Code: **SW7470** Units: **mg/L** Analysis Date: **1/3/2006** Prep Date: **1/3/2006**
Client ID: Run ID: **MI-LA254_060103A** SeqNo: **437370**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004712	0.0002	0.005	0	94.2	80	120	0.004489	4.84	0	

6/9

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9422** Batch ID: **9422** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/27/2005 1:37:28 PM** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051227A** SeqNo: **435746**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4819	0.01	0.5	0	96.4	80	120	0			
Arsenic	0.4754	0.02	0.5	0	95.1	80	120	0			
Beryllium	0.4948	0.003	0.5	0	99.0	80	120	0			
Cadmium	0.4607	0.002	0.5	0.0003774	92.1	80	120	0			
Chromium	0.4754	0.006	0.5	0	95.1	80	120	0			
Copper	0.4801	0.006	0.5	0	96.0	80	120	0			
Lead	0.4618	0.005	0.5	0	92.4	80	120	0			
Nickel	0.4483	0.01	0.5	0	89.7	80	120	0			
Selenium	0.4319	0.05	0.5	0	86.4	80	120	0			
Silver	0.4736	0.005	0.5	0.0005253	94.6	80	120	0			
Thallium	0.4642	0.05	0.5	0	92.8	80	120	0			
Zinc	0.4481	0.05	0.5	0.004124	88.8	80	120	0			

7 / 9

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512189
Project: AL-2 to EP-1 Week of 12/12/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9422** Batch ID: **9422** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/27/2005 1:40:09 PM** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051227A** SeqNo: **435747**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4748	0.01	0.5	0	95.0	80	120	0.4819	1.47	20	
Arsenic	0.4802	0.02	0.5	0	96.0	80	120	0.4754	1.01	20	
Beryllium	0.485	0.003	0.5	0	97.0	80	120	0.4948	2.01	20	
Cadmium	0.4589	0.002	0.5	0.0003774	91.7	80	120	0.4607	0.393	20	
Chromium	0.4709	0.006	0.5	0	94.2	80	120	0.4754	0.964	20	
Copper	0.4763	0.006	0.5	0	95.3	80	120	0.4801	0.801	20	
Lead	0.46	0.005	0.5	0	92.0	80	120	0.4618	0.393	20	
Nickel	0.4473	0.01	0.5	0	89.5	80	120	0.4483	0.223	20	
Selenium	0.4401	0.05	0.5	0	88.0	80	120	0.4319	1.89	20	
Silver	0.4707	0.005	0.5	0.0005253	94.0	80	120	0.4736	0.607	20	
Thallium	0.4632	0.05	0.5	0	92.6	80	120	0.4642	0.220	20	
Zinc	0.4437	0.05	0.5	0.004124	87.9	80	120	0.4481	0.997	20	

6/8

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 12/15/2005

Work Order Number 0512189 | Received by AT

Checklist completed by _____ (Signature) 12/15/05 (Date)

Matrix | Carrier name Client drop-off

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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3, Box 7 Gallup, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: AL-2 to EP-1 Week of 12-12-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 2

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
12-13-05	10:00A	H_2O	AL-2 to EP-1					052871

ANALYSIS REQUEST

BTEX + MTBE + TPH'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, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	PPL Metals Total				Air Bubbles or Headspace (Y or N)
X		X									X	X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
12-14-05	0900A			12/15/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	1325

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 30, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Annual Pond Samp for Gen Chem Pond #8- Order No.: 0512188

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/15/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *30-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: Pond #8
Lab Order: 0512188
Collection Date: 12/13/2005 10:30:00 AM
Project: Annual Pond Samp for Gen Chem Pond #8-200
Lab ID: 0512188-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	ND	50		mg/L	500	12/28/2005
Chloride	79000	500		mg/L	5000	12/28/2005
Phosphorus, Orthophosphate (As P)	ND	250	H	mg/L	500	12/28/2005
Sulfate	4800	250		mg/L	500	12/28/2005
Nitrate (As N)+Nitrite (As N)	ND	50		mg/L	500	12/28/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	280000	0.20		µmhos/cm	20	12/23/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	200	10		mg/L	10	12/27/2005 3:23:15 PM
Magnesium	4000	200		mg/L	200	12/27/2005 3:27:36 PM
Potassium	7300	200		mg/L	200	12/27/2005 3:27:36 PM
Sodium	47000	500		mg/L	500	12/28/2005 7:53:33 AM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	5.42	0.010		pH units	1	12/16/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512188
Project: Annual Pond Samp for Gen Chem Pond #8-200

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK** Batch ID: **R17637** Test Code: **E300** Units: **mg/L** Analysis Date: **12/15/2005** Prep Date:
Client ID: Run ID: **LC_051215A** SeqNo: **432888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID: **MBLK** Batch ID: **R17744** Test Code: **E300** Units: **mg/L** Analysis Date: **12/28/2005** Prep Date:
Client ID: Run ID: **LC_051228A** SeqNo: **436213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID: **MB-9422** Batch ID: **9422** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/27/2005 1:35:00 PM** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051227A** SeqNo: **435745**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	ND	1									
Magnesium	ND	1									
Potassium	ND	1									
Sodium	0.1097	1									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: *30-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512188
Project: Annual Pond Samp for Gen Chem Pond #8-200

QC SUMMARY REPORT
Sample Duplicate

Sample ID: **0512188-01A DUP** Batch ID: **R17649** Test Code: **E150.1** Units: **pH units** Analysis Date: **12/16/2005** Prep Date:
Client ID: **Pond #8** Run ID: **WC_051216B** SeqNo: **433320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	5.45	0.01	0	0	0	0	0	5.42	0.552	0	

3/6

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *30-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512188
Project: Annual Pond Samp for Gen Chem Pond #8-200

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-ST300-05023** Batch ID: **R17637** Test Code: **E300** Units: **mg/L** Analysis Date: **12/15/2005** Prep Date:
Client ID: Run ID: **LC_051215A** SeqNo: **432892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5066	0.1	0.5	0	101	90	110	0			
Chloride	4.639	0.1	5	0	92.8	90	110	0			
Phosphorus, Orthophosphate (As P)	4.846	0.5	5	0	96.9	90	110	0			
Sulfate	9.573	0.5	10	0	95.7	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.283	0.1	3.5	0	93.8	90	110	0			

Sample ID: **LCS-ST300-05023** Batch ID: **R17744** Test Code: **E300** Units: **mg/L** Analysis Date: **12/28/2005** Prep Date:
Client ID: Run ID: **LC_051228A** SeqNo: **436214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4757	0.1	0.5	0	95.1	90	110	0			
Chloride	4.69	0.1	5	0	93.8	90	110	0			
Phosphorus, Orthophosphate (As P)	4.878	0.5	5	0	97.6	90	110	0			
Sulfate	9.637	0.5	10	0	96.4	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.297	0.1	3.5	0	94.2	90	110	0			

Sample ID: **LCS-9422** Batch ID: **9422** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/27/2005 1:37:28 PM** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051227A** SeqNo: **435746**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	52.21	1	50	0	104	80	120	0			
Magnesium	52.14	1	50	0	104	80	120	0			
Potassium	55.6	1	50	0	111	80	120	0			
Sodium	55.85	1	50	0.1097	111	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

CLIENT: Giant Refining Co
Work Order: 0512188
Project: Annual Pond Samp for Gen Chem Pond #8-200

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9422** Batch ID: **9422** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/27/2005 1:40:09 PM** Prep Date: **12/16/2005**
Client ID: Run ID: **ICP_051227A** SeqNo: **435747**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	50.82	1	50	0	102	80	120	52.21	2.70	20	
Magnesium	50.86	1	50	0	102	80	120	52.14	2.48	20	
Potassium	54.12	1	50	0	108	80	120	55.6	2.69	20	
Sodium	54.56	1	50	0.1097	109	80	120	55.85	2.33	20	

5 / 6

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received: 12/15/2005

Work Order Number 0512188

Received by AT

Checklist completed by _____ 12/15/05
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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3, Box 7 Gallup, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: Annual Pond sample for Gen. Chem. Pond #8 - 2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 2°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
12-13-05	10:30A	H_2O	Pond #8					0512188-1

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen. Chem.				Air Bubbles or Headspace (Y or N)
												X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
12-14-05	0900			12/15/05 12:25
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: Gen. Chem. = Cations, anions, pH, and Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 23, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: SW Separator Water Out 12/7/2005 Order No.: 0512123

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/9/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *23-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0512123
Collection Date: 12/7/2005 10:30:00 AM
Project: SW Separator Water Out 12/7/2005
Lab ID: 0512123-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	11	0.50		mg/L	5	12/9/2005
Chloride	300	2.0		mg/L	20	12/20/2005
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	12/9/2005
Sulfate	1000	10		mg/L	20	12/20/2005
Nitrate (As N)+Nitrite (As N)	2.8	0.50		mg/L	5	12/21/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	2100	50		µg/L	50	12/15/2005
Toluene	1700	50		µg/L	50	12/15/2005
Ethylbenzene	15	10		µg/L	10	12/13/2005
Methyl tert-butyl ether (MTBE)	11	10		µg/L	10	12/13/2005
1,2,4-Trimethylbenzene	320	10		µg/L	10	12/13/2005
1,3,5-Trimethylbenzene	120	10		µg/L	10	12/13/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	12/13/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	12/13/2005
Naphthalene	95	20		µg/L	10	12/13/2005
1-Methylnaphthalene	130	40		µg/L	10	12/13/2005
2-Methylnaphthalene	170	40		µg/L	10	12/13/2005
Acetone	410	100		µg/L	10	12/13/2005
Bromobenzene	ND	10		µg/L	10	12/13/2005
Bromochloromethane	ND	10		µg/L	10	12/13/2005
Bromodichloromethane	ND	10		µg/L	10	12/13/2005
Bromoform	ND	10		µg/L	10	12/13/2005
Bromomethane	ND	20		µg/L	10	12/13/2005
2-Butanone	ND	100		µg/L	10	12/13/2005
Carbon disulfide	ND	100		µg/L	10	12/13/2005
Carbon Tetrachloride	ND	20		µg/L	10	12/13/2005
Chlorobenzene	ND	10		µg/L	10	12/13/2005
Chloroethane	ND	20		µg/L	10	12/13/2005
Chloroform	ND	10		µg/L	10	12/13/2005
Chloromethane	ND	10		µg/L	10	12/13/2005
2-Chlorotoluene	ND	10		µg/L	10	12/13/2005
4-Chlorotoluene	ND	10		µg/L	10	12/13/2005
cis-1,2-DCE	ND	10		µg/L	10	12/13/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	12/13/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	12/13/2005
Dibromochloromethane	ND	10		µg/L	10	12/13/2005
Dibromomethane	ND	20		µg/L	10	12/13/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	12/13/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	12/13/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	12/13/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *23-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0512123
Collection Date: 12/7/2005 10:30:00 AM
Project: SW Separator Water Out 12/7/2005
Lab ID: 0512123-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	10		µg/L	10	12/13/2005
1,1-Dichloroethane	ND	20		µg/L	10	12/13/2005
1,1-Dichloroethene	ND	10		µg/L	10	12/13/2005
1,2-Dichloropropane	ND	10		µg/L	10	12/13/2005
1,3-Dichloropropane	ND	10		µg/L	10	12/13/2005
2,2-Dichloropropane	ND	20		µg/L	10	12/13/2005
1,1-Dichloropropene	ND	10		µg/L	10	12/13/2005
Hexachlorobutadiene	ND	20		µg/L	10	12/13/2005
2-Hexanone	ND	100		µg/L	10	12/13/2005
Isopropylbenzene	11	10		µg/L	10	12/13/2005
4-Isopropyltoluene	11	10		µg/L	10	12/13/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	12/13/2005
Methylene Chloride	ND	30		µg/L	10	12/13/2005
n-Butylbenzene	ND	10		µg/L	10	12/13/2005
n-Propylbenzene	ND	10		µg/L	10	12/13/2005
sec-Butylbenzene	ND	10		µg/L	10	12/13/2005
Styrene	ND	10		µg/L	10	12/13/2005
tert-Butylbenzene	ND	10		µg/L	10	12/13/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	12/13/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	12/13/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	12/13/2005
trans-1,2-DCE	ND	10		µg/L	10	12/13/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	12/13/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	12/13/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	12/13/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	12/13/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	12/13/2005
Trichloroethene (TCE)	ND	10		µg/L	10	12/13/2005
Trichlorofluoromethane	ND	10		µg/L	10	12/13/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	12/13/2005
Vinyl chloride	ND	10		µg/L	10	12/13/2005
Xylenes, Total	2100	10		µg/L	10	12/13/2005
Surr: 1,2-Dichloroethane-d4	83.1	69.9-130		%REC	10	12/13/2005
Surr: 4-Bromofluorobenzene	86.5	71.2-123		%REC	10	12/13/2005
Surr: Dibromofluoromethane	78.9	73.9-134		%REC	10	12/13/2005
Surr: Toluene-d8	87.0	81.9-122		%REC	10	12/13/2005
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	240	13		µg/L	5	12/15/2005 3:45:49 PM
1-Methylnaphthalene	210	13		µg/L	5	12/15/2005 3:45:49 PM
2-Methylnaphthalene	32	2.5		µg/L	1	12/13/2005 2:14:34 AM
Acenaphthylene	ND	2.5		µg/L	1	12/13/2005 2:14:34 AM
Acenaphthene	ND	2.5		µg/L	1	12/13/2005 2:14:34 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *23-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0512123
Collection Date: 12/7/2005 10:30:00 AM
Project: SW Separator Water Out 12/7/2005
Lab ID: 0512123-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Fluorene	9.0	0.80		µg/L	1	12/13/2005 2:14:34 AM
Phenanthrene	4.4	0.60		µg/L	1	12/13/2005 2:14:34 AM
Anthracene	ND	0.60		µg/L	1	12/13/2005 2:14:34 AM
Fluoranthene	ND	0.30		µg/L	1	12/13/2005 2:14:34 AM
Pyrene	0.63	0.30		µg/L	1	12/13/2005 2:14:34 AM
Benz(a)anthracene	ND	0.020		µg/L	1	12/13/2005 2:14:34 AM
Chrysene	ND	0.20		µg/L	1	12/13/2005 2:14:34 AM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	12/13/2005 2:14:34 AM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	12/13/2005 2:14:34 AM
Benzo(a)pyrene	0.040	0.020		µg/L	1	12/13/2005 2:14:34 AM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	12/13/2005 2:14:34 AM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	12/13/2005 2:14:34 AM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	12/13/2005 2:14:34 AM
Surr: Benzo(e)pyrene	75.3	54-102		%REC	1	12/13/2005 2:14:34 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	3600	0.010		µmhos/cm	1	12/13/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	12/14/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	12/13/2005 11:21:03 AM
Barium	0.25	0.020		mg/L	1	12/13/2005 11:21:03 AM
Cadmium	ND	0.0020		mg/L	1	12/13/2005 11:21:03 AM
Calcium	110	10		mg/L	10	12/13/2005 12:25:58 PM
Chromium	0.015	0.0060		mg/L	1	12/13/2005 11:21:03 AM
Lead	0.0055	0.0050		mg/L	1	12/14/2005 9:10:14 AM
Magnesium	24	1.0		mg/L	1	12/13/2005 11:21:03 AM
Potassium	17	1.0		mg/L	1	12/13/2005 11:21:03 AM
Selenium	ND	0.050		mg/L	1	12/13/2005 11:21:03 AM
Silver	ND	0.0050		mg/L	1	12/13/2005 11:21:03 AM
Sodium	600	10		mg/L	10	12/13/2005 12:25:58 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	8.26	0.010		pH units	1	12/9/2005

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *23-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK** Batch ID: **R17560** Test Code: **E300** Units: **mg/L** Analysis Date: **12/9/2005** Prep Date:
Client ID: Run ID: **LC_051209A** SeqNo: **430470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID: **MBLK** Batch ID: **R17560** Test Code: **E300** Units: **mg/L** Analysis Date: **12/10/2005** Prep Date:
Client ID: Run ID: **LC_051209A** SeqNo: **430960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1	0	0	0	0	0	0			
Chloride	ND	0.1	0	0	0	0	0	0			
Phosphorus, Orthophosphate (As P)	ND	0.5	0	0	0	0	0	0			
Sulfate	ND	0.5	0	0	0	0	0	0			
Nitrate (As N)+Nitrite (As N)	ND	0.1	0	0	0	0	0	0			

Sample ID: **MBLK** Batch ID: **R17684** Test Code: **E300** Units: **mg/L** Analysis Date: **12/20/2005** Prep Date:
Client ID: Run ID: **LC_051220A** SeqNo: **434320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK** Batch ID: **R17700** Test Code: **E300** Units: **mg/L** Analysis Date: **12/21/2005** Prep Date:
Client ID: Run ID: **LC_051221A** SeqNo: **435031**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9371** Batch ID: **9371** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/12/2005 11:02:29 P** Prep Date: **12/12/2005**
Client ID: Run ID: **HUGO_051212A** SeqNo: **431364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	8.05	0	10	0	80.5	54	102	0			

Sample ID: **MB-9401** Batch ID: **9401** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/14/2005** Prep Date: **12/14/2005**
Client ID: Run ID: **MI-LA254_051214A** SeqNo: **432216**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/13/2005 10:49:51 A** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.006163	0.02									J
Barium	ND	0.02									
Cadmium	0.0007709	0.002									J
Calcium	ND	1									
Chromium	0.000567	0.006									J
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	0.001074	0.005									J
Sodium	ND	1									

Sample ID: **MB-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/14/2005 8:44:40 AM** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.005									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *23-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **5mL rb** Batch ID: **R17602** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/13/2005** Prep Date:

Client ID: Run ID: **NEPTUNE_051213A** SeqNo: **431820**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	2
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	2
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	2
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	8.39	0	10	0	83.9	69.9	130	0
Surr: 4-Bromofluorobenzene	9.194	0	10	0	91.9	71.2	123	0
Surr: Dibromofluoromethane	8.916	0	10	0	89.2	73.9	134	0
Surr: Toluene-d8	9.032	0	10	0	90.3	81.9	122	0

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Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *23-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-ST300-05023** Batch ID: **R17560** Test Code: **E300** Units: **mg/L** Analysis Date: **12/9/2005** Prep Date:
Client ID: Run ID: **LC_051209A** SeqNo: **430471**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4918	0.1	0.5	0	98.4	90	110	0			
Chloride	4.51	0.1	5	0	90.2	90	110	0			
Phosphorus, Orthophosphate (As P)	4.773	0.5	5	0	95.5	90	110	0			
Sulfate	9.581	0.5	10	0	95.8	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.255	0.1	3.5	0	93.0	90	110	0			

Sample ID: **LCS** Batch ID: **R17560** Test Code: **E300** Units: **mg/L** Analysis Date: **12/10/2005** Prep Date:
Client ID: Run ID: **LC_051209A** SeqNo: **430961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4603	0.1	0.5	0	92.1	90	110	0			
Chloride	4.502	0.1	5	0	90.0	90	110	0			
Phosphorus, Orthophosphate (As P)	4.761	0.5	5	0	95.2	90	110	0			
Sulfate	9.547	0.5	10	0	95.5	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.221	0.1	3.5	0	92.0	90	110	0			

Sample ID: **LCS-ST300-05023** Batch ID: **R17684** Test Code: **E300** Units: **mg/L** Analysis Date: **12/20/2005** Prep Date:
Client ID: Run ID: **LC_051220A** SeqNo: **434321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4808	0.1	0.5	0	96.2	90	110	0			
Chloride	4.605	0.1	5	0	92.1	90	110	0			
Phosphorus, Orthophosphate (As P)	4.838	0.5	5	0	96.8	90	110	0			
Sulfate	9.549	0.5	10	0	95.5	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.289	0.1	3.5	0	94.0	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-ST300-05023** Batch ID: **R17700** Test Code: **E300** Units: **mg/L** Analysis Date: **12/21/2005** Prep Date:
Client ID: Run ID: **LC_051221A** SeqNo: **435032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4692	0.1	0.5	0	93.8	90	110	0			
Chloride	4.743	0.1	5	0	94.9	90	110	0			
Phosphorus, Orthophosphate (As P)	5.016	0.5	5	0	100	90	110	0			
Sulfate	9.824	0.5	10	0	98.2	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.372	0.1	3.5	0	96.3	90	110	0			

Sample ID: **100ng lcs** Batch ID: **R17602** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/13/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_051213A** SeqNo: **431821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.2	1	20	0	101	79.3	136	0			
Toluene	19.81	1	20	0	99.1	65.5	123	0			
Chlorobenzene	18.63	1	20	0	93.1	85.6	134	0			
1,1-Dichloroethene	20.22	1	20	0	101	72.7	135	0			
Trichloroethene (TCE)	19.22	1	20	0	96.1	85.6	119	0			

Sample ID: **100ng lcs** Batch ID: **R17627** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/15/2005** Prep Date:
Client ID: Run ID: **THOR_051215A** SeqNo: **432659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.84	1	20	0	94.2	79.3	136	0			
Toluene	17.88	1	20	0	89.4	65.5	123	0			
Chlorobenzene	21.59	1	20	0	108	85.6	134	0			
1,1-Dichloroethene	18.39	1	20	0	92.0	72.7	135	0			
Trichloroethene (TCE)	18.01	1	20	0	90.1	85.6	119	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9371** Batch ID: **9371** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/12/2005 11:50:33 P** Prep Date: **12/12/2005**
Client ID: Run ID: **HUGO_051212A** SeqNo: **431475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	25.58	2.5	40	0	64.0	34.8	97.4	0			
1-Methylnaphthalene	26.08	2.5	40.1	0	65.0	34.7	100	0			
2-Methylnaphthalene	25.79	2.5	40	0	64.5	35	98.1	0			
Acenaphthylene	27.24	2.5	40.1	0	67.9	48.3	95.1	0			
Acenaphthene	27.16	2.5	40	0	67.9	45	95	0			
Fluorene	2.81	0.8	4.01	0	70.1	46.8	93.4	0			
Phenanthrene	1.53	0.6	2.01	0	76.1	48.7	104	0			
Anthracene	1.48	0.6	2.01	0	73.6	47.5	102	0			
Fluoranthene	2.98	0.3	4.01	0	74.3	46.3	108	0			
Pyrene	2.93	0.3	4.01	0	73.1	43.8	109	0			
Benz(a)anthracene	0.28	0.02	0.401	0	69.8	40.3	115	0			
Chrysene	1.45	0.2	2.01	0	72.1	42.6	107	0			
Benzo(b)fluoranthene	0.34	0.05	0.501	0	67.9	48.6	107	0			
Benzo(k)fluoranthene	0.19	0.02	0.25	0	76.0	23.3	136	0			
Benzo(a)pyrene	0.19	0.02	0.251	0	75.7	33.4	117	0			
Dibenz(a,h)anthracene	0.41	0.04	0.501	0	81.8	27.3	139	0			
Benzo(g,h,i)perylene	0.4	0.03	0.5	0	80.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.822	0.08	1.002	0	82.0	39.9	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9371** Batch ID: **9371** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/13/2005 1:26:34 AM** Prep Date: **12/12/2005**
Client ID: Run ID: **HUGO_051212A** SeqNo: **431477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	26.94	2.5	40	0	67.4	34.8	97.4	25.58	5.18	32.1	
1-Methylnaphthalene	27.91	2.5	40.1	0	69.6	34.7	100	26.08	6.78	32.7	
2-Methylnaphthalene	27.64	2.5	40	0	69.1	35	98.1	25.79	6.92	34	
Acenaphthylene	30.2	2.5	40.1	0	75.3	48.3	95.1	27.24	10.3	38.8	
Acenaphthene	29.99	2.5	40	0	75.0	45	95	27.16	9.90	38.6	
Fluorene	3.18	0.8	4.01	0	79.3	46.8	93.4	2.81	12.4	39.3	
Phenanthrene	1.76	0.6	2.01	0	87.6	48.7	104	1.53	14.0	25	
Anthracene	1.71	0.6	2.01	0	85.1	47.5	102	1.48	14.4	23.9	
Fluoranthene	3.57	0.3	4.01	0	89.0	46.3	108	2.98	18.0	15.7	R
Pyrene	3.44	0.3	4.01	0	85.8	43.8	109	2.93	16.0	15.3	R
Benz(a)anthracene	0.35	0.02	0.401	0	87.3	40.3	115	0.28	22.2	119	
Chrysene	1.69	0.2	2.01	0	84.1	42.6	107	1.45	15.3	16.6	
Benzo(b)fluoranthene	0.36	0.05	0.501	0	71.9	48.6	107	0.34	5.71	21.7	
Benzo(k)fluoranthene	0.22	0.02	0.25	0	88.0	23.3	136	0.19	14.6	19.4	
Benzo(a)pyrene	0.23	0.02	0.251	0	91.6	33.4	117	0.19	19.0	16.7	R
Dibenz(a,h)anthracene	0.49	0.04	0.501	0	97.8	27.3	139	0.41	17.8	17.3	R
Benzo(g,h,i)perylene	0.47	0.03	0.5	0	94.0	38.2	117	0.4	16.1	118	
Indeno(1,2,3-cd)pyrene	0.967	0.08	1.002	0	96.5	39.9	125	0.822	16.2	17.7	

Sample ID: **LCS-9401** Batch ID: **9401** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/14/2005** Prep Date: **12/14/2005**
Client ID: Run ID: **MI-LA254_051214A** SeqNo: **432217**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00509	0.0002	0.005	0	102	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9401** Batch ID: **9401** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/14/2005** Prep Date: **12/14/2005**
Client ID: Run ID: **MI-LA254_051214A** SeqNo: **432225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004801	0.0002	0.005	0	96.0	80	120	0.00509	5.85	0	

Sample ID: **LCS-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/13/2005 10:52:52 A** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431618**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4833	0.02	0.5	0.006163	95.4	80	120	0			
Barium	0.4573	0.02	0.5	0	91.5	80	120	0			
Cadmium	0.4607	0.002	0.5	0.0007709	92.0	80	120	0			
Calcium	47.36	1	50	0	94.7	80	120	0			
Chromium	0.4699	0.006	0.5	0.000567	93.9	80	120	0			
Magnesium	47.66	1	50	0	95.3	80	120	0			
Potassium	50.66	1	50	0	101	80	120	0			
Selenium	0.4488	0.05	0.5	0	89.8	80	120	0			
Silver	0.4753	0.005	0.5	0.001074	94.8	80	120	0			
Sodium	50.16	1	50	0	100	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512123
Project: SW Separator Water Out 12/7/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/13/2005 10:56:11 A** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431619**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4827	0.02	0.5	0.006163	95.3	80	120	0.4833	0.133	20	
Barium	0.4585	0.02	0.5	0	91.7	80	120	0.4573	0.252	20	
Cadmium	0.463	0.002	0.5	0.0007709	92.4	80	120	0.4607	0.496	20	
Calcium	47.73	1	50	0	95.5	80	120	47.36	0.775	20	
Chromium	0.4707	0.006	0.5	0.000567	94.0	80	120	0.4699	0.169	20	
Magnesium	48.02	1	50	0	96.0	80	120	47.66	0.743	20	
Potassium	50.96	1	50	0	102	80	120	50.66	0.587	20	
Selenium	0.4429	0.05	0.5	0	88.6	80	120	0.4488	1.34	20	
Silver	0.476	0.005	0.5	0.001074	95.0	80	120	0.4753	0.142	20	
Sodium	50.67	1	50	0	101	80	120	50.16	1.01	20	

Sample ID: **LCS-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/14/2005 8:47:09 AM** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4862	0.005	0.5	0	97.2	80	120	0			

Sample ID: **LCSD-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/14/2005 8:50:10 AM** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4836	0.005	0.5	0	96.7	80	120	0.4862	0.546	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 12/9/2005

Work Order Number 0512123 | Received by AT

Checklist completed by  Signature | Date 12/9/05

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

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Stormwater Separator Water Out 12-7-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature:

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
12-7-05	1030	H_2O	SW Stop. Water Out				0512123-1							X	X			X		X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
12-8-05	0740	Steve Morris	D Schuppe 1135 @ 12/9/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH
Gen Chem = Cations, Anions, pH, and Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 20, 2005

Ed Riege
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 12/5/2005 Order No.: 0512124

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 1 sample on 12/9/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

600

CLIENT: Giant Refining Co
Project: AL-2 to EP-1 Week of 12/5/2005
Lab Order: 0512124

CASE NARRATIVE

Analytical Comments for METHOD 8015GRO_W, SAMPLE 0512124-01a: Elevated surrogate due to matrix interference.

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0512124
Collection Date: 12/7/2005 9:30:00 AM
Project: AL-2 to EP-1 Week of 12/5/2005
Lab ID: 0512124-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	110	10		mg/L	10	12/14/2005 5:19:24 PM
Motor Oil Range Organics (MRO)	ND	50		mg/L	10	12/14/2005 5:19:24 PM
Surr: DNOP	139	58-140		%REC	10	12/14/2005 5:19:24 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	1.7	0.10		mg/L	2	12/16/2005 4:45:20 PM
Surr: BFB	182	79.7-118	S	%REC	2	12/16/2005 4:45:20 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	35	5.0		µg/L	2	12/16/2005 4:45:20 PM
Benzene	4.4	1.0		µg/L	2	12/16/2005 4:45:20 PM
Toluene	8.1	1.0		µg/L	2	12/16/2005 4:45:20 PM
Ethylbenzene	3.7	1.0		µg/L	2	12/16/2005 4:45:20 PM
Xylenes, Total	27	1.0		µg/L	2	12/16/2005 4:45:20 PM
Surr: 4-Bromofluorobenzene	107	82.2-119		%REC	2	12/16/2005 4:45:20 PM
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0019	0.00020		mg/L	1	12/14/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	12/13/2005 11:14:07 AM
Arsenic	ND	0.020		mg/L	1	12/13/2005 11:14:07 AM
Beryllium	ND	0.0030		mg/L	1	12/13/2005 11:14:07 AM
Cadmium	ND	0.0020		mg/L	1	12/13/2005 11:14:07 AM
Chromium	0.0077	0.0060		mg/L	1	12/13/2005 11:14:07 AM
Copper	0.0060	0.0060		mg/L	1	12/13/2005 11:14:07 AM
Lead	ND	0.0050		mg/L	1	12/14/2005 9:04:57 AM
Nickel	0.064	0.010		mg/L	1	12/13/2005 11:14:07 AM
Selenium	ND	0.050		mg/L	1	12/13/2005 11:14:07 AM
Silver	ND	0.0050		mg/L	1	12/13/2005 11:14:07 AM
Thallium	ND	0.010		mg/L	1	12/13/2005 11:14:07 AM
Zinc	0.70	0.050		mg/L	1	12/14/2005 9:04:57 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512124
Project: AL-2 to EP-1 Week of 12/5/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9397** Batch ID: **9397** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/14/2005 3:07:07 PM** Prep Date: **12/14/2005**
Client ID: Run ID: **FID(17A) 2_051213A** SeqNo: **432319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.2	0	1	0	120	58	140	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17648** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/16/2005 11:08:28 A** Prep Date:
Client ID: Run ID: **PIDFID_051216A** SeqNo: **433316**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	20.68	0	20	0	103	79.7	118	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17648** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/16/2005 11:08:28 A** Prep Date:
Client ID: Run ID: **PIDFID_051216A** SeqNo: **433347**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.64	0	20	0	103	82.2	119	0			

Sample ID: **MB-9401** Batch ID: **9401** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/14/2005** Prep Date: **12/14/2005**
Client ID: Run ID: **MI-LA254_051214A** SeqNo: **432216**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0512124
Project: AL-2 to EP-1 Week of 12/5/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/13/2005 10:49:51 A** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.01418	0.01									
Arsenic	0.006163	0.02									J
Beryllium	ND	0.003									
Cadmium	0.0007709	0.002									J
Chromium	0.000567	0.006									J
Copper	0.005159	0.006									J
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	0.001074	0.005									J
Thallium	ND	0.05									

Sample ID: **MB-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/14/2005 8:44:40 AM** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.005									
Zinc	0.01186	0.05									J

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *20-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512124
Project: AL-2 to EP-1 Week of 12/5/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9397** Batch ID: **9397** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/14/2005 3:39:54 PM** Prep Date: **12/14/2005**
Client ID: Run ID: **FID(17A) 2_051213A** SeqNo: **432320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.049	1	5	0	121	81.2	149	0			

Sample ID: **LCSD-9397** Batch ID: **9397** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/14/2005 4:12:56 PM** Prep Date: **12/14/2005**
Client ID: Run ID: **FID(17A) 2_051213A** SeqNo: **432321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.925	1	5	0	138	81.2	149	6.049	13.5	23	

Sample ID: **GRO lcs 2.5ug** Batch ID: **R17648** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/16/2005 11:22:12 P** Prep Date:
Client ID: Run ID: **PIDFID_051216A** SeqNo: **433317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5446	0.05	0.5	0	109	82.6	114	0			

Sample ID: **GRO lcsd 2.5ug** Batch ID: **R17648** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/17/2005 5:25:12 AM** Prep Date:
Client ID: Run ID: **PIDFID_051216A** SeqNo: **433321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5538	0.05	0.5	0	111	82.6	114	0.5446	1.68	8.39	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512124
Project: AL-2 to EP-1 Week of 12/5/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **BTEX lcs 100ng** Batch ID: **R17648** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/17/2005 12:23:13 A** Prep Date:
Client ID: Run ID: **PIDFID_051216A** SeqNo: **433355**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20.96	2.5	20	0	105	64.5	133	0			
Benzene	18.49	0.5	20	0	92.5	88.5	114	0			
Toluene	19.34	0.5	20	0	96.7	87.2	114	0			
Ethylbenzene	19.81	0.5	20	0	99.1	88.6	113	0			
Xylenes, Total	40.01	0.5	40	0	100	83.3	114	0			

Sample ID: **BTEX lcsd 100ng** Batch ID: **R17648** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/17/2005 6:25:05 AM** Prep Date:
Client ID: Run ID: **PIDFID_051216A** SeqNo: **433387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18.43	2.5	20	0	92.2	64.5	133	20.96	12.8	28	
Benzene	18.81	0.5	20	0	94.0	88.5	114	18.49	1.70	27	
Toluene	19.63	0.5	20	0	98.2	87.2	114	19.34	1.52	19	
Ethylbenzene	19.82	0.5	20	0	99.1	88.6	113	19.81	0.0313	10	
Xylenes, Total	39.34	0.5	40	0	98.3	83.3	114	40.01	1.69	13	

Sample ID: **LCS-9401** Batch ID: **9401** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/14/2005** Prep Date: **12/14/2005**
Client ID: Run ID: **MI-LA254_051214A** SeqNo: **432217**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00509	0.0002	0.005	0	102	80	120	0			

Sample ID: **LCSD-9401** Batch ID: **9401** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/14/2005** Prep Date: **12/14/2005**
Client ID: Run ID: **MI-LA254_051214A** SeqNo: **432225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004801	0.0002	0.005	0	96.0	80	120	0.00509	5.85	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512124
Project: AL-2 to EP-1 Week of 12/5/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/13/2005 10:52:52 A** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431618**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4876	0.01	0.5	0.01418	94.7	80	120	0			B
Arsenic	0.4833	0.02	0.5	0.006163	95.4	80	120	0			
Beryllium	0.486	0.003	0.5	0	97.2	80	120	0			
Cadmium	0.4607	0.002	0.5	0.0007709	92.0	80	120	0			
Chromium	0.4699	0.006	0.5	0.000567	93.9	80	120	0			
Copper	0.4757	0.006	0.5	0.005159	94.1	80	120	0			
Nickel	0.4436	0.01	0.5	0	88.7	80	120	0			
Selenium	0.4488	0.05	0.5	0	89.8	80	120	0			
Silver	0.4753	0.005	0.5	0.001074	94.8	80	120	0			
Thallium	0.4768	0.05	0.5	0	95.4	80	120	0			

Sample ID: **LCSD-9372** Batch ID: **9372** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/13/2005 10:56:11 A** Prep Date: **12/12/2005**
Client ID: Run ID: **ICP_051213B** SeqNo: **431619**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4843	0.01	0.5	0.01418	94.0	80	120	0.4876	0.685	20	B
Arsenic	0.4827	0.02	0.5	0.006163	95.3	80	120	0.4833	0.133	20	
Beryllium	0.4873	0.003	0.5	0	97.5	80	120	0.486	0.265	20	
Cadmium	0.463	0.002	0.5	0.0007709	92.4	80	120	0.4607	0.496	20	
Chromium	0.4707	0.006	0.5	0.000567	94.0	80	120	0.4699	0.169	20	
Copper	0.4761	0.006	0.5	0.005159	94.2	80	120	0.4757	0.0793	20	
Nickel	0.4441	0.01	0.5	0	88.8	80	120	0.4436	0.104	20	
Selenium	0.4429	0.05	0.5	0	88.6	80	120	0.4488	1.34	20	
Silver	0.476	0.005	0.5	0.001074	95.0	80	120	0.4753	0.142	20	
Thallium	0.4832	0.05	0.5	0	96.6	80	120	0.4768	1.32	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 12/9/2005

Work Order Number 0512124 | Received by AT

Checklist completed by _____ Signature _____ Date 12/9/05

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniga
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: AL-2 to EP-1 Week of 12-5-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: ~~4°~~ 4°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	PP Metals Total				Air Bubbles or Headspace (Y or N)
12/7/05	0930	H_2O	AL-2 to EP-1					0512124-1	X		X										X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
12-8-05	0735	Steve Morris	[signature]	12/9/05 @ 1135

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 15, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: SW Separator Water Out 12/1/2005 Order No.: 0512008

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/1/2005 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

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0512008
Project: SW Separator Water Out 12/1/2005
Lab ID: 0512008-01

Client Sample ID: SW Sep. Water Out
Collection Date: 12/1/2005 9:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	12	0.50		mg/L	5	12/1/2005
Chloride	350	2.0		mg/L	20	12/12/2005
Nitrogen, Nitrite (As N)	0.81	0.50		mg/L	5	12/1/2005
Nitrogen, Nitrate (As N)	5.5	0.50		mg/L	5	12/1/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	12/1/2005
Sulfate	760	10		mg/L	20	12/12/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	1200	100		µg/L	100	12/6/2005
Toluene	2600	100		µg/L	100	12/6/2005
Ethylbenzene	260	10		µg/L	10	12/5/2005
Methyl tert-butyl ether (MTBE)	13	10		µg/L	10	12/5/2005
1,2,4-Trimethylbenzene	420	10		µg/L	10	12/5/2005
1,3,5-Trimethylbenzene	160	10		µg/L	10	12/5/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	12/5/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	12/5/2005
Naphthalene	140	20		µg/L	10	12/5/2005
1-Methylnaphthalene	140	40		µg/L	10	12/5/2005
2-Methylnaphthalene	190	40		µg/L	10	12/5/2005
Acetone	830	100		µg/L	10	12/5/2005
Bromobenzene	ND	10		µg/L	10	12/5/2005
Bromochloromethane	ND	10		µg/L	10	12/5/2005
Bromodichloromethane	ND	10		µg/L	10	12/5/2005
Bromoform	ND	10		µg/L	10	12/5/2005
Bromomethane	ND	20		µg/L	10	12/5/2005
2-Butanone	ND	100		µg/L	10	12/5/2005
Carbon disulfide	ND	100		µg/L	10	12/5/2005
Carbon Tetrachloride	ND	20		µg/L	10	12/5/2005
Chlorobenzene	ND	10		µg/L	10	12/5/2005
Chloroethane	ND	20		µg/L	10	12/5/2005
Chloroform	ND	10		µg/L	10	12/5/2005
Chloromethane	ND	10		µg/L	10	12/5/2005
2-Chlorotoluene	ND	10		µg/L	10	12/5/2005
4-Chlorotoluene	ND	10		µg/L	10	12/5/2005
cis-1,2-DCE	ND	10		µg/L	10	12/5/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	12/5/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	12/5/2005
Dibromochloromethane	ND	10		µg/L	10	12/5/2005
Dibromomethane	ND	20		µg/L	10	12/5/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	12/5/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	12/5/2005

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0512008
Collection Date: 12/1/2005 9:30:00 AM
Project: SW Separator Water Out 12/1/2005
Lab ID: 0512008-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	10		µg/L	10	12/5/2005
Dichlorodifluoromethane	ND	10		µg/L	10	12/5/2005
1,1-Dichloroethane	ND	10		µg/L	10	12/5/2005
1,1-Dichloroethene	ND	10		µg/L	10	12/5/2005
1,2-Dichloropropane	ND	10		µg/L	10	12/5/2005
1,3-Dichloropropane	ND	10		µg/L	10	12/5/2005
2,2-Dichloropropane	ND	10		µg/L	10	12/5/2005
1,1-Dichloropropene	ND	10		µg/L	10	12/5/2005
Hexachlorobutadiene	ND	10		µg/L	10	12/5/2005
2-Hexanone	ND	100		µg/L	10	12/5/2005
Isopropylbenzene	45	10		µg/L	10	12/5/2005
4-Isopropyltoluene	14	10		µg/L	10	12/5/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	12/5/2005
Methylene Chloride	ND	30		µg/L	10	12/5/2005
n-Butylbenzene	ND	10		µg/L	10	12/5/2005
n-Propylbenzene	21	10		µg/L	10	12/5/2005
sec-Butylbenzene	ND	10		µg/L	10	12/5/2005
Styrene	ND	10		µg/L	10	12/5/2005
tert-Butylbenzene	ND	10		µg/L	10	12/5/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	12/5/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	12/5/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	12/5/2005
trans-1,2-DCE	ND	10		µg/L	10	12/5/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	12/5/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	12/5/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	12/5/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	12/5/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	12/5/2005
Trichloroethene (TCE)	ND	10		µg/L	10	12/5/2005
Trichlorofluoromethane	ND	10		µg/L	10	12/5/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	12/5/2005
Vinyl chloride	ND	10		µg/L	10	12/5/2005
Xylenes, Total	1900	100		µg/L	100	12/6/2005
Surr: 1,2-Dichloroethane-d4	81.6	69.9-130		%REC	10	12/5/2005
Surr: 4-Bromofluorobenzene	88.7	71.2-123		%REC	10	12/5/2005
Surr: Dibromofluoromethane	90.6	73.9-134		%REC	10	12/5/2005
Surr: Toluene-d8	93.5	81.9-122		%REC	10	12/5/2005
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	320	13		µg/L	5	12/9/2005 9:27:16 PM
1-Methylnaphthalene	250	13		µg/L	5	12/9/2005 9:27:16 PM
2-Methylnaphthalene	68	13		µg/L	5	12/9/2005 9:27:16 PM
Acenaphthylene	ND	13		µg/L	5	12/9/2005 9:27:16 PM

Qualifiers:
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0512008
Collection Date: 12/1/2005 9:30:00 AM
Project: SW Separator Water Out 12/1/2005
Lab ID: 0512008-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Acenaphthene	ND	13		µg/L	5	12/9/2005 9:27:16 PM
Fluorene	14	4.0		µg/L	5	12/9/2005 9:27:16 PM
Phenanthrene	13	3.0		µg/L	5	12/9/2005 9:27:16 PM
Anthracene	ND	3.0		µg/L	5	12/9/2005 9:27:16 PM
Fluoranthene	ND	1.5		µg/L	5	12/9/2005 9:27:16 PM
Pyrene	2.2	1.5		µg/L	5	12/9/2005 9:27:16 PM
Benz(a)anthracene	0.85	0.10		µg/L	5	12/9/2005 9:27:16 PM
Chrysene	ND	1.0		µg/L	5	12/9/2005 9:27:16 PM
Benzo(b)fluoranthene	ND	0.25		µg/L	5	12/9/2005 9:27:16 PM
Benzo(k)fluoranthene	ND	0.10		µg/L	5	12/9/2005 9:27:16 PM
Benzo(a)pyrene	ND	0.10		µg/L	5	12/9/2005 9:27:16 PM
Dibenz(a,h)anthracene	ND	0.20		µg/L	5	12/9/2005 9:27:16 PM
Benzo(g,h,i)perylene	0.50	0.15		µg/L	5	12/9/2005 9:27:16 PM
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	5	12/9/2005 9:27:16 PM
Surr: Benzo(e)pyrene	85.0	54-102		%REC	5	12/9/2005 9:27:16 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	3400	0.010		µmhos/cm	1	12/5/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	12/7/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	12/6/2005 12:25:48 PM
Barium	0.23	0.020		mg/L	1	12/6/2005 12:25:48 PM
Cadmium	ND	0.0020		mg/L	1	12/6/2005 12:25:48 PM
Calcium	130	10		mg/L	10	12/6/2005 1:31:27 PM
Chromium	0.020	0.0060		mg/L	1	12/6/2005 12:25:48 PM
Lead	0.0089	0.0050		mg/L	1	12/6/2005 12:25:48 PM
Magnesium	29	1.0		mg/L	1	12/6/2005 12:25:48 PM
Potassium	24	1.0		mg/L	1	12/6/2005 12:25:48 PM
Selenium	ND	0.050		mg/L	1	12/6/2005 12:25:48 PM
Silver	ND	0.0050		mg/L	1	12/6/2005 12:25:48 PM
Sodium	600	10		mg/L	10	12/6/2005 1:31:27 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	9.09	0.010		pH units	1	12/5/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK** Batch ID: **R17477** Test Code: **E300** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date:
Client ID: Run ID: **LC_051201A** SeqNo: **427364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID: **MBLK** Batch ID: **R17586** Test Code: **E300** Units: **mg/L** Analysis Date: **12/12/2005** Prep Date:
Client ID: Run ID: **LC_051212A** SeqNo: **431295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9309** Batch ID: **9309** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/9/2005 2:15:11 PM** Prep Date: **12/1/2005**
Client ID: Run ID: **HUGO_051208A** SeqNo: **431058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.964	0	10	0	79.6	54	102	0			

Sample ID: **MB-9349** Batch ID: **9349** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date: **12/7/2005**
Client ID: Run ID: **MI-LA254_051207A** SeqNo: **429648**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9317** Batch ID: **9317** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/6/2005 12:07:27 PM** Prep Date: **12/2/2005**
Client ID: Run ID: **ICP_051206C** SeqNo: **429195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	0.001153	0.02									J
Cadmium	0.0002834	0.002									J
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **5mL rb-b** Batch ID: **R17496** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/5/2005** Prep Date:

Client ID: Run ID: **NEPTUNE_051205A** SeqNo: **428467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	8.454	0	10	0	84.5	69.9	130	0
Surr: 4-Bromofluorobenzene	9.22	0	10	0	92.2	71.2	123	0
Surr: Dibromofluoromethane	9.092	0	10	0	90.9	73.9	134	0
Surr: Toluene-d8	9.126	0	10	0	91.3	81.9	122	0

9/16

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **0512008-01C DUP** Batch ID: **R17490** Test Code: **E150.1** Units: **pH units** Analysis Date: **12/5/2005** Prep Date:

Client ID: **SW Sep. Water O** Run ID: **WC_051205A** SeqNo: **428335**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	9.1	0.01	0	0	0	0	0	0			

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Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-ST300-05023** Batch ID: **R17477** Test Code: **E300** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date:
Client ID: Run ID: **LC_051201A** SeqNo: **427365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4993	0.1	0.5	0	99.9	90	110	0			
Chloride	4.87	0.1	5	0	97.4	90	110	0			
Nitrogen, Nitrite (As N)	0.9596	0.1	1	0	96.0	90	110	0			
Nitrogen, Nitrate (As N)	2.527	0.1	2.5	0	101	90	110	0			
Phosphorus, Orthophosphate (As P)	5.013	0.5	5	0	100	90	110	0			
Sulfate	10.05	0.5	10	0	100	90	110	0			

Sample ID: **LCS-ST300-05023** Batch ID: **R17586** Test Code: **E300** Units: **mg/L** Analysis Date: **12/12/2005** Prep Date:
Client ID: Run ID: **LC_051212A** SeqNo: **431296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4942	0.1	0.5	0	98.8	90	110	0			
Chloride	4.565	0.1	5	0	91.3	90	110	0			
Nitrogen, Nitrite (As N)	0.916	0.1	1	0	91.6	90	110	0			
Nitrogen, Nitrate (As N)	2.363	0.1	2.5	0	94.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.856	0.5	5	0	97.1	90	110	0			
Sulfate	9.696	0.5	10	0	97.0	90	110	0			

Sample ID: **100ng lcs** Batch ID: **R17496** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/5/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_051205A** SeqNo: **428468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.62	1	20	0	108	79.3	136	0			
Toluene	21.79	1	20	0	109	65.5	123	0			
Chlorobenzene	20.26	1	20	0	101	85.6	134	0			
1,1-Dichloroethene	22	1	20	0	110	72.7	135	0			
Trichloroethene (TCE)	21.38	1	20	0	107	85.6	119	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **100ng lcs-c** Batch ID: **R17522** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/6/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_051205B** SeqNo: **429147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.29	1	20	0	111	79.3	136	0			
Toluene	21.85	1	20	0	109	65.5	123	0			
Chlorobenzene	20.54	1	20	0	103	85.6	134	0			
1,1-Dichloroethene	21.79	1	20	0	109	72.7	135	0			
Trichloroethene (TCE)	21.47	1	20	0	107	85.6	119	0			

Sample ID: **LCS-9309** Batch ID: **9309** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/9/2005 3:03:12 PM** Prep Date: **12/1/2005**
Client ID: Run ID: **HUGO_051208A** SeqNo: **431061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	18.16	2.5	40	0	45.4	34.8	97.4	0			
1-Methylnaphthalene	19.59	2.5	40.1	0	48.9	34.7	100	0			
2-Methylnaphthalene	19.21	2.5	40	0	48.0	35	98.1	0			
Acenaphthylene	23.88	2.5	40.1	0	59.6	48.3	95.1	0			
Acenaphthene	24	2.5	40	0	60.0	45	95	0			
Fluorene	2.72	0.8	4.01	0	67.8	46.8	93.4	0			
Phenanthrene	1.5	0.6	2.01	0	74.6	48.7	104	0			
Anthracene	1.5	0.6	2.01	0	74.6	47.5	102	0			
Fluoranthene	2.98	0.3	4.01	0	74.3	46.3	108	0			
Pyrene	2.83	0.3	4.01	0	70.6	43.8	109	0			
Benz(a)anthracene	0.29	0.02	0.401	0	72.3	40.3	115	0			
Chrysene	1.43	0.2	2.01	0	71.1	42.6	107	0			
Benzo(b)fluoranthene	0.31	0.05	0.501	0	61.9	48.6	107	0			
Benzo(k)fluoranthene	0.19	0.02	0.25	0	76.0	23.3	136	0			
Benzo(a)pyrene	0.19	0.02	0.251	0	75.7	33.4	117	0			
Dibenz(a,h)anthracene	0.41	0.04	0.501	0	81.8	27.3	139	0			
Benzo(g,h,i)perylene	0.43	0.03	0.5	0	86.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.465	0.08	1.002	0	46.4	39.9	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9309** Batch ID: **9309** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/9/2005 3:51:13 PM** Prep Date: **12/1/2005**
Client ID: Run ID: **HUGO_051208A** SeqNo: **431062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	18.87	2.5	40	0	47.2	34.8	97.4	18.16	3.83	32.1	
1-Methylnaphthalene	20.17	2.5	40.1	0	50.3	34.7	100	19.59	2.92	32.7	
2-Methylnaphthalene	19.61	2.5	40	0	49.0	35	98.1	19.21	2.06	34	
Acenaphthylene	25.14	2.5	40.1	0	62.7	48.3	95.1	23.88	5.12	38.8	
Acenaphthene	25.25	2.5	40	0	63.1	45	95	24	5.08	38.6	
Fluorene	2.89	0.8	4.01	0	72.1	46.8	93.4	2.72	6.06	39.3	
Phenanthrene	1.65	0.6	2.01	0	82.1	48.7	104	1.5	9.52	25	
Anthracene	1.65	0.6	2.01	0	82.1	47.5	102	1.5	9.52	23.9	
Fluoranthene	3.25	0.3	4.01	0	81.0	46.3	108	2.98	8.67	15.7	
Pyrene	3.16	0.3	4.01	0	78.8	43.8	109	2.83	11.0	15.3	
Benz(a)anthracene	0.31	0.02	0.401	0	77.3	40.3	115	0.29	6.67	119	
Chrysene	1.6	0.2	2.01	0	79.6	42.6	107	1.43	11.2	16.6	
Benzo(b)fluoranthene	0.39	0.05	0.501	0	77.8	48.6	107	0.31	22.9	21.7	R
Benzo(k)fluoranthene	0.21	0.02	0.25	0	84.0	23.3	136	0.19	10.0	19.4	
Benzo(a)pyrene	0.22	0.02	0.251	0	87.6	33.4	117	0.19	14.6	16.7	
Dibenz(a,h)anthracene	0.46	0.04	0.501	0	91.8	27.3	139	0.41	11.5	17.3	
Benzo(g,h,i)perylene	0.47	0.03	0.5	0	94.0	38.2	117	0.43	8.89	118	
Indeno(1,2,3-cd)pyrene	0.54	0.08	1.002	0	53.9	39.9	125	0.465	14.9	17.7	

Sample ID: **LCS-9349** Batch ID: **9349** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date: **12/7/2005**
Client ID: Run ID: **MI-LA254_051207A** SeqNo: **429649**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004347	0.0002	0.005	0	86.9	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9349** Batch ID: **9349** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date: **12/7/2005**
Client ID: Run ID: **MI-LA254_051207A** SeqNo: **429669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004779	0.0002	0.005	0	95.6	80	120	0.004347	9.46	0	

Sample ID: **LCS-9317** Batch ID: **9317** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/6/2005 12:10:44 PM** Prep Date: **12/2/2005**
Client ID: Run ID: **ICP_051206C** SeqNo: **429196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5017	0.02	0.5	0	100	80	120	0			
Barium	0.4743	0.02	0.5	0.001153	94.6	80	120	0			
Cadmium	0.4806	0.002	0.5	0.0002834	96.1	80	120	0			
Calcium	51.26	1	50	0	103	80	120	0			
Chromium	0.4852	0.006	0.5	0	97.0	80	120	0			
Lead	0.4757	0.005	0.5	0	95.1	80	120	0			
Magnesium	51.69	1	50	0	103	80	120	0			
Potassium	53.77	1	50	0	108	80	120	0			
Selenium	0.4654	0.05	0.5	0	93.1	80	120	0			
Silver	0.4952	0.005	0.5	0	99.0	80	120	0			
Sodium	55.24	1	50	0	110	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512008
Project: SW Separator Water Out 12/1/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9317** Batch ID: **9317** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/6/2005 12:13:23 PM** Prep Date: **12/2/2005**
Client ID: Run ID: **ICP_051206C** SeqNo: **429197**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4935	0.02	0.5	0	98.7	80	120	0.5017	1.66	20	
Barium	0.4793	0.02	0.5	0.001153	95.6	80	120	0.4743	1.05	20	
Cadmium	0.4847	0.002	0.5	0.0002834	96.9	80	120	0.4806	0.861	20	
Calcium	51.71	1	50	0	103	80	120	51.26	0.869	20	
Chromium	0.4904	0.006	0.5	0	98.1	80	120	0.4852	1.07	20	
Lead	0.4753	0.005	0.5	0	95.1	80	120	0.4757	0.0867	20	
Magnesium	52.11	1	50	0	104	80	120	51.69	0.804	20	
Potassium	54.21	1	50	0	108	80	120	53.77	0.824	20	
Selenium	0.4556	0.05	0.5	0	91.1	80	120	0.4654	2.11	20	
Silver	0.5006	0.005	0.5	0	100	80	120	0.4952	1.08	20	
Sodium	55.46	1	50	0	111	80	120	55.24	0.403	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received: 12/1/2005

Work Order Number 0512008

Received by AT

Checklist completed by _____ 12/1/05
Signature Date

Matrix

Carrier name Client drop-off

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? **14°** *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

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Stormwater separator water out 12-1-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 14°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
12-1-05	0930	H_2O	SW Stormwater out					0512008-1							X	X			X		X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
12-1-05	1310		12/1/05 1310
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH
Gen. Chem. = Cations, Anions, pH, & conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 15, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 11/28/05 Order No.: 0512009

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 12/1/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0512009
Collection Date: 12/1/2005 8:30:00 AM
Project: AL-2 to EP-1 Week of 11/28/05
Lab ID: 0512009-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	41	3.0		mg/L	1	12/9/2005 12:12:19 PM
Motor Oil Range Organics (MRO)	ND	15		mg/L	1	12/9/2005 12:12:19 PM
Surr: DNOP	107	58-140		%REC	1	12/9/2005 12:12:19 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.38	0.25		mg/L	5	12/14/2005 2:17:03 PM
Surr: BFB	108	79.7-118		%REC	5	12/14/2005 2:17:03 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	15	13		µg/L	5	12/14/2005 2:17:03 PM
Benzene	19	2.5		µg/L	5	12/14/2005 2:17:03 PM
Toluene	13	2.5		µg/L	5	12/14/2005 2:17:03 PM
Ethylbenzene	ND	2.5		µg/L	5	12/14/2005 2:17:03 PM
Xylenes, Total	8.7	2.5		µg/L	5	12/14/2005 2:17:03 PM
Surr: 4-Bromofluorobenzene	110	82.2-119		%REC	5	12/14/2005 2:17:03 PM
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0038	0.00020		mg/L	1	12/7/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	12/6/2005 12:29:57 PM
Arsenic	ND	0.020		mg/L	1	12/6/2005 12:29:57 PM
Beryllium	ND	0.0030		mg/L	1	12/6/2005 12:29:57 PM
Cadmium	ND	0.0020		mg/L	1	12/6/2005 12:29:57 PM
Chromium	0.0071	0.0060		mg/L	1	12/6/2005 12:29:57 PM
Copper	0.0095	0.0060		mg/L	1	12/6/2005 12:29:57 PM
Lead	ND	0.0050		mg/L	1	12/6/2005 12:29:57 PM
Nickel	0.018	0.010		mg/L	1	12/6/2005 12:29:57 PM
Selenium	ND	0.050		mg/L	1	12/6/2005 12:29:57 PM
Silver	ND	0.0050		mg/L	1	12/6/2005 12:29:57 PM
Sodium	730	10		mg/L	10	12/6/2005 1:33:40 PM
Thallium	ND	0.010		mg/L	1	12/6/2005 12:29:57 PM
Zinc	1.4	0.50		mg/L	10	12/6/2005 1:33:40 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512009
Project: AL-2 to EP-1 Week of 11/28/05

QC SUMMARY REPORT
Method Blank

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: MB-9336 Batch ID: **9336** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/6/2005 2:02:14 PM** Prep Date: **12/6/2005**											
Client ID:		Run ID: **FID(17A) 2_051206A**				SeqNo: **429110**					
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.029	0	1	0	103	58	140	0			
Sample ID: Reagent Blank 5m Batch ID: **R17607** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/14/2005 9:37:13 AM** Prep Date:											
Client ID:		Run ID: **PIDFID_051214A**				SeqNo: **432398**					
Gasoline Range Organics (GRO)	0.0116	0.05									J
Surr: BFB	22.73	0	20	0	114	79.7	118	0			
Sample ID: Reagent Blank 5m Batch ID: **R17607** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/14/2005 9:37:13 AM** Prep Date:											
Client ID:		Run ID: **PIDFID_051214A**				SeqNo: **432140**					
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	21.29	0	20	0	106	82.2	119	0			
Sample ID: MB-9349 Batch ID: **9349** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date: **12/7/2005**											
Client ID:		Run ID: **MI-LA254_051207A**				SeqNo: **429648**					
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512009
Project: AL-2 to EP-1 Week of 11/28/05

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9317** Batch ID: **9317** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/6/2005 12:07:27 PM** Prep Date: **12/2/2005**
Client ID: Run ID: **ICP_051206C** SeqNo: **429195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	0.0002834	0.002									J
Chromium	ND	0.006									
Copper	0.002103	0.006									J
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.05									
Zinc	0.0009524	0.05									J

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *15-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0512009
Project: AL-2 to EP-1 Week of 11/28/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9336** Batch ID: **9336** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/6/2005 2:34:58 PM** Prep Date: **12/6/2005**
Client ID: Run ID: **FID(17A) 2_051206A** SeqNo: **429111**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.408	1	5	0	128	81.2	149	0			

Sample ID: **LCSD-9336** Batch ID: **9336** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/6/2005 3:06:00 PM** Prep Date: **12/6/2005**
Client ID: Run ID: **FID(17A) 2_051206A** SeqNo: **429112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.959	1	5	0	139	81.2	149	6.408	8.24	23	

Sample ID: **GRO lcs 2.5ug** Batch ID: **R17607** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/14/2005 1:42:22 PM** Prep Date:
Client ID: Run ID: **PIDFID_051214A** SeqNo: **432399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5238	0.05	0.5	0.0116	102	82.6	114	0			

Sample ID: **GRO lcsd 2.5ug** Batch ID: **R17607** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/15/2005 1:56:41 AM** Prep Date:
Client ID: Run ID: **PIDFID_051214A** SeqNo: **432400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5304	0.05	0.5	0.0116	104	82.6	114	0.5238	1.25	8.39	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512009
Project: AL-2 to EP-1 Week of 11/28/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **BTEX lcs 100ng** Batch ID: **R17607** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/14/2005 12:11:05 P** Prep Date:
Client ID: Run ID: **PIDFID_051214A** SeqNo: **432141**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20.42	2.5	20	0	102	64.5	133	0			
Benzene	19.14	0.5	20	0	95.7	88.5	114	0			
Toluene	19.4	0.5	20	0	97.0	87.2	114	0			
Ethylbenzene	20.12	0.5	20	0	101	88.6	113	0			
Xylenes, Total	40.25	0.5	40	0	101	83.3	114	0			

Sample ID: **LCS-9349** Batch ID: **9349** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date: **12/7/2005**
Client ID: Run ID: **MI-LA254_051207A** SeqNo: **429649**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004347	0.0002	0.005	0	86.9	80	120	0			

Sample ID: **LCSD-9349** Batch ID: **9349** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date: **12/7/2005**
Client ID: Run ID: **MI-LA254_051207A** SeqNo: **429669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004779	0.0002	0.005	0	95.6	80	120	0.004347	9.46	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512009
Project: AL-2 to EP-1 Week of 11/28/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9317** Batch ID: **9317** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/6/2005 12:10:44 PM** Prep Date: **12/2/2005**
Client ID: Run ID: **ICP_051206C** SeqNo: **429196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4921	0.01	0.5	0	98.4	80	120	0			
Arsenic	0.5017	0.02	0.5	0	100	80	120	0			
Beryllium	0.5033	0.003	0.5	0	101	80	120	0			
Cadmium	0.4806	0.002	0.5	0.0002834	96.1	80	120	0			
Chromium	0.4852	0.006	0.5	0	97.0	80	120	0			
Copper	0.4977	0.006	0.5	0.002103	99.1	80	120	0			
Lead	0.4757	0.005	0.5	0	95.1	80	120	0			
Nickel	0.4625	0.01	0.5	0	92.5	80	120	0			
Selenium	0.4654	0.05	0.5	0	93.1	80	120	0			
Silver	0.4952	0.005	0.5	0	99.0	80	120	0			
Thallium	0.4815	0.05	0.5	0	96.3	80	120	0			
Zinc	0.4683	0.05	0.5	0.0009524	93.5	80	120	0			

6/8

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0512009
Project: AL-2 to EP-1 Week of 11/28/05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9317** Batch ID: **9317** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/6/2005 12:13:23 PM** Prep Date: **12/2/2005**
Client ID: Run ID: **ICP_051206C** SeqNo: **429197**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5005	0.01	0.5	0	100	80	120	0.4921	1.69	20	
Arsenic	0.4935	0.02	0.5	0	98.7	80	120	0.5017	1.66	20	
Beryllium	0.5051	0.003	0.5	0	101	80	120	0.5033	0.354	20	
Cadmium	0.4847	0.002	0.5	0.0002834	96.9	80	120	0.4806	0.861	20	
Chromium	0.4904	0.006	0.5	0	98.1	80	120	0.4852	1.07	20	
Copper	0.5	0.006	0.5	0.002103	99.6	80	120	0.4977	0.469	20	
Lead	0.4753	0.005	0.5	0	95.1	80	120	0.4757	0.0867	20	
Nickel	0.4679	0.01	0.5	0	93.6	80	120	0.4625	1.17	20	
Selenium	0.4556	0.05	0.5	0	91.1	80	120	0.4654	2.11	20	
Silver	0.5006	0.005	0.5	0	100	80	120	0.4952	1.08	20	
Thallium	0.4863	0.05	0.5	0	97.3	80	120	0.4815	0.998	20	
Zinc	0.4728	0.05	0.5	0.0009524	94.4	80	120	0.4683	0.963	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 12/1/2005

Work Order Number 0512009 | Received by AT

Checklist completed by  Signature | Date 12/1/05

Matrix | Carrier name Client drop-off

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? **14°** *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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7
Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 9210

Project Name: AL-2 to EP-1 Week of 11-28-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 14°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	PPL Metals Total				Air Bubbles or Headspace (Y or N)
12/1/05	0830	H_2O	AL-2 to EP-1					0512009-1	X		X										X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
12-1-05	1305		12/1/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 1305

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 12, 2005

Ed Riege
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: Stormwater Separator Water Out

Order No.: 0511258

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 1 sample on 11/23/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0511258
Collection Date: 11/21/2005 2:45:00 PM
Project: Stormwater Separator Water Out
Lab ID: 0511258-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	57	2.0		mg/L	20	12/1/2005
Chloride	790	5.0		mg/L	50	12/7/2005
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/23/2005
Sulfate	1200	10		mg/L	20	12/1/2005
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	10	11/23/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	470	10		µg/L	10	12/3/2005
Toluene	830	10		µg/L	10	12/3/2005
Ethylbenzene	100	10		µg/L	10	12/3/2005
Methyl tert-butyl ether (MTBE)	23	10		µg/L	10	12/3/2005
1,2,4-Trimethylbenzene	280	10		µg/L	10	12/3/2005
1,3,5-Trimethylbenzene	91	10		µg/L	10	12/3/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	12/3/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	12/3/2005
Naphthalene	200	20		µg/L	10	12/3/2005
1-Methylnaphthalene	240	40		µg/L	10	12/3/2005
2-Methylnaphthalene	300	40		µg/L	10	12/3/2005
Acetone	1900	100		µg/L	10	12/3/2005
Bromobenzene	ND	10		µg/L	10	12/3/2005
Bromochloromethane	ND	10		µg/L	10	12/3/2005
Bromodichloromethane	ND	10		µg/L	10	12/3/2005
Bromoform	ND	10		µg/L	10	12/3/2005
Bromomethane	ND	20		µg/L	10	12/3/2005
2-Butanone	ND	100		µg/L	10	12/3/2005
Carbon disulfide	ND	100		µg/L	10	12/3/2005
Carbon Tetrachloride	ND	20		µg/L	10	12/3/2005
Chlorobenzene	ND	10		µg/L	10	12/3/2005
Chloroethane	ND	20		µg/L	10	12/3/2005
Chloroform	ND	10		µg/L	10	12/3/2005
Chloromethane	ND	10		µg/L	10	12/3/2005
2-Chlorotoluene	ND	10		µg/L	10	12/3/2005
4-Chlorotoluene	ND	10		µg/L	10	12/3/2005
cis-1,2-DCE	ND	10		µg/L	10	12/3/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	12/3/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	12/3/2005
Dibromochloromethane	ND	10		µg/L	10	12/3/2005
Dibromomethane	ND	20		µg/L	10	12/3/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	12/3/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	12/3/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	12/3/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0511258
Project: Stormwater Separator Water Out
Lab ID: 0511258-01

Client Sample ID: SW Sep. Water Out
Collection Date: 11/21/2005 2:45:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND	10		µg/L	10	12/3/2005
1,1-Dichloroethane	ND	10		µg/L	10	12/3/2005
1,1-Dichloroethene	ND	10		µg/L	10	12/3/2005
1,2-Dichloropropane	ND	10		µg/L	10	12/3/2005
1,3-Dichloropropane	ND	10		µg/L	10	12/3/2005
2,2-Dichloropropane	ND	10		µg/L	10	12/3/2005
1,1-Dichloropropene	ND	10		µg/L	10	12/3/2005
Hexachlorobutadiene	ND	10		µg/L	10	12/3/2005
2-Hexanone	ND	100		µg/L	10	12/3/2005
Isopropylbenzene	23	10		µg/L	10	12/3/2005
4-Isopropyltoluene	12	10		µg/L	10	12/3/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	12/3/2005
Methylene Chloride	ND	30		µg/L	10	12/3/2005
n-Butylbenzene	ND	10		µg/L	10	12/3/2005
n-Propylbenzene	18	10		µg/L	10	12/3/2005
sec-Butylbenzene	ND	10		µg/L	10	12/3/2005
Styrene	ND	10		µg/L	10	12/3/2005
tert-Butylbenzene	ND	10		µg/L	10	12/3/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	12/3/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	12/3/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	12/3/2005
trans-1,2-DCE	ND	10		µg/L	10	12/3/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	12/3/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	12/3/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	12/3/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	12/3/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	12/3/2005
Trichloroethene (TCE)	ND	10		µg/L	10	12/3/2005
Trichlorofluoromethane	ND	10		µg/L	10	12/3/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	12/3/2005
Vinyl chloride	ND	10		µg/L	10	12/3/2005
Xylenes, Total	1500	10		µg/L	10	12/3/2005
Surr: 1,2-Dichloroethane-d4	89.0	69.9-130		%REC	10	12/3/2005
Surr: 4-Bromofluorobenzene	88.5	71.2-123		%REC	10	12/3/2005
Surr: Dibromofluoromethane	90.4	73.9-134		%REC	10	12/3/2005
Surr: Toluene-d8	90.0	81.9-122		%REC	10	12/3/2005
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	230	5.0		µg/L	1	12/3/2005 4:41:13 AM
1-Methylnaphthalene	220	5.0		µg/L	1	12/3/2005 4:41:13 AM
2-Methylnaphthalene	79	5.0		µg/L	1	12/3/2005 4:41:13 AM
Acenaphthylene	ND	5.0		µg/L	1	12/3/2005 4:41:13 AM
Acenaphthene	ND	5.0		µg/L	1	12/3/2005 4:41:13 AM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0511258
Project: Stormwater Separator Water Out
Lab ID: 0511258-01

Client Sample ID: SW Sep. Water Out
Collection Date: 11/21/2005 2:45:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Fluorene	17	1.6		µg/L	1	12/3/2005 4:41:13 AM
Phenanthrene	15	6.0		µg/L	5	12/6/2005 10:32:55 PM
Anthracene	ND	1.2		µg/L	1	12/3/2005 4:41:13 AM
Fluoranthene	ND	0.60		µg/L	1	12/3/2005 4:41:13 AM
Pyrene	2.4	0.60		µg/L	1	12/3/2005 4:41:13 AM
Benz(a)anthracene	ND	0.040		µg/L	1	12/3/2005 4:41:13 AM
Chrysene	ND	0.40		µg/L	1	12/3/2005 4:41:13 AM
Bertzo(b)fluoranthene	ND	0.10		µg/L	1	12/3/2005 4:41:13 AM
Benzo(k)fluoranthene	ND	0.040		µg/L	1	12/3/2005 4:41:13 AM
Benzo(a)pyrene	0.040	0.040		µg/L	1	12/3/2005 4:41:13 AM
Dibenz(a,h)anthracene	ND	0.080		µg/L	1	12/3/2005 4:41:13 AM
Benzo(g,h,i)perylene	ND	0.060		µg/L	1	12/3/2005 4:41:13 AM
Indeno(1,2,3-cd)pyrene	ND	0.16		µg/L	1	12/3/2005 4:41:13 AM
Surr: Benzo(e)pyrene	75.2	54-102		%REC	1	12/3/2005 4:41:13 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	5600	0.010		µmhos/cm	1	11/30/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.00069	0.00020		mg/L	1	12/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	12/1/2005 11:41:04 AM
Barium	0.28	0.020		mg/L	1	12/1/2005 11:41:04 AM
Cadmium	ND	0.0020		mg/L	1	12/1/2005 11:41:04 AM
Calcium	110	100		mg/L	100	12/1/2005 1:39:58 PM
Chromium	0.033	0.0060		mg/L	1	12/1/2005 11:41:04 AM
Lead	0.0054	0.0050		mg/L	1	12/1/2005 11:41:04 AM
Magnesium	30	1.0		mg/L	1	12/1/2005 11:41:04 AM
Potassium	31	1.0		mg/L	1	12/1/2005 11:41:04 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 11:41:04 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 11:41:04 AM
Sodium	1000	100		mg/L	100	12/1/2005 1:39:58 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	7.86	0.010		pH units	1	12/2/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK** Batch ID: **R17433** Test Code: **E300** Units: **mg/L** Analysis Date: **11/23/2005** Prep Date:
Client ID: Run ID: **LC_051123A** SeqNo: **425985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID: **MBLK** Batch ID: **R17477** Test Code: **E300** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date:
Client ID: Run ID: **LC_051201A** SeqNo: **427364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID: **MBLK** Batch ID: **R17540** Test Code: **E300** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date:
Client ID: Run ID: **LC_051207A** SeqNo: **429825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9262** Batch ID: **9262** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/2/2005 9:29:11 PM** Prep Date: **11/28/2005**
Client ID: Run ID: **HUGO_051202A** SeqNo: **428343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.34	0	10	0	73.4	54	102	0			

Sample ID: **MB-9305** Batch ID: **9305** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date: **12/1/2005**
Client ID: Run ID: **MI-LA254_051201A** SeqNo: **427275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:45:18 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	0.1007	1									J
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Method Blank

Sample ID: **5mL rb-b** Batch ID: **R17485** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/2/2005** Prep Date:

Client ID: Run ID: **NEPTUNE_051202A** SeqNo: **427854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	8.702	0	10	0	87.0	69.9	130	0
Surr: 4-Bromofluorobenzene	9.148	0	10	0	91.5	71.2	123	0
Surr: Dibromofluoromethane	8.722	0	10	0	87.2	73.9	134	0
Surr: Toluene-d8	9.18	0	10	0	91.8	81.9	122	0

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **0511258-01C DUP** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 11:45:11 AM** Prep Date: **11/28/2005**

Client ID: **SW Sep. Water O** Run ID: **ICP_051201B** SeqNo: **427802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02	0	0	0	0	0	0.01623	0	30	
Barium	0.2834	0.02	0	0	0	0	0	0.277	2.29	30	
Cadmium	ND	0.002	0	0	0	0	0	0	0	30	
Chromium	0.0327	0.006	0	0	0	0	0	0.03257	0.401	30	
Lead	0.004466	0.005	0	0	0	0	0	0.005412	0	30	J
Magnesium	30.29	1	0	0	0	0	0	30.14	0.504	30	
Potassium	31.02	1	0	0	0	0	0	30.78	0.775	30	
Selenium	ND	0.05	0	0	0	0	0	0	0	30	
Silver	ND	0.005	0	0	0	0	0	0	0	30	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **0511258-01C MS** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 11:49:17 AM** Prep Date: **11/28/2005**
Client ID: **SW Sep. Water O** Run ID: **ICP_051201B** SeqNo: **427803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5283	0.02	0.5	0.01623	102	75	125	0			
Barium	0.7878	0.02	0.5	0.277	102	75	125	0			
Cadmium	0.5108	0.002	0.5	0	102	75	125	0			
Chromium	0.5156	0.006	0.5	0.03257	96.6	75	125	0			
Lead	0.4823	0.005	0.5	0.005412	95.4	75	125	0			
Magnesium	76.94	1	50	30.14	93.6	75	125	0			
Potassium	84.31	1	50	30.78	107	75	125	0			
Selenium	0.4252	0.05	0.5	0	85.0	75	125	0			
Silver	0.5214	0.005	0.5	0	104	75	125	0			

Sample ID: **0511258-01C MSD** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 11:53:31 AM** Prep Date: **11/28/2005**
Client ID: **SW Sep. Water O** Run ID: **ICP_051201B** SeqNo: **427804**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5488	0.02	0.5	0.01623	107	75	125	0.5283	3.80	20	
Barium	0.899	0.02	0.5	0.277	124	75	125	0.7878	13.2	20	
Cadmium	0.5277	0.002	0.5	0	106	75	125	0.5108	3.26	20	
Chromium	0.5318	0.006	0.5	0.03257	99.8	75	125	0.5156	3.09	20	
Lead	0.5006	0.005	0.5	0.005412	99.0	75	125	0.4823	3.74	20	
Magnesium	78.33	1	50	30.14	96.4	75	125	76.94	1.78	20	
Potassium	86.27	1	50	30.78	111	75	125	84.31	2.30	20	
Selenium	0.4406	0.05	0.5	0	88.1	75	125	0.4252	3.55	20	
Silver	0.541	0.005	0.5	0	108	75	125	0.5214	3.70	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Date: *12-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-ST300-05023** Batch ID: **R17433** Test Code: **E300** Units: **mg/L** Analysis Date: **11/23/2005** Prep Date:
Client ID: Run ID: **LC_051123A** SeqNo: **425986**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4657	0.1	0.5	0	93.1	90	110	0			
Chloride	4.666	0.1	5	0	93.3	90	110	0			
Phosphorus, Orthophosphate (As P)	4.809	0.5	5	0	96.2	90	110	0			
Sulfate	9.754	0.5	10	0	97.5	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.353	0.1	3.5	0	95.8	90	110	0			

Sample ID: **LCS-ST300-05023** Batch ID: **R17477** Test Code: **E300** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date:
Client ID: Run ID: **LC_051201A** SeqNo: **427365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4993	0.1	0.5	0	99.9	90	110	0			
Chloride	4.87	0.1	5	0	97.4	90	110	0			
Phosphorus, Orthophosphate (As P)	5.013	0.5	5	0	100	90	110	0			
Sulfate	10.05	0.5	10	0	100	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.486	0.1	3.5	0	99.6	90	110	0			

Sample ID: **LCS-ST300-05023** Batch ID: **R17540** Test Code: **E300** Units: **mg/L** Analysis Date: **12/7/2005** Prep Date:
Client ID: Run ID: **LC_051207A** SeqNo: **429826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4844	0.1	0.5	0	96.9	90	110	0			
Chloride	4.548	0.1	5	0	91.0	90	110	0			
Phosphorus, Orthophosphate (As P)	4.746	0.5	5	0	94.9	90	110	0			
Sulfate	9.393	0.5	10	0	93.9	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.228	0.1	3.5	0	92.2	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

12/16

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **100ng lcs** Batch ID: **R17485** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **12/2/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_051202A** SeqNo: **427910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.95	1	20	0	105	79.3	136	0			
Toluene	20.11	1	20	0	101	65.5	123	0			
Chlorobenzene	18.98	1	20	0	94.9	85.6	126	0			
1,1-Dichloroethene	20.87	1	20	0	104	72.7	135	0			
Trichloroethene (TCE)	20.33	1	20	0	102	85.6	119	0			

Sample ID: **LCS-9262** Batch ID: **9262** Test Code: **SW8310** Units: **µg/L** Analysis Date: **12/2/2005 10:17:14 PM** Prep Date: **11/28/2005**
Client ID: Run ID: **HUGO_051202A** SeqNo: **428346**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	24.54	2.5	40	0	61.4	34.8	97.4	0			
1-Methylnaphthalene	25.76	2.5	40.1	0	64.2	34.7	100	0			
2-Methylnaphthalene	25.58	2.5	40	0	64.0	35	98.1	0			
Acenaphthylene	28.63	2.5	40.1	0	71.4	48.3	95.1	0			
Acenaphthene	27.9	2.5	40	0	69.8	45	95	0			
Fluorene	3	0.8	4.01	0	74.8	46.8	93.4	0			
Phenanthrene	1.63	0.6	2.01	0	81.1	48.7	104	0			
Anthracene	1.67	0.6	2.01	0	83.1	47.5	102	0			
Fluoranthene	3.45	0.3	4.01	0	86.0	46.3	108	0			
Pyrene	3.35	0.3	4.01	0	83.5	43.8	109	0			
Benz(a)anthracene	0.35	0.02	0.401	0	87.3	40.3	115	0			
Chrysene	1.75	0.2	2.01	0	87.1	42.6	107	0			
Benzo(b)fluoranthene	0.38	0.05	0.501	0	75.8	48.6	107	0			
Benzo(k)fluoranthene	0.21	0.02	0.25	0	84.0	23.3	136	0			
Benzo(a)pyrene	0.22	0.02	0.251	0	87.6	33.4	117	0			
Dibenz(a,h)anthracene	0.688	0.04	0.501	0	137	27.3	139	0			
Benzo(g,h,i)perylene	0.48	0.03	0.5	0	96.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.982	0.08	1.002	0	98.0	39.9	125	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9305** Batch ID: **9305** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date: **12/1/2005**
Client ID: Run ID: **MI-LA254_051201A** SeqNo: **427276**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004721	0.0002	0.005	0	94.4	80	120	0			

Sample ID: **LCSD-9305** Batch ID: **9305** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date: **12/1/2005**
Client ID: Run ID: **MI-LA254_051201A** SeqNo: **427289**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00481	0.0002	0.005	0	96.2	80	120	0.004721	1.87	0	

Sample ID: **LCS-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:48:31 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4912	0.02	0.5	0	98.2	80	120	0			
Barium	0.4885	0.02	0.5	0	97.7	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Calcium	49.2	1	50	0	98.4	80	120	0			
Chromium	0.4941	0.006	0.5	0	98.8	80	120	0			
Lead	0.4856	0.005	0.5	0	97.1	80	120	0			
Magnesium	49.4	1	50	0	98.8	80	120	0			
Potassium	51.72	1	50	0.1007	103	80	120	0			
Selenium	0.4823	0.05	0.5	0	96.5	80	120	0			
Silver	0.495	0.005	0.5	0	99.0	80	120	0			
Sodium	52.1	1	50	0	104	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511258
Project: Stormwater Separator Water Out

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:51:42 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Barium	0.4971	0.02	0.5	0	99.4	80	120	0.4885	1.74	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Calcium	49.43	1	50	0	98.9	80	120	49.2	0.467	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Magnesium	49.54	1	50	0	99.1	80	120	49.4	0.272	20	
Potassium	52.15	1	50	0.1007	104	80	120	51.72	0.835	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Sodium	52.25	1	50	0	104	80	120	52.1	0.295	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 11/23/2005

Work Order Number 0511258 | Received by AT

Checklist completed by  11/23/05
Signature Date

Matrix | Carrier name | Client drop-off

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

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

Client: GIANT REFINING CO. CINIZA
Address: ROUTE 3, BOX 7 GALLUP, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: Stormwater Separator Water Out
Project #:
Project Manager: ED RIEGE
Sampler: JOHNNY SANCHEZ
Sample Temperature: 4

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
11-21-05	1445	H_2O	SW Step. Water Out	7 EACH			0511258-1							X	X			X		X				

Date: 11-22-05 Time: 0900 Relinquished By: (Signature) J. Sanchez
Received By: (Signature) 11/23/05 1400

Date: Time: Relinquished By: (Signature)
Received By: (Signature)

Remarks: RUSH
Gen Chem = Cations, Anions, pH + Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 09, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Aeration Lagoon Bank Material 11-16-05 Order No.: 0511189

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/17/2005 for the analyses presented in the following report.

This report is an addendum to the report dated November 30, 2005. 418.1 has been added to this report. Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *09-Dec-05*

CLIENT: Giant Refining Co
Project: Aeration Lagoon Bank Material 11-16-05
Lab Order: 0511189

CASE NARRATIVE

Analytical Comments for METHOD 8260_S, SAMPLE 0511189-01a: Sample analyzed at dilution because of late eluting hydrocarbons.

Method 6010: 0511189-1 DUP RPD >30 for Cd & Ba. 0511189-1 MSD recovery low for Cr and Pb. 0511189-1 MSD RPD >30 for Pb. Sample may not be homogenous. IN36-05223

418.1 was added to the analysis request past the 14 day prep holding time of the sample.

Hall Environmental Analysis Laboratory

Date: *09-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05
Lab ID: 0511189-01

Client Sample ID: AL Bank Material
Collection Date: 11/17/2005 8:45:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						Analyst: **CKL**
Petroleum Hydrocarbons, TR	390000	10000		mg/Kg	500	12/8/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		mg/Kg	20	11/21/2005
Toluene	ND	1.0		mg/Kg	20	11/21/2005
Ethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	11/21/2005
1,2,4-Trimethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,3,5-Trimethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	11/21/2005
Naphthalene	ND	2.0		mg/Kg	20	11/21/2005
1-Methylnaphthalene	6.5	4.0		mg/Kg	20	11/21/2005
2-Methylnaphthalene	5.8	4.0		mg/Kg	20	11/21/2005
Acetone	ND	15		mg/Kg	20	11/21/2005
Bromobenzene	ND	1.0		mg/Kg	20	11/21/2005
Bromochloromethane	ND	1.0		mg/Kg	20	11/21/2005
Bromodichloromethane	ND	1.0		mg/Kg	20	11/21/2005
Bromoform	ND	1.0		mg/Kg	20	11/21/2005
Bromomethane	ND	2.0		mg/Kg	20	11/21/2005
2-Butanone	ND	10		mg/Kg	20	11/21/2005
Carbon disulfide	ND	10		mg/Kg	20	11/21/2005
Carbon tetrachloride	ND	2.0		mg/Kg	20	11/21/2005
Chlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
Chloroethane	ND	2.0		mg/Kg	20	11/21/2005
Chloroform	ND	1.0		mg/Kg	20	11/21/2005
Chloromethane	ND	1.0		mg/Kg	20	11/21/2005
2-Chlorotoluene	ND	1.0		mg/Kg	20	11/21/2005
4-Chlorotoluene	ND	1.0		mg/Kg	20	11/21/2005
cis-1,2-DCE	ND	1.0		mg/Kg	20	11/21/2005
cis-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dibromo-3-chloropropane	ND	2.0		mg/Kg	20	11/21/2005
Dibromochloromethane	ND	1.0		mg/Kg	20	11/21/2005
Dibromomethane	ND	2.0		mg/Kg	20	11/21/2005
1,2-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,3-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,4-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
Dichlorodifluoromethane	ND	1.0		mg/Kg	20	11/21/2005
1,1-Dichloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1-Dichloroethene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dichloropropane	ND	1.0		mg/Kg	20	11/21/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *09-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05
Lab ID: 0511189-01

Client Sample ID: AL Bank Material
Collection Date: 11/17/2005 8:45:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	1.0		mg/Kg	20	11/21/2005
2,2-Dichloropropane	ND	2.0		mg/Kg	20	11/21/2005
1,1-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005
Hexachlorobutadiene	ND	1.0		mg/Kg	20	11/21/2005
2-Hexanone	ND	10		mg/Kg	20	11/21/2005
Isopropylbenzene	ND	1.0		mg/Kg	20	11/21/2005
4-Isopropyltoluene	ND	1.0		mg/Kg	20	11/21/2005
4-Methyl-2-pentanone	ND	10		mg/Kg	20	11/21/2005
Methylene chloride	ND	3.0		mg/Kg	20	11/21/2005
n-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
n-Propylbenzene	ND	1.0		mg/Kg	20	11/21/2005
sec-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
Styrene	ND	1.0		mg/Kg	20	11/21/2005
tert-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,1,1,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1,2,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/21/2005
Tetrachloroethene (PCE)	ND	1.0		mg/Kg	20	11/21/2005
trans-1,2-DCE	ND	1.0		mg/Kg	20	11/21/2005
trans-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005
1,2,3-Trichlorobenzene	ND	2.0		mg/Kg	20	11/21/2005
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,1,1-Trichloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1,2-Trichloroethane	ND	1.0		mg/Kg	20	11/21/2005
Trichloroethene (TCE)	ND	1.0		mg/Kg	20	11/21/2005
Trichlorofluoromethane	ND	1.0		mg/Kg	20	11/21/2005
1,2,3-Trichloropropane	ND	2.0		mg/Kg	20	11/21/2005
Vinyl chloride	ND	1.0		mg/Kg	20	11/21/2005
Xylenes, Total	ND	1.0		mg/Kg	20	11/21/2005
Surr: 1,2-Dichloroethane-d4	99.3	74.2-135		%REC	20	11/21/2005
Surr: 4-Bromofluorobenzene	98.2	72.9-143		%REC	20	11/21/2005
Surr: Dibromofluoromethane	97.9	76.9-138		%REC	20	11/21/2005
Surr: Toluene-d8	83.8	70-126		%REC	20	11/21/2005
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	1.9	0.66		mg/Kg	20	11/28/2005
EPA METHOD 6010B: SOIL METALS						Analyst: **NMO**
Arsenic	12	2.5		mg/Kg	1	11/22/2005 10:53:04 AM
Barium	190	1.0		mg/Kg	10	11/22/2005 11:08:04 AM
Cadmium	0.48	0.10		mg/Kg	1	11/22/2005 10:53:04 AM
Chromium	16	0.30		mg/Kg	1	11/22/2005 10:53:04 AM
Lead	23	0.25		mg/Kg	1	11/22/2005 10:53:04 AM
Selenium	ND	2.5		mg/Kg	1	11/22/2005 10:53:04 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *09-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05
Lab ID: 0511189-01

Client Sample ID: AL Bank Material
Collection Date: 11/17/2005 8:45:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Silver	ND	0.25		mg/Kg	1	11/22/2005 10:53:04 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *09-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-9342** Batch ID: **9342** Test Code: **E418.1** Units: **mg/Kg** Analysis Date: **12/8/2005** Prep Date: **12/6/2005**

Client ID: Run ID: **BUCK IR_051208A** SeqNo: **430172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20									

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
/

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Method Blank

Sample ID: **mb-9226** Batch ID: **9226** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date: **11/21/2005** Prep Date: **11/20/2005**
Client ID: Run ID: **THOR_051118C** SeqNo: **424791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.05									
Toluene	ND	0.05									
Ethylbenzene	ND	0.05									
Methyl tert-butyl ether (MTBE)	0.0465	0.05									J
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	ND	0.05									
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	0.75									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	ND	0.1									
2-Butanone	ND	0.5									
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									
cis-1,3-Dichloropropene	ND	0.05									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Method Blank

1,2-Dibromo-3-chloropropane	ND	0.1
Dibromochloromethane	ND	0.05
Dibromomethane	ND	0.1
1,2-Dichlorobenzene	ND	0.05
1,3-Dichlorobenzene	ND	0.05
1,4-Dichlorobenzene	ND	0.05
Dichlorodifluoromethane	ND	0.05
1,1-Dichloroethane	ND	0.05
1,1-Dichloroethene	ND	0.05
1,2-Dichloropropane	ND	0.05
1,3-Dichloropropane	ND	0.05
2,2-Dichloropropane	ND	0.1
1,1-Dichloropropene	ND	0.05
Hexachlorobutadiene	ND	0.05
2-Hexanone	ND	0.5
Isopropylbenzene	ND	0.05
4-Isopropyltoluene	ND	0.05
4-Methyl-2-pentanone	ND	0.5
Methylene chloride	ND	0.15
n-Butylbenzene	ND	0.05
n-Propylbenzene	ND	0.05
sec-Butylbenzene	ND	0.05
Styrene	ND	0.05
tert-Butylbenzene	ND	0.05
1,1,1,2-Tetrachloroethane	ND	0.05
1,1,2,2-Tetrachloroethane	ND	0.05
Tetrachloroethene (PCE)	ND	0.05
trans-1,2-DCE	ND	0.05
trans-1,3-Dichloropropene	ND	0.05
1,2,3-Trichlorobenzene	ND	0.1
1,2,4-Trichlorobenzene	ND	0.05
1,1,1-Trichloroethane	ND	0.05
1,1,2-Trichloroethane	ND	0.05

7/12

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Method Blank

Trichloroethene (TCE)	ND	0.05							
Trichlorofluoromethane	ND	0.05							
1,2,3-Trichloropropane	ND	0.1							
Vinyl chloride	ND	0.05							
Xylenes, Total	ND	0.05							
Surr: 1,2-Dichloroethane-d4	0.4964	0	0.5	0	99.3	74.2	135	0	
Surr: 4-Bromofluorobenzene	0.5452	0	0.5	0	109	72.9	143	0	
Surr: Dibromofluoromethane	0.5136	0	0.5	0	103	76.9	138	0	
Surr: Toluene-d8	0.4063	0	0.5	0	81.3	70	126	0	

Sample ID: **MB-9270** Batch ID: **9270** Test Code: **SW7471** Units: **mg/Kg** Analysis Date: **11/28/2005** Prep Date: **11/28/2005**
Client ID: Run ID: **MI-LA254_051128A** SeqNo: **425769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID: **MB-9222** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **11/22/2005 10:18:50 A** Prep Date: **11/18/2005**
Client ID: Run ID: **ICP_051122A** SeqNo: **424797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

8/12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 09-Dec-05

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **0511189-01B DUP** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **11/22/2005 10:55:37 A** Prep Date: **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.02	2.5	0	0	0	0	0	11.93	0.730	30	
Cadmium	0.6731	0.1	0	0	0	0	0	0.4753	34.4	30	R
Chromium	17.82	0.3	0	0	0	0	0	16.08	10.2	30	
Lead	28.17	0.25	0	0	0	0	0	23.24	19.2	30	
Selenium	ND	2.5	0	0	0	0	0	0	0	30	
Silver	ND	0.25	0	0	0	0	0	0	0	30	

Sample ID: **0511189-01B DUP** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **11/22/2005 11:10:57 A** Prep Date: **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	108.3	1	0	0	0	0	0	187.7	53.6	30	R

9/12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: *09-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **0511189-01B MS** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **11/22/2005 10:59:54 A** Prep Date: **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	35.82	2.5	24.42	11.93	97.8	75	125	0			
Cadmium	23.51	0.1	24.42	0.4753	94.3	75	125	0			
Chromium	38.25	0.3	24.42	16.08	90.8	75	125	0			
Selenium	21.42	2.5	24.42	0	87.7	75	125	0			
Silver	23.02	0.25	24.42	0	94.2	75	125	0			

Sample ID: **0511189-01B MSD** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date: **11/22/2005 11:04:15 A** Prep Date: **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	34	2.5	24.42	11.93	90.4	75	125	35.82	5.23	30	
Cadmium	23.26	0.1	24.42	0.4753	93.3	75	125	23.51	1.06	30	
Chromium	32.35	0.3	24.42	16.08	66.6	75	125	38.25	16.7	30	S
Lead	35.33	0.25	24.42	23.24	49.5	75	125	48.97	32.4	30	SR
Selenium	19.21	2.5	24.42	0	78.7	75	125	21.42	10.9	30	
Silver	23.2	0.25	24.42	0	95.0	75	125	23.02	0.769	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
/

Hall Environmental Analysis Laboratory

Date: *09-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9342**	Batch ID: **9342**	Test Code: **E418.1**	Units: **mg/Kg**	Analysis Date: **12/8/2005**	Prep Date: **12/6/2005**
Client ID:		Run ID: **BUCK IR_051208A**		SeqNo: **430173**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	90.4	20	100	0	90.4	82	114	0			

Sample ID: **LCSD-9342**	Batch ID: **9342**	Test Code: **E418.1**	Units: **mg/Kg**	Analysis Date: **12/8/2005**	Prep Date: **12/6/2005**
Client ID:		Run ID: **BUCK IR_051208A**		SeqNo: **430179**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	90.4	20	100	0	90.4	82	114	90.4	0	20	

Sample ID: **lcs-9226**	Batch ID: **9226**	Test Code: **SW8260B**	Units: **mg/Kg**	Analysis Date: **11/21/2005**	Prep Date: **11/20/2005**
Client ID:		Run ID: **THOR_051118C**		SeqNo: **424792**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.004	0.05	1	0	100	80.8	132	0			
Toluene	0.7508	0.05	1	0	75.1	72.1	126	0			
Chlorobenzene	1.098	0.05	1	0	110	83	124	0			
1,1-Dichloroethene	0.8875	0.05	1	0	88.8	59	147	0			
Trichloroethene (TCE)	0.9096	0.05	1	0	91.0	77.2	123	0			

Sample ID: **LCS-9270**	Batch ID: **9270**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date: **11/28/2005**	Prep Date: **11/28/2005**
Client ID:		Run ID: **MI-LA254_051128A**		SeqNo: **425770**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1838	0.033	0.1667	0	110	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: LCSD-9270	Batch ID: 9270	Test Code: SW7471	Units: mg/Kg	Analysis Date: 11/28/2005	Prep Date: 11/28/2005
Client ID:		Run ID: MI-LA254_051128A		SeqNo: 425777	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1816	0.033	0.1667	0	109	80	120	0.1838	1.21	20	

Sample ID: LCS-9222	Batch ID: 9222	Test Code: SW6010A	Units: mg/Kg	Analysis Date: 11/22/2005 10:21:10 A	Prep Date: 11/18/2005
Client ID:		Run ID: ICP_051122A		SeqNo: 424798	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.01	0.25	25	0	96.0	80	120	0			

Sample ID: LCSD-9222	Batch ID: 9222	Test Code: SW6010A	Units: mg/Kg	Analysis Date: 11/22/2005 10:23:45 A	Prep Date: 11/18/2005
Client ID:		Run ID: ICP_051122A		SeqNo: 424799	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.17	0.25	25	0	96.7	80	120	24.01	0.670	20	

12/12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☐ Level 4 ☐

Other:

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

Client: Giant Refining Company - Ciniza

Address: Route 3 Box 7 Gallup, NM 87301

Phone #: 505 722 3833

Fax #: 505 722 0210

Project Name: Aeration Lagoon Bank Material 11-16-2005

Project #:

Project Manager: Steve Morris

Sampler: Steve Morris

Sample Temperature: 6

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
11-17-05	0845	Non Aqueous	AL Bank Material	2x4 oz				0511189-1								X			X						

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
11-17-05	1430	Steve Morris	[signature] 11/17/05 1430
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH
Sample is from contaminated/oily soil around the banks of Aeration Lagoon 1+2 as well as Evap pond 1

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 06, 2005

Ed Riege
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 11/21/05 Order No.: 0511257

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 1 sample on 11/23/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0511257
Collection Date: 11/21/2005 2:55:00 PM
Project: AL-2 to EP-1 Week of 11/21/05
Lab ID: 0511257-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	48	1.0		mg/L	1	11/28/2005 7:32:42 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/28/2005 7:32:42 PM
Surr: DNOP	89.9	58-140		%REC	1	11/28/2005 7:32:42 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.22	0.10		mg/L	2	12/2/2005 10:24:21 AM
Surr: BFB	102	79.7-118		%REC	2	12/2/2005 10:24:21 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	15	5.0		µg/L	2	12/2/2005 10:24:21 AM
Benzene	18	1.0		µg/L	2	12/2/2005 10:24:21 AM
Toluene	16	1.0		µg/L	2	12/2/2005 10:24:21 AM
Ethylbenzene	1.6	1.0		µg/L	2	12/2/2005 10:24:21 AM
Xylenes, Total	11	1.0		µg/L	2	12/2/2005 10:24:21 AM
Surr: 4-Bromofluorobenzene	107	82.2-119		%REC	2	12/2/2005 10:24:21 AM
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0017	0.00020		mg/L	1	12/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	12/1/2005 2:54:45 PM
Arsenic	ND	0.020		mg/L	1	12/1/2005 10:17:07 AM
Beryllium	ND	0.0030		mg/L	1	12/1/2005 10:17:07 AM
Cadmium	ND	0.0020		mg/L	1	12/1/2005 10:17:07 AM
Chromium	ND	0.0060		mg/L	1	12/1/2005 10:17:07 AM
Copper	ND	0.0060		mg/L	1	12/1/2005 10:17:07 AM
Lead	ND	0.0050		mg/L	1	12/1/2005 10:17:07 AM
Nickel	ND	0.010		mg/L	1	12/1/2005 10:17:07 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:17:07 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:17:07 AM
Thallium	ND	0.050		mg/L	1	12/1/2005 10:17:07 AM
Zinc	1.1	0.50		mg/L	10	12/1/2005 12:28:49 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-9263** Batch ID: **9263** Test Code: **SW8015** Units: **mg/L** Analysis Date: **11/28/2005 5:53:55 PM** Prep Date: **11/28/2005**
Client ID: Run ID: **FID(17A) 2_051128A** SeqNo: **425867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.289	0	1	0	129	58	140	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17472** Test Code: **SW8015** Units: **mg/L** Analysis Date: **11/30/2005 9:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051130A** SeqNo: **427453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	19.87	0	20	0	99.4	79.7	118	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17483** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/2/2005 8:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **428271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	19.92	0	20	0	99.6	79.7	118	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Method Blank

Sample ID: **Reagent Blank 5m** Batch ID: **R17472** Test Code: **SW8021** Units: **µg/L** Analysis Date: **11/30/2005 9:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051130A** SeqNo: **427443**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.75	0	20	0	98.8	82.2	119	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17483** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/2/2005 8:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **427827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.98	0	20	0	105	82.2	119	0			

Sample ID: **MB-9305** Batch ID: **9305** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date: **12/1/2005**
Client ID: Run ID: **MI-LA254_051201A** SeqNo: **427275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:45:18 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.05									
Zinc	ND	0.05									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9263**	Batch ID: **9263**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **11/28/2005 6:26:55 PM**	Prep Date: **11/28/2005**
Client ID:		Run ID: **FID(17A) 2_051128A**		SeqNo: **425881**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.574	1	5	0	131	81.2	149	0			

Sample ID: **LCSD-9263**	Batch ID: **9263**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **11/28/2005 6:59:57 PM**	Prep Date: **11/28/2005**
Client ID:		Run ID: **FID(17A) 2_051128A**		SeqNo: **425882**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.753	1	5	0	135	81.2	149	6.574	2.69	23	

Sample ID: **GRO lcs 2.5ug**	Batch ID: **R17472**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **11/30/2005 10:37:50 P**	Prep Date:
Client ID:		Run ID: **PIDFID_051130A**		SeqNo: **427454**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.495	0.05	0.5	0	99.0	82.6	114	0			

Sample ID: **GRO lcs 2.5ug**	Batch ID: **R17483**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **12/2/2005 5:29:27 PM**	Prep Date:
Client ID:		Run ID: **PIDFID_051202A**		SeqNo: **428279**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4892	0.05	0.5	0	97.8	82.6	114	0			

Sample ID: **GRO lcsd 2.5ug**	Batch ID: **R17483**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **12/2/2005 5:59:56 PM**	Prep Date:
Client ID:		Run ID: **PIDFID_051202A**		SeqNo: **428280**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4714	0.05	0.5	0	94.3	82.6	114	0.4892	3.71	8.39	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **BTEX lcs 100ng** Batch ID: **R17472** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/1/2005 12:08:12 AM** Prep Date:
Client ID: Run ID: **PIDFID_051130A** SeqNo: **427444**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20.04	2.5	20	0	100	64.5	133	0			
Benzene	19.92	0.5	20	0	99.6	88.5	114	0			
Toluene	19.9	0.5	20	0	99.5	87.2	114	0			
Ethylbenzene	19.8	0.5	20	0	99.0	88.6	113	0			
Xylenes, Total	42.27	0.5	40	0	106	83.3	114	0			

Sample ID: **BTEX lcs 100ng** Batch ID: **R17483** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/2/2005 6:30:25 PM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **427828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22.61	2.5	20	0	113	64.5	133	0			
Benzene	20.23	0.5	20	0	101	88.5	114	0			
Toluene	20.24	0.5	20	0	101	87.2	114	0			
Ethylbenzene	20.45	0.5	20	0	102	88.6	113	0			
Xylenes, Total	42.96	0.5	40	0	107	83.3	114	0			

Sample ID: **BTEX lcsd 100ng** Batch ID: **R17483** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/2/2005 7:00:53 PM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **427829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22.03	2.5	20	0	110	64.5	133	22.61	2.57	28	
Benzene	19.89	0.5	20	0	99.4	88.5	114	20.23	1.70	27	
Toluene	19.7	0.5	20	0	98.5	87.2	114	20.24	2.73	19	
Ethylbenzene	19.95	0.5	20	0	99.7	88.6	113	20.45	2.50	10	
Xylenes, Total	42.09	0.5	40	0	105	83.3	114	42.96	2.06	13	

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Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9305** Batch ID: **9305** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date: **12/1/2005**
Client ID: Run ID: **MI-LA254_051201A** SeqNo: **427276**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004721	0.0002	0.005	0	94.4	80	120	0			

Sample ID: **LCSD-9305** Batch ID: **9305** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date: **12/1/2005**
Client ID: Run ID: **MI-LA254_051201A** SeqNo: **427289**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00481	0.0002	0.005	0	96.2	80	120	0.004721	1.87	0	

Sample ID: **LCS-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:48:31 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5127	0.01	0.5	0	103	80	120	0			
Arsenic	0.4912	0.02	0.5	0	98.2	80	120	0			
Beryllium	0.5113	0.003	0.5	0	102	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Chromium	0.4941	0.006	0.5	0	98.8	80	120	0			
Copper	0.5065	0.006	0.5	0	101	80	120	0			
Lead	0.4856	0.005	0.5	0	97.1	80	120	0			
Nickel	0.4692	0.01	0.5	0	93.8	80	120	0			
Selenium	0.4823	0.05	0.5	0	96.5	80	120	0			
Silver	0.495	0.005	0.5	0	99.0	80	120	0			
Thallium	0.5157	0.05	0.5	0	103	80	120	0			
Zinc	0.4727	0.05	0.5	0	94.5	80	120	0			

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Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:51:42 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.526	0.01	0.5	0	105	80	120	0.5127	2.55	20	
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Beryllium	0.5196	0.003	0.5	0	104	80	120	0.5113	1.59	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Copper	0.5159	0.006	0.5	0	103	80	120	0.5065	1.84	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Nickel	0.4769	0.01	0.5	0	95.4	80	120	0.4692	1.64	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Thallium	0.5221	0.05	0.5	0	104	80	120	0.5157	1.23	20	
Zinc	0.483	0.05	0.5	0	96.6	80	120	0.4727	2.16	20	

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Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 11/23/2005

Work Order Number 0511257 | Received by AT

Checklist completed by _____ Signature | _____ Date 11/23/05

Matrix | Carrier name FedEx

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 ☐		
[illegible] - 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

CHAIN-OF-CUSTODY RECORD

QA / QC Package
Std ☐ Level 4 ☐
Other:

Client: GIANT REFINING CO. CINIZA
Address: ROUTE 3, BOX 7 GALLUP, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: AL-2 to EP-1 Week of 11-21-2005
Project #:
Project Manager: ED RIEGE
Sampler: JOHNNY SANCHEZ
Sample Temperature: 4°C

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	PPL TCL/Metals				Air Bubbles or Headspace (Y or N)
11-21-05	1455	H_2O	AL-2 to EP-1	5 EACH			051257-1	X		X										X				

Remarks:

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
11-22-05	0900	J Sanchez	11/23/05 413
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 06, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Water 11-16-2005 Order No.: 0511190

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/18/2005 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

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0511190
Collection Date: 11/16/2005 10:30:00 AM
Project: Stormwater Separator Water 11-16-2005
Lab ID: 0511190-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	69	2.0		mg/L	20	11/18/2005
Chloride	370	1.0		mg/L	10	11/18/2005
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/18/2005
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/18/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/18/2005
Sulfate	1100	10		mg/L	20	11/18/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	280	10		µg/L	10	11/21/2005
Toluene	330	10		µg/L	10	11/21/2005
Ethylbenzene	36	10		µg/L	10	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/21/2005
1,2,4-Trimethylbenzene	230	10		µg/L	10	11/21/2005
1,3,5-Trimethylbenzene	68	10		µg/L	10	11/21/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/21/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/21/2005
Naphthalene	150	20		µg/L	10	11/21/2005
1-Methylnaphthalene	120	40		µg/L	10	11/21/2005
2-Methylnaphthalene	140	40		µg/L	10	11/21/2005
Acetone	340	100		µg/L	10	11/21/2005
Bromobenzene	ND	10		µg/L	10	11/21/2005
Bromochloromethane	ND	10		µg/L	10	11/21/2005
Bromodichloromethane	ND	10		µg/L	10	11/21/2005
Bromoform	ND	10		µg/L	10	11/21/2005
Bromomethane	ND	20		µg/L	10	11/21/2005
2-Butanone	ND	100		µg/L	10	11/21/2005
Carbon disulfide	ND	100		µg/L	10	11/21/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/21/2005
Chlorobenzene	ND	10		µg/L	10	11/21/2005
Chloroethane	ND	20		µg/L	10	11/21/2005
Chloroform	ND	10		µg/L	10	11/21/2005
Chloromethane	ND	10		µg/L	10	11/21/2005
2-Chlorotoluene	ND	10		µg/L	10	11/21/2005
4-Chlorotoluene	ND	10		µg/L	10	11/21/2005
cis-1,2-DCE	ND	10		µg/L	10	11/21/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/21/2005
Dibromochloromethane	ND	10		µg/L	10	11/21/2005
Dibromomethane	ND	20		µg/L	10	11/21/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/21/2005

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0511190
Project: Stormwater Separator Water 11-16-2005
Lab ID: 0511190-01

Client Sample ID: SW Sep Water Out
Collection Date: 11/16/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	10		µg/L	10	11/21/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/21/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/21/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,3-Dichloropropane	ND	10		µg/L	10	11/21/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/21/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/21/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/21/2005
2-Hexanone	ND	100		µg/L	10	11/21/2005
Isopropylbenzene	ND	10		µg/L	10	11/21/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/21/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/21/2005
Methylene Chloride	ND	30		µg/L	10	11/21/2005
n-Butylbenzene	13	10		µg/L	10	11/21/2005
n-Propylbenzene	ND	10		µg/L	10	11/21/2005
sec-Butylbenzene	ND	10		µg/L	10	11/21/2005
Styrene	ND	10		µg/L	10	11/21/2005
tert-Butylbenzene	ND	10		µg/L	10	11/21/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/21/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/21/2005
trans-1,2-DCE	ND	10		µg/L	10	11/21/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/21/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/21/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/21/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/21/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/21/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/21/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/21/2005
Vinyl chloride	ND	10		µg/L	10	11/21/2005
Xylenes, Total	880	10		µg/L	10	11/21/2005
Surr: 1,2-Dichloroethane-d4	93.0	69.9-130		%REC	10	11/21/2005
Surr: 4-Bromofluorobenzene	111	71.2-123		%REC	10	11/21/2005
Surr: Dibromofluoromethane	94.0	73.9-134		%REC	10	11/21/2005
Surr: Toluene-d8	93.5	80-122		%REC	10	11/21/2005
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	230	13		µg/L	1	11/30/2005 4:13:34 AM
1-Methylnaphthalene	ND	13		µg/L	1	11/30/2005 4:13:34 AM
2-Methylnaphthalene	93	13		µg/L	1	11/30/2005 4:13:34 AM
Acenaphthylene	ND	13		µg/L	1	11/30/2005 4:13:34 AM

Qualifiers:
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B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0511190
Collection Date: 11/16/2005 10:30:00 AM
Project: Stormwater Separator Water 11-16-2005
Lab ID: 0511190-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Acenaphthene	ND	13		µg/L	1	11/30/2005 4:13:34 AM
Fluorene	22	4.0		µg/L	1	11/30/2005 4:13:34 AM
Phenanthrene	21	3.0		µg/L	1	11/30/2005 4:13:34 AM
Anthracene	ND	3.0		µg/L	1	11/30/2005 4:13:34 AM
Fluoranthene	ND	1.5		µg/L	1	11/30/2005 4:13:34 AM
Pyrene	2.7	1.5		µg/L	1	11/30/2005 4:13:34 AM
Benz(a)anthracene	ND	0.10		µg/L	1	11/30/2005 4:13:34 AM
Chrysene	ND	1.0		µg/L	1	11/30/2005 4:13:34 AM
Benzo(b)fluoranthene	ND	0.25		µg/L	1	11/30/2005 4:13:34 AM
Benzo(k)fluoranthene	ND	0.10		µg/L	1	11/30/2005 4:13:34 AM
Benzo(a)pyrene	0.10	0.10		µg/L	1	11/30/2005 4:13:34 AM
Dibenz(a,h)anthracene	ND	0.20		µg/L	1	11/30/2005 4:13:34 AM
Benzo(g,h,i)perylene	ND	0.15		µg/L	1	11/30/2005 4:13:34 AM
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	1	11/30/2005 4:13:34 AM
Surr: Benzo(e)pyrene	80.9	54-102		%REC	1	11/30/2005 4:13:34 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	4500	0.010		µmhos/cm	1	11/30/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.00021	0.00020		mg/L	1	11/22/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	12/1/2005 10:13:05 AM
Barium	0.30	0.020		mg/L	1	12/1/2005 10:13:05 AM
Cadmium	ND	0.0020		mg/L	1	12/1/2005 10:13:05 AM
Calcium	95	1.0		mg/L	1	12/1/2005 10:13:05 AM
Chromium	0.031	0.0060		mg/L	1	12/1/2005 10:13:05 AM
Lead	0.011	0.0050		mg/L	1	12/1/2005 10:13:05 AM
Magnesium	25	1.0		mg/L	1	12/1/2005 10:13:05 AM
Potassium	33	1.0		mg/L	1	12/1/2005 10:13:05 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:13:05 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:13:05 AM
Sodium	870	10		mg/L	10	12/1/2005 12:22:55 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	7.29	0.010		pH units	1	12/2/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MBLK** Batch ID: **R17358** Test Code: **E300** Units: **mg/L** Analysis Date: **11/18/2005** Prep Date:

Client ID: Run ID: **LC_051118A** SeqNo: **423979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
/

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

Sample ID: **5mL rb** Batch ID: **R17359** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **11/18/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_051118A** SeqNo: **424054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
cis-1,3-Dichloropropene	ND	1									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1
1,1,2-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.756	0	10	0	97.6	69.9	130	0
Surr: 4-Bromofluorobenzene	8.984	0	10	0	89.8	71.2	123	0
Surr: Dibromofluoromethane	8.92	0	10	0	89.2	73.9	134	0
Surr: Toluene-d8	9.992	0	10	0	99.9	81.9	122	0

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

Sample ID: **b12** Batch ID: **R17385** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **11/22/2005** Prep Date:
Client ID: Run ID: **THOR_051118C** SeqNo: **424815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
cis-1,3-Dichloropropene	ND	1									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1
1,1,2-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

Trichloroethene (TCE)	ND	1							
Trichlorofluoromethane	ND	1							
1,2,3-Trichloropropane	ND	2							
Vinyl chloride	ND	1							
Xylenes, Total	ND	1							
Surr: 1,2-Dichloroethane-d4	9.594	0	10	0	95.9	69.9	130	0	
Surr: 4-Bromofluorobenzene	10.94	0	10	0	109	71.2	123	0	
Surr: Dibromofluoromethane	10.37	0	10	0	104	73.9	134	0	
Surr: Toluene-d8	8.02	0	10	0	80.2	80	122	0	

Sample ID: **MB-9252** Batch ID: **9252** Test Code: **SW8310** Units: **µg/L** Analysis Date: **11/28/2005 11:19:59 P** Prep Date: **11/22/2005**
Client ID: Run ID: **HUGO_051128A** SeqNo: **426283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.89	0	10	0	78.9	54	102	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9249** Batch ID: **9249** Test Code: **SW7470** Units: **mg/L** Analysis Date: **11/22/2005** Prep Date: **11/22/2005**
Client ID: Run ID: **MI-LA254_051122A** SeqNo: **424992**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Sample ID: **MB-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:45:18 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	0.1007	1									J
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									

11/18

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **0511190-01C DUP** Batch ID: **R17465** Test Code: **E120.1** Units: **µmhos/cm** Analysis Date: **11/30/2005** Prep Date:

Client ID: **SW Sep Water Ou** Run ID: **WC_051130C** SeqNo: **427033**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	4490	0.01	0	0	0	0	0	4480	0.223	20	

12/18

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS**	Batch ID: **R17358**	Test Code: **E300**	Units: **mg/L**	Analysis Date: **11/18/2005**	Prep Date:
Client ID:		Run ID: **LC_051118A**		SeqNo: **423983**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5001	0.1	0.5	0	100	90	110	0			
Chloride	4.925	0.1	5	0	98.5	90	110	0			
Nitrogen, Nitrite (As N)	0.9703	0.1	1	0	97.0	90	110	0			
Nitrogen, Nitrate (As N)	2.568	0.1	2.5	0	103	90	110	0			
Phosphorus, Orthophosphate (As P)	5.178	0.5	5	0	104	90	110	0			
Sulfate	10.29	0.5	10	0	103	90	110	0			

Sample ID: **100ng lcs**	Batch ID: **R17359**	Test Code: **SW8260B**	Units: **µg/L**	Analysis Date: **11/18/2005**	Prep Date:
Client ID:		Run ID: **NEPTUNE_051118A**		SeqNo: **424055**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.45	1	20	0	107	79.3	136	0			
Toluene	20.71	1	20	0	104	65.5	123	0			
Chlorobenzene	20.78	1	20	0	104	85.6	126	0			
1,1-Dichloroethene	23.46	1	20	0	117	72.7	135	0			
Trichloroethene (TCE)	19.59	1	20	0	98.0	85.6	119	0			

Sample ID: **227.27ng ccv-b m**	Batch ID: **R17385**	Test Code: **SW8260B**	Units: **µg/L**	Analysis Date: **11/21/2005**	Prep Date:
Client ID:		Run ID: **THOR_051118C**		SeqNo: **424816**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.7	1	45	0	99.3	79.3	136	0			
Toluene	39.86	1	45	0	88.6	65.5	123	0			
Chlorobenzene	48.93	1	45	0	109	85.6	126	0			
1,1-Dichloroethene	42.28	1	45	0	94.0	72.7	135	0			
Trichloroethene (TCE)	45.02	1	45	0	100	85.6	119	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9252** Batch ID: **9252** Test Code: **SW8310** Units: **µg/L** Analysis Date: **11/29/2005 12:07:59 A** Prep Date: **11/22/2005**
Client ID: Run ID: **HUGO_051128A** SeqNo: **426284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	20.28	2.5	40	0	50.7	34.8	97.4	0			
1-Methylnaphthalene	20.65	2.5	40.1	0	51.5	34.7	100	0			
2-Methylnaphthalene	19.96	2.5	40	0	49.9	35	98.1	0			
Acenaphthylene	24.74	2.5	40.1	0	61.7	48.3	95.1	0			
Acenaphthene	24.12	2.5	40	0	60.3	45	95	0			
Fluorene	2.71	0.8	4.01	0	67.6	46.8	93.4	0			
Phenanthrene	1.53	0.6	2.01	0	76.1	48.7	104	0			
Anthracene	1.52	0.6	2.01	0	75.6	47.5	102	0			
Fluoranthene	3.35	0.3	4.01	0	83.5	46.3	108	0			
Pyrene	3.23	0.3	4.01	0	80.5	43.8	109	0			
Benz(a)anthracene	0.32	0.02	0.401	0	79.8	40.3	115	0			
Chrysene	1.67	0.2	2.01	0	83.1	42.6	107	0			
Benzo(b)fluoranthene	0.4	0.05	0.501	0	79.8	48.6	107	0			
Benzo(k)fluoranthene	0.2	0.02	0.25	0	80.0	23.3	136	0			
Benzo(a)pyrene	0.22	0.02	0.251	0	87.6	33.4	117	0			
Dibenz(a,h)anthracene	0.45	0.04	0.501	0	89.8	27.3	139	0			
Benzo(g,h,i)perylene	0.47	0.03	0.5	0	94.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	1.052	0.08	1.002	0	105	39.9	125	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9252** Batch ID: **9252** Test Code: **SW8310** Units: **µg/L** Analysis Date: **11/29/2005 12:55:59 A** Prep Date: **11/22/2005**
Client ID: Run ID: **HUGO_051128A** SeqNo: **426285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	22.64	2.5	40	0	56.6	34.8	97.4	20.28	11.0	32.1	
1-Methylnaphthalene	22.3	2.5	40.1	0	55.6	34.7	100	20.65	7.68	32.7	
2-Methylnaphthalene	22.18	2.5	40	0	55.5	35	98.1	19.96	10.5	34	
Acenaphthylene	25.48	2.5	40.1	0	63.5	48.3	95.1	24.74	2.97	38.8	
Acenaphthene	24.82	2.5	40	0	62.1	45	95	24.12	2.86	38.6	
Fluorene	2.72	0.8	4.01	0	67.8	46.8	93.4	2.71	0.368	39.3	
Phenanthrene	1.51	0.6	2.01	0	75.1	48.7	104	1.53	1.32	25	
Anthracene	1.52	0.6	2.01	0	75.6	47.5	102	1.52	0	23.9	
Fluoranthene	3.13	0.3	4.01	0	78.1	46.3	108	3.35	6.79	15.7	
Pyrene	3.06	0.3	4.01	0	76.3	43.8	109	3.23	5.41	15.3	
Benz(a)anthracene	0.3	0.02	0.401	0	74.8	40.3	115	0.32	6.45	119	
Chrysene	1.65	0.2	2.01	0	82.1	42.6	107	1.67	1.20	16.6	
Benzo(b)fluoranthene	0.4	0.05	0.501	0	79.8	48.6	107	0.4	0	21.7	
Benzo(k)fluoranthene	0.19	0.02	0.25	0	76.0	23.3	136	0.2	5.13	19.4	
Benzo(a)pyrene	0.2	0.02	0.251	0	79.7	33.4	117	0.22	9.52	16.7	
Dibenz(a,h)anthracene	0.42	0.04	0.501	0	83.8	27.3	139	0.45	6.90	17.3	
Benzo(g,h,i)perylene	0.43	0.03	0.5	0	86.0	38.2	117	0.47	8.89	118	
Indeno(1,2,3-cd)pyrene	0.822	0.08	1.002	0	82.0	39.9	125	1.052	24.5	17.7	R

Sample ID: **LCS-9249** Batch ID: **9249** Test Code: **SW7470** Units: **mg/L** Analysis Date: **11/22/2005** Prep Date: **11/22/2005**
Client ID: Run ID: **MI-LA254_051122A** SeqNo: **424993**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004685	0.0002	0.005	0	93.7	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9249** Batch ID: **9249** Test Code: **SW7470** Units: **mg/L** Analysis Date: **11/22/2005** Prep Date: **11/22/2005**
Client ID: Run ID: **MI-LA254_051122A** SeqNo: **425008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005046	0.0002	0.005	0	101	80	120	0.004685	7.41	0	

Sample ID: **LCS-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:48:31 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4912	0.02	0.5	0	98.2	80	120	0			
Barium	0.4885	0.02	0.5	0	97.7	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Calcium	49.2	1	50	0	98.4	80	120	0			
Chromium	0.4941	0.006	0.5	0	98.8	80	120	0			
Lead	0.4856	0.005	0.5	0	97.1	80	120	0			
Magnesium	49.4	1	50	0	98.8	80	120	0			
Potassium	51.72	1	50	0.1007	103	80	120	0			
Selenium	0.4823	0.05	0.5	0	96.5	80	120	0			
Silver	0.495	0.005	0.5	0	99.0	80	120	0			
Sodium	52.1	1	50	0	104	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511190
Project: Stormwater Separator Water 11-16-2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:51:42 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Barium	0.4971	0.02	0.5	0	99.4	80	120	0.4885	1.74	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Calcium	49.43	1	50	0	98.9	80	120	49.2	0.467	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Magnesium	49.54	1	50	0	99.1	80	120	49.4	0.272	20	
Potassium	52.15	1	50	0.1007	104	80	120	51.72	0.835	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Sodium	52.25	1	50	0	104	80	120	52.1	0.295	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 11/18/2005

Work Order Number 0511190 | Received by AT

Checklist completed by _____ Signature _____ Date 11/18/05

Matrix | Carrier name Client drop-off

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? 6° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

700

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza

Address: Route 3, Box 7
Gallup, NM 87301

Phone #: 505-722-3833

Fax #: 505-722-0210

Project Name: Stormwater Separator Water 11-16-2005

Project #:

Project Manager: Steve Morris

Sampler: Steve Morris

Sample Temperature: 6°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
11-16-05	10:30A	H_2O	SW Sep. Water Out					0511190-1							X	X			X		X				

Date: 11-17-05 Time: 1435 Relinquished By: (Signature) Steve Morris Received By: (Signature) 11/17/05 1435

Date: Time: Relinquished By: (Signature) Received By: (Signature)

Remarks: Rush.
Gen Chem = Cations, Anions, pH, and Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 06, 2005

Ed Riege
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 11/21/05 Order No.: 0511257

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 1 sample on 11/23/2005 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

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0511257
Collection Date: 11/21/2005 2:55:00 PM
Project: AL-2 to EP-1 Week of 11/21/05
Lab ID: 0511257-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	48	1.0		mg/L	1	11/28/2005 7:32:42 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/28/2005 7:32:42 PM
Surr: DNOP	89.9	58-140		%REC	1	11/28/2005 7:32:42 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.22	0.10		mg/L	2	12/2/2005 10:24:21 AM
Surr: BFB	102	79.7-118		%REC	2	12/2/2005 10:24:21 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	15	5.0		µg/L	2	12/2/2005 10:24:21 AM
Benzene	18	1.0		µg/L	2	12/2/2005 10:24:21 AM
Toluene	16	1.0		µg/L	2	12/2/2005 10:24:21 AM
Ethylbenzene	1.6	1.0		µg/L	2	12/2/2005 10:24:21 AM
Xylenes, Total	11	1.0		µg/L	2	12/2/2005 10:24:21 AM
Surr: 4-Bromofluorobenzene	107	82.2-119		%REC	2	12/2/2005 10:24:21 AM
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0017	0.00020		mg/L	1	12/1/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	12/1/2005 2:54:45 PM
Arsenic	ND	0.020		mg/L	1	12/1/2005 10:17:07 AM
Beryllium	ND	0.0030		mg/L	1	12/1/2005 10:17:07 AM
Cadmium	ND	0.0020		mg/L	1	12/1/2005 10:17:07 AM
Chromium	ND	0.0060		mg/L	1	12/1/2005 10:17:07 AM
Copper	ND	0.0060		mg/L	1	12/1/2005 10:17:07 AM
Lead	ND	0.0050		mg/L	1	12/1/2005 10:17:07 AM
Nickel	ND	0.010		mg/L	1	12/1/2005 10:17:07 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:17:07 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:17:07 AM
Thallium	ND	0.050		mg/L	1	12/1/2005 10:17:07 AM
Zinc	1.1	0.50		mg/L	10	12/1/2005 12:28:49 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 06-Dec-05

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-9263** Batch ID: **9263** Test Code: **SW8015** Units: **mg/L** Analysis Date: **11/28/2005 5:53:55 PM** Prep Date: **11/28/2005**
Client ID: Run ID: **FID(17A) 2_051128A** SeqNo: **425867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.289	0	1	0	129	58	140	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17472** Test Code: **SW8015** Units: **mg/L** Analysis Date: **11/30/2005 9:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051130A** SeqNo: **427453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	19.87	0	20	0	99.4	79.7	118	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17483** Test Code: **SW8015** Units: **mg/L** Analysis Date: **12/2/2005 8:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **428271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	19.92	0	20	0	99.6	79.7	118	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

Sample ID: **Reagent Blank 5m** Batch ID: **R17472** Test Code: **SW8021** Units: **µg/L** Analysis Date: **11/30/2005 9:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051130A** SeqNo: **427443**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.75	0	20	0	98.8	82.2	119	0			

Sample ID: **Reagent Blank 5m** Batch ID: **R17483** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/2/2005 8:17:04 AM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **427827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.98	0	20	0	105	82.2	119	0			

Sample ID: **MB-9305** Batch ID: **9305** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/1/2005** Prep Date: **12/1/2005**
Client ID: Run ID: **MI-LA254_051201A** SeqNo: **427275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:45:18 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.05									
Zinc	ND	0.05									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9263**	Batch ID: **9263**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **11/28/2005 6:26:55 PM**	Prep Date: **11/28/2005**
Client ID:		Run ID: **FID(17A) 2_051128A**		SeqNo: **425881**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.574	1	5	0	131	81.2	149	0			

Sample ID: **LCSD-9263**	Batch ID: **9263**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **11/28/2005 6:59:57 PM**	Prep Date: **11/28/2005**
Client ID:		Run ID: **FID(17A) 2_051128A**		SeqNo: **425882**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.753	1	5	0	135	81.2	149	6.574	2.69	23	

Sample ID: **GRO lcs 2.5ug**	Batch ID: **R17472**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **11/30/2005 10:37:50 P**	Prep Date:
Client ID:		Run ID: **PIDFID_051130A**		SeqNo: **427454**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.495	0.05	0.5	0	99.0	82.6	114	0			

Sample ID: **GRO lcs 2.5ug**	Batch ID: **R17483**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **12/2/2005 5:29:27 PM**	Prep Date:
Client ID:		Run ID: **PIDFID_051202A**		SeqNo: **428279**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4892	0.05	0.5	0	97.8	82.6	114	0			

Sample ID: **GRO lcsd 2.5ug**	Batch ID: **R17483**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date: **12/2/2005 5:59:56 PM**	Prep Date:
Client ID:		Run ID: **PIDFID_051202A**		SeqNo: **428280**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4714	0.05	0.5	0	94.3	82.6	114	0.4892	3.71	8.39	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **BTEX lcs 100ng** Batch ID: **R17472** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/1/2005 12:08:12 AM** Prep Date:
Client ID: Run ID: **PIDFID_051130A** SeqNo: **427444**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	20.04	2.5	20	0	100	64.5	133	0			
Benzene	19.92	0.5	20	0	99.6	88.5	114	0			
Toluene	19.9	0.5	20	0	99.5	87.2	114	0			
Ethylbenzene	19.8	0.5	20	0	99.0	88.6	113	0			
Xylenes, Total	42.27	0.5	40	0	106	83.3	114	0			

Sample ID: **BTEX lcs 100ng** Batch ID: **R17483** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/2/2005 6:30:25 PM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **427828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22.61	2.5	20	0	113	64.5	133	0			
Benzene	20.23	0.5	20	0	101	88.5	114	0			
Toluene	20.24	0.5	20	0	101	87.2	114	0			
Ethylbenzene	20.45	0.5	20	0	102	88.6	113	0			
Xylenes, Total	42.96	0.5	40	0	107	83.3	114	0			

Sample ID: **BTEX lcsd 100ng** Batch ID: **R17483** Test Code: **SW8021** Units: **µg/L** Analysis Date: **12/2/2005 7:00:53 PM** Prep Date:
Client ID: Run ID: **PIDFID_051202A** SeqNo: **427829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22.03	2.5	20	0	110	64.5	133	22.61	2.57	28	
Benzene	19.89	0.5	20	0	99.4	88.5	114	20.23	1.70	27	
Toluene	19.7	0.5	20	0	98.5	87.2	114	20.24	2.73	19	
Ethylbenzene	19.95	0.5	20	0	99.7	88.6	113	20.45	2.50	10	
Xylenes, Total	42.09	0.5	40	0	105	83.3	114	42.96	2.06	13	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS-9305	Batch ID: 9305	Test Code: SW7470	Units: mg/L	Analysis Date: 12/1/2005			Prep Date: 12/1/2005			
Client ID:		Run ID: MI-LA254_051201A		SeqNo: 427276						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004721	0.0002	0.005	0	94.4	80	120	0			

Sample ID: LCSD-9305	Batch ID: 9305	Test Code: SW7470	Units: mg/L	Analysis Date: 12/1/2005			Prep Date: 12/1/2005			
Client ID:		Run ID: MI-LA254_051201A		SeqNo: 427289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00481	0.0002	0.005	0	96.2	80	120	0.004721	1.87	0	

Sample ID: LCS-9267	Batch ID: 9267	Test Code: SW6010A	Units: mg/L	Analysis Date: 12/1/2005 9:48:31 AM			Prep Date: 11/28/2005			
Client ID:		Run ID: ICP_051201B		SeqNo: 427778						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5127	0.01	0.5	0	103	80	120	0			
Arsenic	0.4912	0.02	0.5	0	98.2	80	120	0			
Beryllium	0.5113	0.003	0.5	0	102	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Chromium	0.4941	0.006	0.5	0	98.8	80	120	0			
Copper	0.5065	0.006	0.5	0	101	80	120	0			
Lead	0.4856	0.005	0.5	0	97.1	80	120	0			
Nickel	0.4692	0.01	0.5	0	93.8	80	120	0			
Selenium	0.4823	0.05	0.5	0	96.5	80	120	0			
Silver	0.495	0.005	0.5	0	99.0	80	120	0			
Thallium	0.5157	0.05	0.5	0	103	80	120	0			
Zinc	0.4727	0.05	0.5	0	94.5	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511257
Project: AL-2 to EP-1 Week of 11/21/05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:51:42 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.526	0.01	0.5	0	105	80	120	0.5127	2.55	20	
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Beryllium	0.5196	0.003	0.5	0	104	80	120	0.5113	1.59	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Copper	0.5159	0.006	0.5	0	103	80	120	0.5065	1.84	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Nickel	0.4769	0.01	0.5	0	95.4	80	120	0.4692	1.64	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Thallium	0.5221	0.05	0.5	0	104	80	120	0.5157	1.23	20	
Zinc	0.483	0.05	0.5	0	96.6	80	120	0.4727	2.16	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received: 11/23/2005

Work Order Number 0511257

Received by AT

Checklist completed by _____ 11/23/05
Signature Date

Matrix

Carrier name FedEx

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

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: GIANT REFINING CO. CINIZA
Address: ROUTE 3, BOX 7 GALLUP, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: AL-2 to EP-1 Week of 11-21-2005
Project #:
Project Manager: ED RIEGE
Sampler: JOHNNY SANCHEZ
Sample Temperature: 4°C

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	PCL TAL Metals				Air Bubbles or Headspace (Y or N)
11-21-05	1455	H_2O	AL-2 to EP-1	5 EACH			051257-1	X		X										X				

Date: 11-22-05 Time: 0900 Relinquished By: (Signature) — Received By: (Signature) 11/23/05 1413
Date: Time: Relinquished By: (Signature) — Received By: (Signature)

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

December 06, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 11/14/2005 Order No.: 0511191

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/17/2005 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

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Lab Order: 0511191
Project: AL-2 to EP-1 Week of 11/14/2005
Lab ID: 0511191-01

Client Sample ID: AL-2 to EP-1
Collection Date: 11/16/2005 10:50:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0013	0.00020		mg/L	1	11/22/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	12/1/2005 2:48:32 PM
Arsenic	ND	0.020		mg/L	1	12/1/2005 10:00:47 AM
Beryllium	ND	0.0030		mg/L	1	12/1/2005 10:00:47 AM
Cadmium	ND	0.0020		mg/L	1	12/1/2005 10:00:47 AM
Chromium	ND	0.0060		mg/L	1	12/1/2005 10:00:47 AM
Copper	0.0061	0.0060		mg/L	1	12/1/2005 10:00:47 AM
Lead	ND	0.0050		mg/L	1	12/1/2005 10:00:47 AM
Nickel	ND	0.010		mg/L	1	12/1/2005 10:00:47 AM
Selenium	ND	0.050		mg/L	1	12/1/2005 10:00:47 AM
Silver	ND	0.0050		mg/L	1	12/1/2005 10:00:47 AM
Thallium	ND	0.050		mg/L	1	12/1/2005 10:00:47 AM
Zinc	1.1	0.50		mg/L	10	12/1/2005 12:16:53 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511191
Project: AL-2 to EP-1 Week of 11/14/2005

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-9249**	Batch ID: **9249**	Test Code: **SW7470**	Units: **mg/L**	Analysis Date: **11/22/2005**	Prep Date: **11/22/2005**
Client ID:		Run ID: **MI-LA254_051122A**		SeqNo: **424992**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Sample ID: **MB-9267**	Batch ID: **9267**	Test Code: **SW6010A**	Units: **mg/L**	Analysis Date: **12/1/2005 9:45:18 AM**	Prep Date: **11/28/2005**
Client ID:		Run ID: **ICP_051201B**		SeqNo: **427777**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.05									
Zinc	ND	0.05									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *06-Dec-05*

CLIENT: Giant Refining Co
Work Order: 0511191
Project: AL-2 to EP-1 Week of 11/14/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-9249**	Batch ID: **9249**	Test Code: **SW7470**	Units: **mg/L**	Analysis Date: **11/22/2005**	Prep Date: **11/22/2005**
Client ID:		Run ID: **MI-LA254_051122A**		SeqNo: **424993**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004685	0.0002	0.005	0	93.7	80	120	0			

Sample ID: **LCSD-9249**	Batch ID: **9249**	Test Code: **SW7470**	Units: **mg/L**	Analysis Date: **11/22/2005**	Prep Date: **11/22/2005**
Client ID:		Run ID: **MI-LA254_051122A**		SeqNo: **425008**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005046	0.0002	0.005	0	101	80	120	0.004685	7.41	0	

Sample ID: **LCS-9267**	Batch ID: **9267**	Test Code: **SW6010A**	Units: **mg/L**	Analysis Date: **12/1/2005 9:48:31 AM**	Prep Date: **11/28/2005**
Client ID:		Run ID: **ICP_051201B**		SeqNo: **427778**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5127	0.01	0.5	0	103	80	120	0			
Arsenic	0.4912	0.02	0.5	0	98.2	80	120	0			
Beryllium	0.5113	0.003	0.5	0	102	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Chromium	0.4941	0.006	0.5	0	98.8	80	120	0			
Copper	0.5065	0.006	0.5	0	101	80	120	0			
Lead	0.4856	0.005	0.5	0	97.1	80	120	0			
Nickel	0.4692	0.01	0.5	0	93.8	80	120	0			
Selenium	0.4823	0.05	0.5	0	96.5	80	120	0			
Silver	0.495	0.005	0.5	0	99.0	80	120	0			
Thallium	0.5157	0.05	0.5	0	103	80	120	0			
Zinc	0.4727	0.05	0.5	0	94.5	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511191
Project: AL-2 to EP-1 Week of 11/14/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9267** Batch ID: **9267** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **12/1/2005 9:51:42 AM** Prep Date: **11/28/2005**
Client ID: Run ID: **ICP_051201B** SeqNo: **427779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.526	0.01	0.5	0	105	80	120	0.5127	2.55	20	
Arsenic	0.509	0.02	0.5	0	102	80	120	0.4912	3.56	20	
Beryllium	0.5196	0.003	0.5	0	104	80	120	0.5113	1.59	20	
Cadmium	0.5009	0.002	0.5	0	100	80	120	0.49	2.21	20	
Chromium	0.5053	0.006	0.5	0	101	80	120	0.4941	2.24	20	
Copper	0.5159	0.006	0.5	0	103	80	120	0.5065	1.84	20	
Lead	0.4931	0.005	0.5	0	98.6	80	120	0.4856	1.52	20	
Nickel	0.4769	0.01	0.5	0	95.4	80	120	0.4692	1.64	20	
Selenium	0.4853	0.05	0.5	0	97.1	80	120	0.4823	0.614	20	
Silver	0.5036	0.005	0.5	0	101	80	120	0.495	1.72	20	
Thallium	0.5221	0.05	0.5	0	104	80	120	0.5157	1.23	20	
Zinc	0.483	0.05	0.5	0	96.6	80	120	0.4727	2.16	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 11/17/2005

Work Order Number 0511191 | Received by AT

Checklist completed by _____ Signature | 11/17/05 Date

Matrix | Carrier name | Client drop-off

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? **6°** *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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company Ciniza
Address: Route 3, Box 7 Gallup, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: AL-2 to EP-1 Week of 11-14-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 6°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
11-16-05	10:50AM	Aq	AL-2 to EP-1				0511A1-1

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	PPL Total Metals				Air Bubbles or Headspace (Y or N)
												X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
11-17-05	1440	Steve Morris	11/17/05 1440
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 30, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Aeration Lagoon Bank Material 11-16-05 Order No.: 0511189

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/17/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Project: Aeration Lagoon Bank Material 11-16-05
Lab Order: 0511189

CASE NARRATIVE

Analytical Comments for METHOD 8260_S, SAMPLE 0511189-01a: Sample analyzed at dilution because of late eluting hydrocarbons.

Method 6010: 0511189-1 DUP RPD >30 for Cd & Ba. 0511189-1 MSD recovery low for Cr and Pb. 0511189-1 MSD RPD >30 for Pb. Sample may not be homogenous. IN36-05223

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL Bank Material
Lab Order: 0511189
Collection Date: 11/17/2005 8:45:00 AM
Project: Aeration Lagoon Bank Material 11-16-05
Lab ID: 0511189-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		mg/Kg	20	11/21/2005
Toluene	ND	1.0		mg/Kg	20	11/21/2005
Ethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	11/21/2005
1,2,4-Trimethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,3,5-Trimethylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	11/21/2005
Naphthalene	ND	2.0		mg/Kg	20	11/21/2005
1-Methylnaphthalene	6.5	4.0		mg/Kg	20	11/21/2005
2-Methylnaphthalene	5.8	4.0		mg/Kg	20	11/21/2005
Acetone	ND	15		mg/Kg	20	11/21/2005
Bromobenzene	ND	1.0		mg/Kg	20	11/21/2005
Bromochloromethane	ND	1.0		mg/Kg	20	11/21/2005
Bromodichloromethane	ND	1.0		mg/Kg	20	11/21/2005
Bromoform	ND	1.0		mg/Kg	20	11/21/2005
Bromomethane	ND	2.0		mg/Kg	20	11/21/2005
2-Butanone	ND	10		mg/Kg	20	11/21/2005
Carbon disulfide	ND	10		mg/Kg	20	11/21/2005
Carbon tetrachloride	ND	2.0		mg/Kg	20	11/21/2005
Chlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
Chloroethane	ND	2.0		mg/Kg	20	11/21/2005
Chloroform	ND	1.0		mg/Kg	20	11/21/2005
Chloromethane	ND	1.0		mg/Kg	20	11/21/2005
2-Chlorotoluene	ND	1.0		mg/Kg	20	11/21/2005
4-Chlorotoluene	ND	1.0		mg/Kg	20	11/21/2005
cis-1,2-DCE	ND	1.0		mg/Kg	20	11/21/2005
cis-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dibromo-3-chloropropane	ND	2.0		mg/Kg	20	11/21/2005
Dibromochloromethane	ND	1.0		mg/Kg	20	11/21/2005
Dibromomethane	ND	2.0		mg/Kg	20	11/21/2005
1,2-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,3-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,4-Dichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
Dichlorodifluoromethane	ND	1.0		mg/Kg	20	11/21/2005
1,1-Dichloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1-Dichloroethene	ND	1.0		mg/Kg	20	11/21/2005
1,2-Dichloropropane	ND	1.0		mg/Kg	20	11/21/2005
1,3-Dichloropropane	ND	1.0		mg/Kg	20	11/21/2005
2,2-Dichloropropane	ND	2.0		mg/Kg	20	11/21/2005
1,1-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL Bank Material
Lab Order: 0511189
Collection Date: 11/17/2005 8:45:00 AM
Project: Aeration Lagoon Bank Material 11-16-05
Lab ID: 0511189-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	1.0		mg/Kg	20	11/21/2005
2-Hexanone	ND	10		mg/Kg	20	11/21/2005
Isopropylbenzene	ND	1.0		mg/Kg	20	11/21/2005
4-Isopropyltoluene	ND	1.0		mg/Kg	20	11/21/2005
4-Methyl-2-pentanone	ND	10		mg/Kg	20	11/21/2005
Methylene chloride	ND	3.0		mg/Kg	20	11/21/2005
n-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
n-Propylbenzene	ND	1.0		mg/Kg	20	11/21/2005
sec-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
Styrene	ND	1.0		mg/Kg	20	11/21/2005
tert-Butylbenzene	ND	1.0		mg/Kg	20	11/21/2005
1,1,1,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1,2,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/21/2005
Tetrachloroethene (PCE)	ND	1.0		mg/Kg	20	11/21/2005
trans-1,2-DCE	ND	1.0		mg/Kg	20	11/21/2005
trans-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/21/2005
1,2,3-Trichlorobenzene	ND	2.0		mg/Kg	20	11/21/2005
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	20	11/21/2005
1,1,1-Trichloroethane	ND	1.0		mg/Kg	20	11/21/2005
1,1,2-Trichloroethane	ND	1.0		mg/Kg	20	11/21/2005
Trichloroethene (TCE)	ND	1.0		mg/Kg	20	11/21/2005
Trichlorofluoromethane	ND	1.0		mg/Kg	20	11/21/2005
1,2,3-Trichloropropane	ND	2.0		mg/Kg	20	11/21/2005
Vinyl chloride	ND	1.0		mg/Kg	20	11/21/2005
Xylenes, Total	ND	1.0		mg/Kg	20	11/21/2005
Surr: 1,2-Dichloroethane-d4	99.3	74.2-135		%REC	20	11/21/2005
Surr: 4-Bromofluorobenzene	98.2	72.9-143		%REC	20	11/21/2005
Surr: Dibromofluoromethane	97.9	76.9-138		%REC	20	11/21/2005
Surr: Toluene-d8	83.8	70-126		%REC	20	11/21/2005
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	1.9	0.66		mg/Kg	20	11/28/2005
EPA METHOD 6010B: SOIL METALS						Analyst: **NMO**
Arsenic	12	2.5		mg/Kg	1	11/22/2005 10:53:04 AM
Barium	190	1.0		mg/Kg	10	11/22/2005 11:08:04 AM
Cadmium	0.48	0.10		mg/Kg	1	11/22/2005 10:53:04 AM
Chromium	16	0.30		mg/Kg	1	11/22/2005 10:53:04 AM
Lead	23	0.25		mg/Kg	1	11/22/2005 10:53:04 AM
Selenium	ND	2.5		mg/Kg	1	11/22/2005 10:53:04 AM
Silver	ND	0.25		mg/Kg	1	11/22/2005 10:53:04 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Method Blank

Sample ID **mb-9226** Batch ID: **9226** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **11/21/2005** Prep Date **11/20/2005**
Client ID: Run ID: **THOR_051118C** SeqNo: **424791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.05									
Toluene	ND	0.05									
Ethylbenzene	ND	0.05									
Methyl tert-butyl ether (MTBE)	0.0465	0.05									J
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	ND	0.05									
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	0.75									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	ND	0.1									
2-Butanone	ND	0.5									
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	0.05
1,2-Dibromo-3-chloropropane	ND	0.1
Dibromochloromethane	ND	0.05
Dibromomethane	ND	0.1
1,2-Dichlorobenzene	ND	0.05
1,3-Dichlorobenzene	ND	0.05
1,4-Dichlorobenzene	ND	0.05
Dichlorodifluoromethane	ND	0.05
1,1-Dichloroethane	ND	0.05
1,1-Dichloroethene	ND	0.05
1,2-Dichloropropane	ND	0.05
1,3-Dichloropropane	ND	0.05
2,2-Dichloropropane	ND	0.1
1,1-Dichloropropene	ND	0.05
Hexachlorobutadiene	ND	0.05
2-Hexanone	ND	0.5
Isopropylbenzene	ND	0.05
4-Isopropyltoluene	ND	0.05
4-Methyl-2-pentanone	ND	0.5
Methylene chloride	ND	0.15
n-Butylbenzene	ND	0.05
n-Propylbenzene	ND	0.05
sec-Butylbenzene	ND	0.05
Styrene	ND	0.05
tert-Butylbenzene	ND	0.05
1,1,1,2-Tetrachloroethane	ND	0.05
1,1,2,2-Tetrachloroethane	ND	0.05
Tetrachloroethene (PCE)	ND	0.05
trans-1,2-DCE	ND	0.05
trans-1,3-Dichloropropene	ND	0.05
1,2,3-Trichlorobenzene	ND	0.1
1,2,4-Trichlorobenzene	ND	0.05
1,1,1-Trichloroethane	ND	0.05

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	0.05							
Trichloroethene (TCE)	ND	0.05							
Trichlorofluoromethane	ND	0.05							
1,2,3-Trichloropropane	ND	0.1							
Vinyl chloride	ND	0.05							
Xylenes, Total	ND	0.05							
Surr: 1,2-Dichloroethane-d4	0.4964	0	0.5	0	99.3	74.2	135	0	
Surr: 4-Bromofluorobenzene	0.5452	0	0.5	0	109	72.9	143	0	
Surr: Dibromofluoromethane	0.5136	0	0.5	0	103	76.9	138	0	
Surr: Toluene-d8	0.4063	0	0.5	0	81.3	70	126	0	

Sample ID **MB-9270** Batch ID: **9270** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **11/28/2005** Prep Date **11/28/2005**
Client ID: Run ID: **MI-LA254_051128A** SeqNo: **425769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID **MB-9222** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **11/22/2005 10:18:50 A** Prep Date **11/18/2005**
Client ID: Run ID: **ICP_051122A** SeqNo: **424797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0511189-01B DUP** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **11/22/2005 10:55:37 A** Prep Date **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.02	2.5	0	0	0	0	0	11.93	0.730	30	
Cadmium	0.6731	0.1	0	0	0	0	0	0.4753	34.4	30	R
Chromium	17.82	0.3	0	0	0	0	0	16.08	10.2	30	
Lead	28.17	0.25	0	0	0	0	0	23.24	19.2	30	
Selenium	ND	2.5	0	0	0	0	0	0	0	30	
Silver	ND	0.25	0	0	0	0	0	0	0	30	

Sample ID **0511189-01B DUP** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **11/22/2005 11:10:57 A** Prep Date **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	108.3	1	0	0	0	0	0	187.7	53.6	30	R

7/11

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID **0511189-01B MS** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **11/22/2005 10:59:54 A** Prep Date **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	35.82	2.5	24.42	11.93	97.8	75	125	0			
Cadmium	23.51	0.1	24.42	0.4753	94.3	75	125	0			
Chromium	38.25	0.3	24.42	16.08	90.8	75	125	0			
Selenium	21.42	2.5	24.42	0	87.7	75	125	0			
Silver	23.02	0.25	24.42	0	94.2	75	125	0			

Sample ID **0511189-01B MSD** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **11/22/2005 11:04:15 A** Prep Date **11/18/2005**
Client ID: **AL Bank Material** Run ID: **ICP_051122A** SeqNo: **424910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	34	2.5	24.42	11.93	90.4	75	125	35.82	5.23	30	
Cadmium	23.26	0.1	24.42	0.4753	93.3	75	125	23.51	1.06	30	
Chromium	32.35	0.3	24.42	16.08	66.6	75	125	38.25	16.7	30	S
Lead	35.33	0.25	24.42	23.24	49.5	75	125	48.97	32.4	30	SR
Selenium	19.21	2.5	24.42	0	78.7	75	125	21.42	10.9	30	
Silver	23.2	0.25	24.42	0	95.0	75	125	23.02	0.769	30	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **lcs-9226**	Batch ID: **9226**	Test Code: **SW8260B**	Units: **mg/Kg**	Analysis Date **11/21/2005**	Prep Date **11/20/2005**
Client ID:		Run ID: **THOR_051118C**		SeqNo: **424792**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.004	0.05	1	0	100	80.8	132	0			
Toluene	0.7508	0.05	1	0	75.1	72.1	126	0			
Chlorobenzene	1.098	0.05	1	0	110	83	124	0			
1,1-Dichloroethene	0.8875	0.05	1	0	88.8	59	147	0			
Trichloroethene (TCE)	0.9096	0.05	1	0	91.0	77.2	123	0			

Sample ID **LCS-9270**	Batch ID: **9270**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **11/28/2005**	Prep Date **11/28/2005**
Client ID:		Run ID: **MI-LA254_051128A**		SeqNo: **425770**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1838	0.033	0.1667	0	110	80	120	0			

Sample ID **LCSD-9270**	Batch ID: **9270**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **11/28/2005**	Prep Date **11/28/2005**
Client ID:		Run ID: **MI-LA254_051128A**		SeqNo: **425777**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1816	0.033	0.1667	0	109	80	120	0.1838	1.21	20	

Sample ID **LCS-9222**	Batch ID: **9222**	Test Code: **SW6010A**	Units: **mg/Kg**	Analysis Date **11/22/2005 10:21:10 A**	Prep Date **11/18/2005**
Client ID:		Run ID: **ICP_051122A**		SeqNo: **424798**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.01	0.25	25	0	96.0	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0511189
Project: Aeration Lagoon Bank Material 11-16-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9222** Batch ID: **9222** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **11/22/2005 10:23:45 A** Prep Date **11/18/2005**
Client ID: Run ID: **ICP_051122A** SeqNo: **424799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.17	0.25	25	0	96.7	80	120	24.01	0.670	20	

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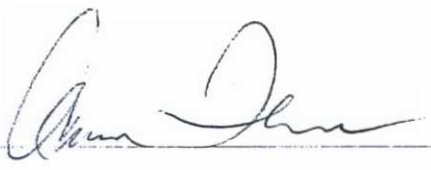
Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 11/17/2005

Work Order Number 0511189 | Received by AT

Checklist completed by  Signature 11/17/05 Date

Matrix | Carrier name | Client drop-off

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? **6°** *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

QA / QC Package: Std ☐ Level 4 ☐ Other:

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

Client: Giant Refining Company - Ciniza

Address: Route 3 Box 7 Gallup, NM 87301

Phone #: 505 722 3833

Fax #: 505 722 0210

Project Name: Aeration Lagoon Bank Material 11-16-2005

Project #:

Project Manager: Steve Morris

Sampler: Steve Morris

Sample Temperature: 6

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: $HgCl_2$	Preservative: HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
11-17-05	0845	Non Aqueous	AL Bank Material	2x4 oz				0511189-1								X			X						

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
11-17-05	1430	Steve Morris	[signature] 11/17/05 1430
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH
Sample is from contaminated/oily soil around the banks of Aeration [illegible] Evaporated 1

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 30, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Old & New API Sep Eff & AL-2-EP-1 SP. Order No.: 0511192

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 3 samples on 11/17/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Old API Effluent
Lab Order: 0511192
Collection Date: 11/16/2005 10:40:00 AM
Project: Old & New API Sep Eff & AL-2-EP-1 SP.
Lab ID: 0511192-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	7.7	1.0		mg/L	1	11/23/2005 9:13:32 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/23/2005 9:13:32 AM
Surr: DNOP	126	58-140		%REC	1	11/23/2005 9:13:32 AM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KTM**
Benzene	170	10		µg/L	10	11/29/2005
Toluene	240	10		µg/L	10	11/29/2005
Ethylbenzene	24	10		µg/L	10	11/29/2005
Methyl tert-butyl ether (MTBE)	15	10		µg/L	10	11/29/2005
Xylenes, Total	570	10		µg/L	10	11/29/2005
Surr: 4-Bromofluorobenzene	87.2	71.2-123		%REC	10	11/29/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: New API Effluent
Lab Order: 0511192
Collection Date: 11/16/2005 10:45:00 AM
Project: Old & New API Sep Eff & AL-2-EP-1 SP.
Lab ID: 0511192-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	90	3.0		mg/L	1	11/23/2005 9:46:20 AM
Motor Oil Range Organics (MRO)	ND	15		mg/L	1	11/23/2005 9:46:20 AM
Surr: DNOP	132	58-140		%REC	1	11/23/2005 9:46:20 AM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KTM**
Benzene	2000	50		µg/L	50	11/29/2005
Toluene	1100	50		µg/L	50	11/29/2005
Ethylbenzene	110	10		µg/L	10	11/29/2005
Methyl tert-butyl ether (MTBE)	1800	10		µg/L	10	11/29/2005
Xylenes, Total	560	10		µg/L	10	11/29/2005
Surr: 4-Bromofluorobenzene	83.7	71.2-123		%REC	10	11/29/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0511192
Collection Date: 11/16/2005 10:50:00 AM
Project: Old & New API Sep Eff & AL-2-EP-1 SP.
Lab ID: 0511192-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	43	1.0		mg/L	1	11/23/2005 10:18:51 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/23/2005 10:18:51 AM
Surr: DNOP	85.4	58-140		%REC	1	11/23/2005 10:18:51 AM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KTM**
Benzene	11	5.0		µg/L	5	11/30/2005
Toluene	7.3	5.0		µg/L	5	11/30/2005
Ethylbenzene	ND	5.0		µg/L	5	11/30/2005
Methyl tert-butyl ether (MTBE)	17	5.0		µg/L	5	11/30/2005
Xylenes, Total	ND	5.0		µg/L	5	11/30/2005
Surr: 4-Bromofluorobenzene	87.6	71.2-123		%REC	5	11/30/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511192
Project: Old & New API Sep Eff & AL-2-EP-1 SP.

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9247**	Batch ID: **9247**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date **11/23/2005 7:35:10 AM**	Prep Date **11/22/2005**
Client ID:		Run ID: **FID(17A) 2_051122A**		SeqNo: **425190**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.18	0	1	0	118	58	140	0			

Sample ID **5mL rb-b**	Batch ID: **R17450**	Test Code: **SW8260B**	Units: **µg/L**	Analysis Date **11/29/2005**	Prep Date
Client ID:		Run ID: **NEPTUNE_051129A**		SeqNo: **426506**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
Xylenes, Total	ND	1									
Surr: 4-Bromofluorobenzene	9.612	0	10	0	96.1	71.2	123	0			

Sample ID **5mL rb-b**	Batch ID: **R17458**	Test Code: **SW8260B**	Units: **µg/L**	Analysis Date **11/30/2005**	Prep Date
Client ID:		Run ID: **NEPTUNE_051130A**		SeqNo: **426786**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
Xylenes, Total	ND	1									
Surr: 4-Bromofluorobenzene	9.368	0	10	0	93.7	71.2	123	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

CLIENT: Giant Refining Co
Work Order: 0511192
Project: Old & New API Sep Eff & AL-2-EP-1 SP.

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-9247**	Batch ID: **9247**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date **11/23/2005 8:07:57 AM**	Prep Date **11/22/2005**
Client ID:		Run ID: **FID(17A) 2_051122A**		SeqNo: **425191**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.706	1	5	0	114	81.2	149	0			

Sample ID **LCSD-9247**	Batch ID: **9247**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date **11/23/2005 8:40:45 AM**	Prep Date **11/22/2005**
Client ID:		Run ID: **FID(17A) 2_051122A**		SeqNo: **425275**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.086	1	5	0	122	81.2	149	5.706	6.44	23	

Sample ID **100ng lcs**	Batch ID: **R17450**	Test Code: **SW8260B**	Units: **µg/L**	Analysis Date **11/29/2005**	Prep Date
Client ID:		Run ID: **NEPTUNE_051129A**		SeqNo: **426508**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.31	1	20	0	96.6	80	130	0			
Toluene	18.39	1	20	0	92.0	77	121	0			

Sample ID **100NG LCS**	Batch ID: **R17458**	Test Code: **SW8260B**	Units: **µg/L**	Analysis Date **11/30/2005**	Prep Date
Client ID:		Run ID: **NEPTUNE_051130A**		SeqNo: **426787**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.3	1	20	0	96.5	80	130	0			
Toluene	19.23	1	20	0	96.1	77	121	0			

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received: 11/17/2005

Work Order Number 0511192

Received by AT

Checklist completed by _____ 11/17/05
Signature Date

Matrix

Carrier name Client drop-off

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? 6° *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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3, Box 7, Gallup, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: Old and New API separator Effluents and AL-2 to EP-1 SPECIAL
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 6

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	BTEX + MTBE [redacted] (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)/GRO	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
11-16-05	10:40A	H_2O	Old API Effluent				0511192-1	X		X														
"	10:45A	"	NEW API Effluent				-2	X		X														
"	10:50A	"	AL-2 to EP-1				-3	X		X														

Remarks: RUSH

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
11-17-05	1445	Steve Morris	11/17/05
			1445

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 22, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Split samples w/OCD on Old API Sep Order No.: 0511125

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 3 samples on 11/11/2005 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

Hall Environmental Analysis Laboratory

Date: *23-Nov-05*

CLIENT: Giant Refining Co
Project: Split samples w/OCD on Old API Sep
Lab Order: 0511125

CASE NARRATIVE

Practical quantitation limits (PQL) elevated for EPA Method 8270 due to emulsion formed during extraction and the amount of hydrocarbons in the sample.

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Old API Sep
Lab Order: 0511125
Collection Date: 11/10/2005 5:20:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						Analyst: **JAT**
Petroleum Hydrocarbons, TR	2100	100		mg/L	20	11/16/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	200	10		µg/L	10	11/16/2005
Toluene	220	10		µg/L	10	11/16/2005
Ethylbenzene	ND	10		µg/L	10	11/16/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/16/2005
1,2,4-Trimethylbenzene	68	10		µg/L	10	11/16/2005
1,3,5-Trimethylbenzene	24	10		µg/L	10	11/16/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/16/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/16/2005
Naphthalene	82	20		µg/L	10	11/16/2005
1-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
2-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
Acetone	ND	100		µg/L	10	11/16/2005
Bromobenzene	ND	10		µg/L	10	11/16/2005
Bromochloromethane	ND	10		µg/L	10	11/16/2005
Bromodichloromethane	ND	10		µg/L	10	11/16/2005
Bromoform	ND	10		µg/L	10	11/16/2005
Bromomethane	ND	20		µg/L	10	11/16/2005
2-Butanone	ND	100		µg/L	10	11/16/2005
Carbon disulfide	ND	100		µg/L	10	11/16/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/16/2005
Chlorobenzene	ND	10		µg/L	10	11/16/2005
Chloroethane	ND	20		µg/L	10	11/16/2005
Chloroform	ND	10		µg/L	10	11/16/2005
Chloromethane	ND	10		µg/L	10	11/16/2005
2-Chlorotoluene	ND	10		µg/L	10	11/16/2005
4-Chlorotoluene	ND	10		µg/L	10	11/16/2005
cis-1,2-DCE	ND	10		µg/L	10	11/16/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/16/2005
Dibromochloromethane	ND	10		µg/L	10	11/16/2005
Dibromomethane	ND	20		µg/L	10	11/16/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/16/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/16/2005

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Old API Sep
Lab Order: 0511125
Collection Date: 11/10/2005 5:20:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/16/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/16/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/16/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/16/2005
2-Hexanone	ND	100		µg/L	10	11/16/2005
Isopropylbenzene	ND	10		µg/L	10	11/16/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/16/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/16/2005
Methylene Chloride	ND	30		µg/L	10	11/16/2005
n-Butylbenzene	ND	10		µg/L	10	11/16/2005
n-Propylbenzene	ND	10		µg/L	10	11/16/2005
sec-Butylbenzene	ND	10		µg/L	10	11/16/2005
Styrene	ND	10		µg/L	10	11/16/2005
tert-Butylbenzene	ND	10		µg/L	10	11/16/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/16/2005
trans-1,2-DCE	ND	10		µg/L	10	11/16/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/16/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/16/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/16/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/16/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/16/2005
Vinyl chloride	ND	10		µg/L	10	11/16/2005
Xylenes, Total	290	10		µg/L	10	11/16/2005
Surr: 1,2-Dichloroethane-d4	109	69.9-130		%REC	10	11/16/2005
Surr: 4-Bromofluorobenzene	100	71.2-123		%REC	10	11/16/2005
Surr: Dibromofluoromethane	106	73.9-134		%REC	10	11/16/2005
Surr: Toluene-d8	104	81.9-122		%REC	10	11/16/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	20		µg/L	1	11/17/2005
Acenaphthylene	ND	20		µg/L	1	11/17/2005
Aniline	ND	40		µg/L	1	11/17/2005
Anthracene	ND	20		µg/L	1	11/17/2005
Azobenzene	ND	20		µg/L	1	11/17/2005
Benz(a)anthracene	ND	30		µg/L	1	11/17/2005
Benzo(a)pyrene	ND	30		µg/L	1	11/17/2005
Benzo(b)fluoranthene	ND	30		µg/L	1	11/17/2005
Benzo(g,h,i)perylene	ND	20		µg/L	1	11/17/2005

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E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Old API Sep
Lab Order: 0511125
Collection Date: 11/10/2005 5:20:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	20		µg/L	1	11/17/2005
Benzoic acid	ND	100		µg/L	1	11/17/2005
Benzyl alcohol	ND	40		µg/L	1	11/17/2005
Bis(2-chloroethoxy)methane	ND	20		µg/L	1	11/17/2005
Bis(2-chloroethyl)ether	ND	30		µg/L	1	11/17/2005
Bis(2-chloroisopropyl)ether	ND	30		µg/L	1	11/17/2005
Bis(2-ethylhexyl)phthalate	31	30		µg/L	1	11/17/2005
4-Bromophenyl phenyl ether	ND	20		µg/L	1	11/17/2005
Butyl benzyl phthalate	ND	30		µg/L	1	11/17/2005
Carbazole	ND	20		µg/L	1	11/17/2005
4-Chloro-3-methylphenol	ND	40		µg/L	1	11/17/2005
4-Chloroaniline	ND	40		µg/L	1	11/17/2005
2-Chloronaphthalene	ND	20		µg/L	1	11/17/2005
2-Chlorophenol	ND	20		µg/L	1	11/17/2005
4-Chlorophenyl phenyl ether	ND	30		µg/L	1	11/17/2005
Chrysene	ND	30		µg/L	1	11/17/2005
Di-n-butyl phthalate	ND	20		µg/L	1	11/17/2005
Di-n-octyl phthalate	ND	30		µg/L	1	11/17/2005
Dibenz(a,h)anthracene	ND	20		µg/L	1	11/17/2005
Dibenzofuran	27	20		µg/L	1	11/17/2005
1,2-Dichlorobenzene	ND	20		µg/L	1	11/17/2005
1,3-Dichlorobenzene	ND	20		µg/L	1	11/17/2005
1,4-Dichlorobenzene	ND	20		µg/L	1	11/17/2005
3,3'-Dichlorobenzidine	ND	30		µg/L	1	11/17/2005
Diethyl phthalate	ND	20		µg/L	1	11/17/2005
Dimethyl phthalate	ND	20		µg/L	1	11/17/2005
2,4-Dichlorophenol	ND	20		µg/L	1	11/17/2005
2,4-Dimethylphenol	ND	20		µg/L	1	11/17/2005
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2005
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2005
2,4-Dinitrotoluene	ND	20		µg/L	1	11/17/2005
2,6-Dinitrotoluene	ND	20		µg/L	1	11/17/2005
Fluoranthene	ND	20		µg/L	1	11/17/2005
Fluorene	75	20		µg/L	1	11/17/2005
Hexachlorobenzene	ND	20		µg/L	1	11/17/2005
Hexachlorobutadiene	ND	20		µg/L	1	11/17/2005
Hexachlorocyclopentadiene	ND	20		µg/L	1	11/17/2005
Hexachloroethane	ND	20		µg/L	1	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	20		µg/L	1	11/17/2005
Isophorone	ND	20		µg/L	1	11/17/2005
2-Methylnaphthalene	250	20		µg/L	1	11/17/2005
2-Methylphenol	ND	30		µg/L	1	11/17/2005

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Old API Sep
Lab Order: 0511125
Collection Date: 11/10/2005 5:20:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	40		µg/L	1	11/17/2005
N-Nitrosodi-n-propylamine	ND	20		µg/L	1	11/17/2005
N-Nitrosodimethylamine	ND	20		µg/L	1	11/17/2005
N-Nitrosodiphenylamine	ND	20		µg/L	1	11/17/2005
Naphthalene	92	20		µg/L	1	11/17/2005
2-Nitroaniline	ND	100		µg/L	1	11/17/2005
3-Nitroaniline	ND	100		µg/L	1	11/17/2005
4-Nitroaniline	ND	40		µg/L	1	11/17/2005
Nitrobenzene	ND	20		µg/L	1	11/17/2005
2-Nitrophenol	ND	30		µg/L	1	11/17/2005
4-Nitrophenol	ND	100		µg/L	1	11/17/2005
Pentachlorophenol	ND	100		µg/L	1	11/17/2005
Phenanthrene	170	20		µg/L	1	11/17/2005
Phenol	ND	20		µg/L	1	11/17/2005
Pyrene	86	30		µg/L	1	11/17/2005
Pyridine	ND	60		µg/L	1	11/17/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	1	11/17/2005
2,4,5-Trichlorophenol	ND	20		µg/L	1	11/17/2005
2,4,6-Trichlorophenol	ND	30		µg/L	1	11/17/2005
Surr: 2,4,6-Tribromophenol	75.6	16.6-150		%REC	1	11/17/2005
Surr: 2-Fluorobiphenyl	80.2	19.6-134		%REC	1	11/17/2005
Surr: 2-Fluorophenol	48.2	9.54-113		%REC	1	11/17/2005
Surr: 4-Terphenyl-d14	78.1	22.7-145		%REC	1	11/17/2005
Surr: Nitrobenzene-d5	78.1	14.6-134		%REC	1	11/17/2005
Surr: Phenol-d5	38.1	10.7-80.3		%REC	1	11/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	0.0024	0.00020		mg/L	1	11/14/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Aluminum	4.3	0.40		mg/L	20	11/17/2005 12:59:54 PM
Antimony	ND	0.010		mg/L	1	11/17/2005 11:19:21 AM
Arsenic	ND	0.020		mg/L	1	11/17/2005 11:19:21 AM
Barium	0.74	0.020		mg/L	1	11/17/2005 11:19:21 AM
Beryllium	ND	0.0030		mg/L	1	11/17/2005 11:19:21 AM
Boron	0.21	0.040		mg/L	1	11/17/2005 11:19:21 AM
Cadmium	0.0025	0.0020		mg/L	1	11/17/2005 11:19:21 AM
Calcium	110	20		mg/L	20	11/17/2005 12:59:54 PM
Chromium	0.027	0.0060		mg/L	1	11/17/2005 11:19:21 AM
Cobalt	0.0073	0.0060		mg/L	1	11/17/2005 11:19:21 AM
Copper	0.12	0.0060		mg/L	1	11/17/2005 11:19:21 AM
Iron	46	1.0		mg/L	20	11/17/2005 12:59:54 PM
Lead	0.028	0.0050		mg/L	1	11/17/2005 11:19:21 AM

Qualifiers:
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
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E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: Old API Sep
Lab Order: 0511125
Collection Date: 11/10/2005 5:20:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	29	1.0		mg/L	1	11/17/2005 11:19:21 AM
Manganese	0.75	0.0020		mg/L	1	11/17/2005 11:19:21 AM
Molybdenum	0.091	0.0080		mg/L	1	11/17/2005 11:19:21 AM
Nickel	0.060	0.010		mg/L	1	11/17/2005 11:19:21 AM
Potassium	35	1.0		mg/L	1	11/17/2005 11:19:21 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:19:21 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:19:21 AM
Sodium	530	20		mg/L	20	11/17/2005 12:59:54 PM
Thallium	ND	0.050		mg/L	1	11/17/2005 11:19:21 AM
Vanadium	ND	0.050		mg/L	1	11/17/2005 11:19:21 AM
Zinc	2.6	1.0		mg/L	20	11/17/2005 12:59:54 PM
Silica	40	22		mg/L	20	11/17/2005 12:59:54 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0511125
Collection Date: 11/10/2005 5:35:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						Analyst: **JAT**
Petroleum Hydrocarbons, TR	65	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	25	10		µg/L	10	11/16/2005
Toluene	28	10		µg/L	10	11/16/2005
Ethylbenzene	ND	10		µg/L	10	11/16/2005
Methyl tert-butyl ether (MTBE)	19	10		µg/L	10	11/16/2005
1,2,4-Trimethylbenzene	19	10		µg/L	10	11/16/2005
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/16/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/16/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/16/2005
Naphthalene	ND	20		µg/L	10	11/16/2005
1-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
2-Methylnaphthalene	ND	40		µg/L	10	11/16/2005
Acetone	3500	500		µg/L	50	11/18/2005
Bromobenzene	ND	10		µg/L	10	11/16/2005
Bromochloromethane	ND	10		µg/L	10	11/16/2005
Bromodichloromethane	ND	10		µg/L	10	11/16/2005
Bromoform	ND	10		µg/L	10	11/16/2005
Bromomethane	ND	20		µg/L	10	11/16/2005
2-Butanone	360	100		µg/L	10	11/16/2005
Carbon disulfide	ND	100		µg/L	10	11/16/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/16/2005
Chlorobenzene	ND	10		µg/L	10	11/16/2005
Chloroethane	ND	20		µg/L	10	11/16/2005
Chloroform	ND	10		µg/L	10	11/16/2005
Chloromethane	ND	10		µg/L	10	11/16/2005
2-Chlorotoluene	ND	10		µg/L	10	11/16/2005
4-Chlorotoluene	ND	10		µg/L	10	11/16/2005
cis-1,2-DCE	ND	10		µg/L	10	11/16/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/16/2005
Dibromochloromethane	ND	10		µg/L	10	11/16/2005
Dibromomethane	ND	20		µg/L	10	11/16/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/16/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/16/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-02

Client Sample ID: AL-2 to EP-1
Collection Date: 11/10/2005 5:35:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/16/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/16/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/16/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/16/2005
2-Hexanone	ND	100		µg/L	10	11/16/2005
Isopropylbenzene	ND	10		µg/L	10	11/16/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/16/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/16/2005
Methylene Chloride	ND	30		µg/L	10	11/16/2005
n-Butylbenzene	ND	10		µg/L	10	11/16/2005
n-Propylbenzene	ND	10		µg/L	10	11/16/2005
sec-Butylbenzene	ND	10		µg/L	10	11/16/2005
Styrene	ND	10		µg/L	10	11/16/2005
tert-Butylbenzene	ND	10		µg/L	10	11/16/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/16/2005
trans-1,2-DCE	ND	10		µg/L	10	11/16/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/16/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/16/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/16/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/16/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/16/2005
Vinyl chloride	ND	10		µg/L	10	11/16/2005
Xylenes, Total	18	10		µg/L	10	11/16/2005
Surr: 1,2-Dichloroethane-d4	103	69.9-130		%REC	10	11/16/2005
Surr: 4-Bromofluorobenzene	90.7	71.2-123		%REC	10	11/16/2005
Surr: Dibromofluoromethane	104	73.9-134		%REC	10	11/16/2005
Surr: Toluene-d8	114	81.9-122		%REC	10	11/16/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	200		µg/L	10	11/17/2005
Acenaphthylene	ND	200		µg/L	10	11/17/2005
Aniline	ND	400		µg/L	10	11/17/2005
Anthracene	ND	200		µg/L	10	11/17/2005
Azobenzene	ND	200		µg/L	10	11/17/2005
Benz(a)anthracene	ND	300		µg/L	10	11/17/2005
Benzo(a)pyrene	ND	300		µg/L	10	11/17/2005
Benzo(b)fluoranthene	ND	300		µg/L	10	11/17/2005
Benzo(g,h,i)perylene	ND	200		µg/L	10	11/17/2005

Qualifiers:
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0511125
Collection Date: 11/10/2005 5:35:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	200		µg/L	10	11/17/2005
Benzoic acid	ND	1000		µg/L	10	11/17/2005
Benzyl alcohol	ND	400		µg/L	10	11/17/2005
Bis(2-chloroethoxy)methane	ND	200		µg/L	10	11/17/2005
Bis(2-chloroethyl)ether	ND	300		µg/L	10	11/17/2005
Bis(2-chloroisopropyl)ether	ND	300		µg/L	10	11/17/2005
Bis(2-ethylhexyl)phthalate	ND	300		µg/L	10	11/17/2005
4-Bromophenyl phenyl ether	ND	200		µg/L	10	11/17/2005
Butyl benzyl phthalate	ND	300		µg/L	10	11/17/2005
Carbazole	ND	200		µg/L	10	11/17/2005
4-Chloro-3-methylphenol	ND	400		µg/L	10	11/17/2005
4-Chloroaniline	ND	400		µg/L	10	11/17/2005
2-Chloronaphthalene	ND	200		µg/L	10	11/17/2005
2-Chlorophenol	ND	200		µg/L	10	11/17/2005
4-Chlorophenyl phenyl ether	ND	300		µg/L	10	11/17/2005
Chrysene	ND	300		µg/L	10	11/17/2005
Di-n-butyl phthalate	ND	200		µg/L	10	11/17/2005
Di-n-octyl phthalate	ND	300		µg/L	10	11/17/2005
Dibenz(a,h)anthracene	ND	200		µg/L	10	11/17/2005
Dibenzofuran	ND	200		µg/L	10	11/17/2005
1,2-Dichlorobenzene	ND	200		µg/L	10	11/17/2005
1,3-Dichlorobenzene	ND	200		µg/L	10	11/17/2005
1,4-Dichlorobenzene	ND	200		µg/L	10	11/17/2005
3,3'-Dichlorobenzidine	ND	300		µg/L	10	11/17/2005
Diethyl phthalate	ND	200		µg/L	10	11/17/2005
Dimethyl phthalate	ND	200		µg/L	10	11/17/2005
2,4-Dichlorophenol	ND	200		µg/L	10	11/17/2005
2,4-Dimethylphenol	ND	200		µg/L	10	11/17/2005
4,6-Dinitro-2-methylphenol	ND	1000		µg/L	10	11/17/2005
2,4-Dinitrophenol	ND	1000		µg/L	10	11/17/2005
2,4-Dinitrotoluene	ND	200		µg/L	10	11/17/2005
2,6-Dinitrotoluene	ND	200		µg/L	10	11/17/2005
Fluoranthene	ND	200		µg/L	10	11/17/2005
Fluorene	ND	200		µg/L	10	11/17/2005
Hexachlorobenzene	ND	200		µg/L	10	11/17/2005
Hexachlorobutadiene	ND	200		µg/L	10	11/17/2005
Hexachlorocyclopentadiene	ND	200		µg/L	10	11/17/2005
Hexachloroethane	ND	200		µg/L	10	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	200		µg/L	10	11/17/2005
Isophorone	ND	200		µg/L	10	11/17/2005
2-Methylnaphthalene	ND	200		µg/L	10	11/17/2005
2-Methylphenol	ND	300		µg/L	10	11/17/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

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Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-02

Client Sample ID: AL-2 to EP-1
Collection Date: 11/10/2005 5:35:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	400		µg/L	10	11/17/2005
N-Nitrosodi-n-propylamine	ND	200		µg/L	10	11/17/2005
N-Nitrosodimethylamine	ND	200		µg/L	10	11/17/2005
N-Nitrosodiphenylamine	ND	200		µg/L	10	11/17/2005
Naphthalene	ND	200		µg/L	10	11/17/2005
2-Nitroaniline	ND	1000		µg/L	10	11/17/2005
3-Nitroaniline	ND	1000		µg/L	10	11/17/2005
4-Nitroaniline	ND	400		µg/L	10	11/17/2005
Nitrobenzene	ND	200		µg/L	10	11/17/2005
2-Nitrophenol	ND	300		µg/L	10	11/17/2005
4-Nitrophenol	ND	1000		µg/L	10	11/17/2005
Pentachlorophenol	ND	1000		µg/L	10	11/17/2005
Phenanthrene	ND	200		µg/L	10	11/17/2005
Phenol	ND	200		µg/L	10	11/17/2005
Pyrene	ND	300		µg/L	10	11/17/2005
Pyridine	ND	600		µg/L	10	11/17/2005
1,2,4-Trichlorobenzene	ND	200		µg/L	10	11/17/2005
2,4,5-Trichlorophenol	ND	200		µg/L	10	11/17/2005
2,4,6-Trichlorophenol	ND	300		µg/L	10	11/17/2005
Surr: 2,4,6-Tribromophenol	93.2	16.6-150		%REC	10	11/17/2005
Surr: 2-Fluorobiphenyl	75.6	19.6-134		%REC	10	11/17/2005
Surr: 2-Fluorophenol	50.3	9.54-113		%REC	10	11/17/2005
Surr: 4-Terphenyl-d14	80.2	22.7-145		%REC	10	11/17/2005
Surr: Nitrobenzene-d5	68.0	14.6-134		%REC	10	11/17/2005
Surr: Phenol-d5	37.8	10.7-80.3		%REC	10	11/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	0.0013	0.00020		mg/L	1	11/14/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Aluminum	0.73	0.020		mg/L	1	11/17/2005 11:22:15 AM
Antimony	ND	0.010		mg/L	1	11/17/2005 11:22:15 AM
Arsenic	ND	0.020		mg/L	1	11/17/2005 11:22:15 AM
Barium	0.11	0.020		mg/L	1	11/17/2005 11:22:15 AM
Beryllium	ND	0.0030		mg/L	1	11/17/2005 11:22:15 AM
Boron	0.21	0.040		mg/L	1	11/17/2005 11:22:15 AM
Cadmium	ND	0.0020		mg/L	1	11/17/2005 11:22:15 AM
Calcium	57	1.0		mg/L	1	11/17/2005 11:22:15 AM
Chromium	0.0081	0.0060		mg/L	1	11/17/2005 11:22:15 AM
Cobalt	0.0081	0.0060		mg/L	1	11/17/2005 11:22:15 AM
Copper	0.0071	0.0060		mg/L	1	11/17/2005 11:22:15 AM
Iron	7.5	1.0		mg/L	20	11/17/2005 1:05:59 PM
Lead	ND	0.0050		mg/L	1	11/17/2005 11:22:15 AM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-02

Client Sample ID: AL-2 to EP-1
Collection Date: 11/10/2005 5:35:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	14	1.0		mg/L	1	11/17/2005 11:22:15 AM
Manganese	0.27	0.0020		mg/L	1	11/17/2005 11:22:15 AM
Molybdenum	0.013	0.0080		mg/L	1	11/17/2005 11:22:15 AM
Nickel	0.022	0.010		mg/L	1	11/17/2005 11:22:15 AM
Potassium	34	1.0		mg/L	1	11/17/2005 11:22:15 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:22:15 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:22:15 AM
Sodium	650	20		mg/L	20	11/17/2005 1:05:59 PM
Thallium	ND	0.050		mg/L	1	11/17/2005 11:22:15 AM
Vanadium	ND	0.050		mg/L	1	11/17/2005 11:22:15 AM
Zinc	1.4	1.0		mg/L	20	11/17/2005 1:05:59 PM
Silica	21	5.4		mg/L	5	11/18/2005 12:53:53 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-03

Client Sample ID: EP-1 to EP-2
Collection Date: 11/10/2005 6:05:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 418.1: TPH						Analyst: **JAT**
Petroleum Hydrocarbons, TR	50	2.0		mg/L	1	11/16/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	11	10		µg/L	10	11/16/2005
Toluene	20	10		µg/L	10	11/16/2005
Ethylbenzene	ND	10		µg/L	10	11/16/2005
Methyl tert-butyl ether (MTBE)	12	10		µg/L	10	11/16/2005
1,2,4-Trimethylbenzene	26	10		µg/L	10	11/16/2005
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/16/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/16/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/16/2005
Naphthalene	42	20		µg/L	10	11/16/2005
1-Methylnaphthalene	50	40		µg/L	10	11/16/2005
2-Methylnaphthalene	52	40		µg/L	10	11/16/2005
Acetone	1600	100		µg/L	10	11/16/2005
Bromobenzene	ND	10		µg/L	10	11/16/2005
Bromochloromethane	ND	10		µg/L	10	11/16/2005
Bromodichloromethane	ND	10		µg/L	10	11/16/2005
Bromoform	ND	10		µg/L	10	11/16/2005
Bromomethane	ND	20		µg/L	10	11/16/2005
2-Butanone	220	100		µg/L	10	11/16/2005
Carbon disulfide	ND	100		µg/L	10	11/16/2005
Carbon Tetrachloride	ND	20		µg/L	10	11/16/2005
Chlorobenzene	ND	10		µg/L	10	11/16/2005
Chloroethane	ND	20		µg/L	10	11/16/2005
Chloroform	ND	10		µg/L	10	11/16/2005
Chloromethane	ND	10		µg/L	10	11/16/2005
2-Chlorotoluene	ND	10		µg/L	10	11/16/2005
4-Chlorotoluene	ND	10		µg/L	10	11/16/2005
cis-1,2-DCE	ND	10		µg/L	10	11/16/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/16/2005
Dibromochloromethane	ND	10		µg/L	10	11/16/2005
Dibromomethane	ND	20		µg/L	10	11/16/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
1,4-Dichlorobenzene	ND	10		µg/L	10	11/16/2005
Dichlorodifluoromethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethane	ND	10		µg/L	10	11/16/2005
1,1-Dichloroethene	ND	10		µg/L	10	11/16/2005
1,2-Dichloropropane	ND	10		µg/L	10	11/16/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: EP-1 to EP-2
Lab Order: 0511125
Collection Date: 11/10/2005 6:05:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichloropropane	ND	10		µg/L	10	11/16/2005
2,2-Dichloropropane	ND	10		µg/L	10	11/16/2005
1,1-Dichloropropene	ND	10		µg/L	10	11/16/2005
Hexachlorobutadiene	ND	10		µg/L	10	11/16/2005
2-Hexanone	ND	100		µg/L	10	11/16/2005
Isopropylbenzene	ND	10		µg/L	10	11/16/2005
4-Isopropyltoluene	ND	10		µg/L	10	11/16/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	11/16/2005
Methylene Chloride	ND	30		µg/L	10	11/16/2005
n-Butylbenzene	ND	10		µg/L	10	11/16/2005
n-Propylbenzene	ND	10		µg/L	10	11/16/2005
sec-Butylbenzene	ND	10		µg/L	10	11/16/2005
Styrene	ND	10		µg/L	10	11/16/2005
tert-Butylbenzene	ND	10		µg/L	10	11/16/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/16/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/16/2005
trans-1,2-DCE	ND	10		µg/L	10	11/16/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/16/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/16/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	11/16/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	11/16/2005
Trichloroethene (TCE)	ND	10		µg/L	10	11/16/2005
Trichlorofluoromethane	ND	10		µg/L	10	11/16/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	11/16/2005
Vinyl chloride	ND	10		µg/L	10	11/16/2005
Xylenes, Total	29	10		µg/L	10	11/16/2005
Surr: 1,2-Dichloroethane-d4	96.7	69.9-130		%REC	10	11/16/2005
Surr: 4-Bromofluorobenzene	96.1	71.2-123		%REC	10	11/16/2005
Surr: Dibromofluoromethane	105	73.9-134		%REC	10	11/16/2005
Surr: Toluene-d8	114	81.9-122		%REC	10	11/16/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	11/17/2005
Acenaphthylene	ND	50		µg/L	1	11/17/2005
Aniline	ND	100		µg/L	1	11/17/2005
Anthracene	ND	50		µg/L	1	11/17/2005
Azobenzene	ND	50		µg/L	1	11/17/2005
Benz(a)anthracene	ND	75		µg/L	1	11/17/2005
Benzo(a)pyrene	ND	75		µg/L	1	11/17/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	11/17/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: EP-1 to EP-2
Lab Order: 0511125
Collection Date: 11/10/2005 6:05:00 PM
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-03
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2005
Benzoic acid	ND	250		µg/L	1	11/17/2005
Benzyl alcohol	ND	100		µg/L	1	11/17/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	11/17/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	11/17/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	11/17/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2005
Butyl benzyl phthalate	ND	75		µg/L	1	11/17/2005
Carbazole	ND	50		µg/L	1	11/17/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	11/17/2005
4-Chloroaniline	ND	100		µg/L	1	11/17/2005
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2005
2-Chlorophenol	ND	50		µg/L	1	11/17/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	11/17/2005
Chrysene	ND	75		µg/L	1	11/17/2005
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2005
Di-n-octyl phthalate	ND	75		µg/L	1	11/17/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2005
Dibenzofuran	ND	50		µg/L	1	11/17/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	11/17/2005
Diethyl phthalate	ND	50		µg/L	1	11/17/2005
Dimethyl phthalate	ND	50		µg/L	1	11/17/2005
2,4-Dichlorophenol	ND	50		µg/L	1	11/17/2005
2,4-Dimethylphenol	65	50		µg/L	1	11/17/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	11/17/2005
2,4-Dinitrophenol	ND	250		µg/L	1	11/17/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2005
Fluoranthene	ND	50		µg/L	1	11/17/2005
Fluorene	53	50		µg/L	1	11/17/2005
Hexachlorobenzene	ND	50		µg/L	1	11/17/2005
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2005
Hexachloroethane	ND	50		µg/L	1	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2005
Isophorone	ND	50		µg/L	1	11/17/2005
2-Methylnaphthalene	98	50		µg/L	1	11/17/2005
2-Methylphenol	ND	75		µg/L	1	11/17/2005

Qualifiers:
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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-03

Client Sample ID: EP-1 to EP-2
Collection Date: 11/10/2005 6:05:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
3+4-Methylphenol	ND	100		µg/L	1	11/17/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2005
Naphthalene	ND	50		µg/L	1	11/17/2005
2-Nitroaniline	ND	250		µg/L	1	11/17/2005
3-Nitroaniline	ND	250		µg/L	1	11/17/2005
4-Nitroaniline	ND	100		µg/L	1	11/17/2005
Nitrobenzene	ND	50		µg/L	1	11/17/2005
2-Nitrophenol	ND	75		µg/L	1	11/17/2005
4-Nitrophenol	ND	250		µg/L	1	11/17/2005
Pentachlorophenol	ND	250		µg/L	1	11/17/2005
Phenanthrene	110	50		µg/L	1	11/17/2005
Phenol	67	50		µg/L	1	11/17/2005
Pyrene	ND	75		µg/L	1	11/17/2005
Pyridine	ND	150		µg/L	1	11/17/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	11/17/2005
Surr: 2,4,6-Tribromophenol	87.2	16.6-150		%REC	1	11/17/2005
Surr: 2-Fluorobiphenyl	72.4	19.6-134		%REC	1	11/17/2005
Surr: 2-Fluorophenol	46.8	9.54-113		%REC	1	11/17/2005
Surr: 4-Terphenyl-d14	78.1	22.7-145		%REC	1	11/17/2005
Surr: Nitrobenzene-d5	66.9	14.6-134		%REC	1	11/17/2005
Surr: Phenol-d5	35.4	10.7-80.3		%REC	1	11/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	0.00097	0.00020		mg/L	1	11/14/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Aluminum	0.37	0.020		mg/L	1	11/17/2005 11:25:32 AM
Antimony	ND	0.010		mg/L	1	11/17/2005 11:25:32 AM
Arsenic	ND	0.020		mg/L	1	11/17/2005 11:25:32 AM
Barium	0.081	0.020		mg/L	1	11/17/2005 11:25:32 AM
Beryllium	ND	0.0030		mg/L	1	11/17/2005 11:25:32 AM
Boron	0.22	0.040		mg/L	1	11/17/2005 11:25:32 AM
Cadmium	ND	0.0020		mg/L	1	11/17/2005 11:25:32 AM
Calcium	56	1.0		mg/L	1	11/17/2005 11:25:32 AM
Chromium	0.0074	0.0060		mg/L	1	11/17/2005 11:25:32 AM
Cobalt	ND	0.0060		mg/L	1	11/17/2005 11:25:32 AM
Copper	0.0067	0.0060		mg/L	1	11/17/2005 11:25:32 AM
Iron	6.2	1.0		mg/L	20	11/17/2005 1:08:12 PM
Lead	ND	0.0050		mg/L	1	11/17/2005 11:25:32 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511125
Project: Split samples w/OCD on Old API Sep
Lab ID: 0511125-03

Client Sample ID: EP-1 to EP-2
Collection Date: 11/10/2005 6:05:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	16	1.0		mg/L	1	11/17/2005 11:25:32 AM
Manganese	0.30	0.0020		mg/L	1	11/17/2005 11:25:32 AM
Molybdenum	ND	0.0080		mg/L	1	11/17/2005 11:25:32 AM
Nickel	0.016	0.010		mg/L	1	11/17/2005 11:25:32 AM
Potassium	40	1.0		mg/L	1	11/17/2005 11:25:32 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:25:32 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:25:32 AM
Sodium	800	20		mg/L	20	11/17/2005 1:08:12 PM
Thallium	ND	0.050		mg/L	1	11/17/2005 11:25:32 AM
Vanadium	ND	0.050		mg/L	1	11/17/2005 11:25:32 AM
Zinc	0.97	0.050		mg/L	1	11/17/2005 11:25:32 AM
Silica	20	5.4		mg/L	5	11/18/2005 12:51:39 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9185** Batch ID: **9185** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/17/2005** Prep Date **11/14/2005**
Client ID: Run ID: **ELMO_051117A** SeqNo: **424365**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

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
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

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

2-Nitrophenol	ND	15							
4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	145.7	0	200	0	72.9	16.6	150	0	
Surr: 2-Fluorobiphenyl	70.68	0	100	0	70.7	19.6	134	0	
Surr: 2-Fluorophenol	114.8	0	200	0	57.4	9.54	113	0	
Surr: 4-Terphenyl-d14	88.34	0	100	0	88.3	22.7	145	0	
Surr: Nitrobenzene-d5	67.28	0	100	0	67.3	14.6	134	0	
Surr: Phenol-d5	73.12	0	200	0	36.6	10.7	80.3	0	

Sample ID **MB-9184** Batch ID: **9184** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/14/2005** Prep Date **11/14/2005**
Client ID: Run ID: **MI-LA254_051114A** SeqNo: **422036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9199** Batch ID: **9199** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/17/2005 11:00:56 A** Prep Date **11/15/2005**
Client ID: Run ID: **ICP_051117A** SeqNo: **423291**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.02									
Antimony	ND	0.01									
Arsenic	ND	0.02									
Barium	ND	0.02									
Beryllium	ND	0.003									
Boron	0.009077	0.04									J
Cadmium	0.0003728	0.002									J
Calcium	ND	1									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Copper	ND	0.006									
Iron	ND	0.05									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	0.0004479	0.002									J
Molybdenum	ND	0.008									
Nickel	ND	0.01									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	0.0004823	0.005									J
Sodium	ND	1									
Thallium	ND	0.05									
Vanadium	ND	0.05									
Zinc	0.001187	0.05									J
Silica	ND	1.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT

Method Blank

Sample ID **5ml rb** Batch ID: **R17297** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/15/2005** Prep Date

Client ID: Run ID: **THOR_051115A** SeqNo: **422319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	0.506	1									J
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	10.46	0	10	0	105	69.9	130	0
Surr: 4-Bromofluorobenzene	10.26	0	10	0	103	71.2	123	0
Surr: Dibromofluoromethane	11.42	0	10	0	114	73.9	134	0
Surr: Toluene-d8	11.03	0	10	0	110	81.9	122	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

Sample ID **5mL rb** Batch ID: **R17344** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/17/2005** Prep Date

Client ID: Run ID: **NEPTUNE_051117A** SeqNo: **423631**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
cis-1,3-Dichloropropene	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1
1,1,2-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Method Blank

Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	8.928	0	10	0	89.3	69.9	130	0
Surr: 4-Bromofluorobenzene	9.004	0	10	0	90.0	71.2	123	0
Surr: Dibromofluoromethane	8.604	0	10	0	86.0	73.9	134	0
Surr: Toluene-d8	9.728	0	10	0	97.3	81.9	122	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *22-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **100ng lcs** Batch ID: **R17297** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/15/2005** Prep Date

Client ID: Run ID: **THOR_051115A** SeqNo: **422320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.87	1	20	0	99.4	79.3	136	0			
Toluene	21.12	1	20	0	106	65.5	123	0			
Chlorobenzene	20.12	1	20	0	101	85.6	126	0			
1,1-Dichloroethene	22.63	1	20	0	113	72.7	135	0			
Trichloroethene (TCE)	20.67	1	20	0	103	85.6	119	0			

Sample ID **100ng lcsd** Batch ID: **R17297** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/16/2005** Prep Date

Client ID: Run ID: **THOR_051115A** SeqNo: **422545**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.45	1	20	0	107	81.4	130	19.87	7.62	11	
Toluene	20.43	1	20	0	102	65.5	123	21.12	3.33	12.2	
Chlorobenzene	19.96	1	20	0	99.8	89.6	134	20.12	0.808	12	
1,1-Dichloroethene	22.16	1	20	0	111	75.1	120	22.63	2.07	19.3	
Trichloroethene (TCE)	19.96	1	20	0	99.8	75.8	110	20.67	3.52	15.5	

Sample ID **100ng lcs** Batch ID: **R17344** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/17/2005** Prep Date

Client ID: Run ID: **NEPTUNE_051117A** SeqNo: **423632**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.77	1	20	0	104	79.3	136	0			
Toluene	20.54	1	20	0	103	65.5	123	0			
Chlorobenzene	20.81	1	20	0	104	85.6	126	0			
1,1-Dichloroethene	22.16	1	20	0	111	72.7	135	0			
Trichloroethene (TCE)	19.43	1	20	0	97.1	85.6	119	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9185** Batch ID: **9185** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/17/2005** Prep Date **11/14/2005**
Client ID: Run ID: **ELMO_051117A** SeqNo: **424366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.72	10	100	0	75.7	11	123	0			
4-Chloro-3-methylphenol	140.7	20	200	0	70.4	15.4	119	0			
2-Chlorophenol	141	10	200	0	70.5	12.2	122	0			
1,4-Dichlorobenzene	68.12	10	100	0	68.1	16.9	100	0			
2,4-Dinitrotoluene	71.96	10	100	0	72.0	13	138	0			
N-Nitrosodi-n-propylamine	68.28	10	100	0	68.3	9.93	122	0			
4-Nitrophenol	87.36	50	200	0	43.7	-20.5	87.4	0			
Pentachlorophenol	129.2	50	200	0	64.6	-0.355	114	0			
Phenol	76.18	10	200	0	38.1	7.53	73.1	0			
Pyrene	80.9	15	100	0	80.9	12.6	140	0			
1,2,4-Trichlorobenzene	66.78	10	100	0	66.8	17.4	98.7	0			

Sample ID **LCSD-9185** Batch ID: **9185** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/17/2005** Prep Date **11/14/2005**
Client ID: Run ID: **ELMO_051117A** SeqNo: **424368**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.94	10	100	0	75.9	11	123	75.72	0.290	30.5	
4-Chloro-3-methylphenol	145.9	20	200	0	72.9	15.4	119	140.7	3.60	28.6	
2-Chlorophenol	128.1	10	200	0	64.0	12.2	122	141	9.59	107	
1,4-Dichlorobenzene	59.16	10	100	0	59.2	16.9	100	68.12	14.1	62.1	
2,4-Dinitrotoluene	71.68	10	100	0	71.7	13	138	71.96	0.390	14.7	
N-Nitrosodi-n-propylamine	66.94	10	100	0	66.9	9.93	122	68.28	1.98	30.3	
4-Nitrophenol	56.1	50	200	0	28.1	12.5	87.4	87.36	43.6	36.3	R
Pentachlorophenol	74.34	50	200	0	37.2	3.55	114	129.2	53.9	49	R
Phenol	75.02	10	200	0	37.5	7.53	73.1	76.18	1.53	52.4	
Pyrene	82.6	15	100	0	82.6	12.6	140	80.9	2.08	16.3	
1,2,4-Trichlorobenzene	62.1	10	100	0	62.1	17.4	98.7	66.78	7.26	36.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9184**	Batch ID: **9184**	Test Code: **SW7470**		Units: **mg/L**		Analysis Date **11/14/2005**			Prep Date **11/14/2005**		
Client ID:		Run ID: **MI-LA254_051114A**				SeqNo: **422037**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004712	0.0002	0.005	0	94.2	80	120	0			

Sample ID **LCSD-9184**	Batch ID: **9184**	Test Code: **SW7470**		Units: **mg/L**		Analysis Date **11/14/2005**			Prep Date **11/14/2005**		
Client ID:		Run ID: **MI-LA254_051114A**				SeqNo: **422051**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004592	0.0002	0.005	0	91.8	80	120	0.004712	2.59	0	

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Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9199** Batch ID: **9199** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/17/2005 11:03:34 A** Prep Date **11/15/2005**
Client ID: Run ID: **ICP_051117A** SeqNo: **423292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.4958	0.02	0.5	0	99.2	80	120	0			
Antimony	0.4905	0.01	0.5	0	98.1	80	120	0			
Arsenic	0.478	0.02	0.5	0	95.6	80	120	0			
Barium	0.467	0.02	0.5	0	93.4	80	120	0			
Beryllium	0.4998	0.003	0.5	0	100	80	120	0			
Boron	0.4865	0.04	0.5	0.009077	95.5	80	120	0			
Cadmium	0.4706	0.002	0.5	0.0003728	94.1	80	120	0			
Calcium	52.36	1	50	0	105	80	120	0			
Chromium	0.4743	0.006	0.5	0	94.9	80	120	0			
Cobalt	0.4658	0.006	0.5	0	93.2	80	120	0			
Copper	0.4923	0.006	0.5	0	98.5	80	120	0			
Iron	0.4631	0.05	0.5	0	92.6	80	120	0			
Lead	0.4736	0.005	0.5	0	94.7	80	120	0			
Magnesium	52.77	1	50	0	106	80	120	0			
Manganese	0.4631	0.002	0.5	0.0004479	92.5	80	120	0			
Molybdenum	0.4934	0.008	0.5	0	98.7	80	120	0			
Nickel	0.455	0.01	0.5	0	91.0	80	120	0			
Potassium	55.53	1	50	0	111	80	120	0			
Selenium	0.4616	0.05	0.5	0	92.3	80	120	0			
Silver	0.4803	0.005	0.5	0.0004823	96.0	80	120	0			
Sodium	56.54	1	50	0	113	80	120	0			
Thallium	0.5019	0.05	0.5	0	100	80	120	0			
Vanadium	0.4881	0.05	0.5	0	97.6	80	120	0			
Zinc	0.4585	0.05	0.5	0.001187	91.5	80	120	0			
Silica	4.802	1.1	5.35	0	89.8	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511125
Project: Split samples w/OCD on Old API Sep

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9199** Batch ID: **9199** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/17/2005 11:06:32 A** Prep Date **11/15/2005**
Client ID: Run ID: **ICP_051117A** SeqNo: **423293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.5036	0.02	0.5	0	101	80	120	0.4958	1.58	20	
Antimony	0.483	0.01	0.5	0	96.6	80	120	0.4905	1.55	20	
Arsenic	0.4825	0.02	0.5	0	96.5	80	120	0.478	0.949	20	
Barium	0.4685	0.02	0.5	0	93.7	80	120	0.467	0.312	20	
Beryllium	0.4968	0.003	0.5	0	99.4	80	120	0.4998	0.604	20	
Boron	0.4937	0.04	0.5	0.009077	96.9	80	120	0.4865	1.47	20	
Cadmium	0.471	0.002	0.5	0.0003728	94.1	80	120	0.4706	0.0773	20	
Calcium	51.81	1	50	0	104	80	120	52.36	1.06	20	
Chromium	0.4733	0.006	0.5	0	94.7	80	120	0.4743	0.210	20	
Cobalt	0.4606	0.006	0.5	0	92.1	80	120	0.4658	1.13	20	
Copper	0.4937	0.006	0.5	0	98.7	80	120	0.4923	0.273	20	
Iron	0.4673	0.05	0.5	0	93.5	80	120	0.4631	0.891	20	
Lead	0.4725	0.005	0.5	0	94.5	80	120	0.4736	0.235	20	
Magnesium	52.4	1	50	0	105	80	120	52.77	0.688	20	
Manganese	0.4655	0.002	0.5	0.0004479	93.0	80	120	0.4631	0.505	20	
Molybdenum	0.4905	0.008	0.5	0	98.1	80	120	0.4934	0.585	20	
Nickel	0.456	0.01	0.5	0	91.2	80	120	0.455	0.224	20	
Potassium	55.08	1	50	0	110	80	120	55.53	0.809	20	
Selenium	0.4647	0.05	0.5	0	92.9	80	120	0.4616	0.672	20	
Silver	0.4843	0.005	0.5	0.0004823	96.8	80	120	0.4803	0.834	20	
Sodium	56.4	1	50	0	113	80	120	56.54	0.239	20	
Thallium	0.4935	0.05	0.5	0	98.7	80	120	0.5019	1.69	20	
Vanadium	0.4911	0.05	0.5	0	98.2	80	120	0.4881	0.615	20	
Zinc	0.4746	0.05	0.5	0.001187	94.7	80	120	0.4585	3.44	20	
Silica	4.866	1.1	5.35	0	91.0	80	120	4.802	1.32	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received: 11/11/2005

Work Order Number 0511125

Received by AT

Checklist completed by _____ Signature

11/11/05 Date

Matrix

Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Split samples with OCD on Old API separator, AL-2 to EP-1, and EP-1 to EP-2
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 4°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA) (Base, Neutral)	6010 Metals OCD	7470 Hg			Air Bubbles or Headspace (Y or N)
11-10-05	1720	H_2O	Old API Sep.	6 each				051125-1				X							X	X	X	X			
"	1735	"	AL-2 to EP-1	6 each				-2			X								+	+	+	+			
"	1805	"	EP-1 to EP-2	6 each				-3				X							+	X	X	X			

Date: 11-11-05 Time: 1435 Relinquished By: (Signature) Steve Morris
Received By: (Signature) 11/11/05 1435
Date: Time: Relinquished By: (Signature)
Received By: (Signature)

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 21, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Water at Condensate Return Tank

Order No.: 0511124

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/11/2005 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

Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	ND	0.10		mg/L	1	11/12/2005
Chloride	0.11	0.10		mg/L	1	11/12/2005
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/12/2005
Nitrogen, Nitrate (As N)	0.16	0.10		mg/L	1	11/12/2005
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/12/2005
Sulfate	ND	0.50		mg/L	1	11/12/2005
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	11/16/2005
Toluene	ND	1.0		µg/L	1	11/16/2005
Ethylbenzene	ND	1.0		µg/L	1	11/16/2005
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/16/2005
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/16/2005
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/16/2005
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/16/2005
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/16/2005
Naphthalene	ND	2.0		µg/L	1	11/16/2005
1-Methylnaphthalene	ND	4.0		µg/L	1	11/16/2005
2-Methylnaphthalene	ND	4.0		µg/L	1	11/16/2005
Acetone	ND	10		µg/L	1	11/16/2005
Bromobenzene	ND	1.0		µg/L	1	11/16/2005
Bromochloromethane	ND	1.0		µg/L	1	11/16/2005
Bromodichloromethane	ND	1.0		µg/L	1	11/16/2005
Bromoform	ND	1.0		µg/L	1	11/16/2005
Bromomethane	ND	2.0		µg/L	1	11/16/2005
2-Butanone	ND	10		µg/L	1	11/16/2005
Carbon disulfide	ND	10		µg/L	1	11/16/2005
Carbon Tetrachloride	ND	2.0		µg/L	1	11/16/2005
Chlorobenzene	ND	1.0		µg/L	1	11/16/2005
Chloroethane	ND	2.0		µg/L	1	11/16/2005
Chloroform	ND	1.0		µg/L	1	11/16/2005
Chloromethane	ND	1.0		µg/L	1	11/16/2005
2-Chlorotoluene	ND	1.0		µg/L	1	11/16/2005
4-Chlorotoluene	ND	1.0		µg/L	1	11/16/2005
cis-1,2-DCE	ND	1.0		µg/L	1	11/16/2005
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/16/2005
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/16/2005
Dibromochloromethane	ND	1.0		µg/L	1	11/16/2005
Dibromomethane	ND	2.0		µg/L	1	11/16/2005
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/16/2005
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/16/2005

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/16/2005
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/16/2005
1,1-Dichloroethane	ND	1.0		µg/L	1	11/16/2005
1,1-Dichloroethene	ND	1.0		µg/L	1	11/16/2005
1,2-Dichloropropane	ND	1.0		µg/L	1	11/16/2005
1,3-Dichloropropane	ND	1.0		µg/L	1	11/16/2005
2,2-Dichloropropane	ND	1.0		µg/L	1	11/16/2005
1,1-Dichloropropene	ND	1.0		µg/L	1	11/16/2005
Hexachlorobutadiene	ND	1.0		µg/L	1	11/16/2005
2-Hexanone	ND	10		µg/L	1	11/16/2005
Isopropylbenzene	ND	1.0		µg/L	1	11/16/2005
4-Isopropyltoluene	ND	1.0		µg/L	1	11/16/2005
4-Methyl-2-pentanone	ND	10		µg/L	1	11/16/2005
Methylene Chloride	ND	3.0		µg/L	1	11/16/2005
n-Butylbenzene	ND	1.0		µg/L	1	11/16/2005
n-Propylbenzene	ND	1.0		µg/L	1	11/16/2005
sec-Butylbenzene	ND	1.0		µg/L	1	11/16/2005
Styrene	ND	1.0		µg/L	1	11/16/2005
tert-Butylbenzene	ND	1.0		µg/L	1	11/16/2005
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/16/2005
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	11/16/2005
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/16/2005
trans-1,2-DCE	ND	1.0		µg/L	1	11/16/2005
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/16/2005
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/16/2005
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/16/2005
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/16/2005
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/16/2005
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/16/2005
Trichlorofluoromethane	ND	1.0		µg/L	1	11/16/2005
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/16/2005
Vinyl chloride	ND	1.0		µg/L	1	11/16/2005
Xylenes, Total	ND	1.0		µg/L	1	11/16/2005
Surr: 1,2-Dichloroethane-d4	103	69.9-130		%REC	1	11/16/2005
Surr: 4-Bromofluorobenzene	107	71.2-123		%REC	1	11/16/2005
Surr: Dibromofluoromethane	104	73.9-134		%REC	1	11/16/2005
Surr: Toluene-d8	104	81.9-122		%REC	1	11/16/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	11/17/2005
Acenaphthylene	ND	10		µg/L	1	11/17/2005
Aniline	ND	20		µg/L	1	11/17/2005
Anthracene	ND	10		µg/L	1	11/17/2005

Qualifiers:
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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	10		µg/L	1	11/17/2005
Benz(a)anthracene	ND	15		µg/L	1	11/17/2005
Benzo(a)pyrene	ND	15		µg/L	1	11/17/2005
Benzo(b)fluoranthene	ND	15		µg/L	1	11/17/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/17/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	11/17/2005
Benzoic acid	ND	50		µg/L	1	11/17/2005
Benzyl alcohol	ND	20		µg/L	1	11/17/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/17/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/17/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/17/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/17/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/17/2005
Butyl benzyl phthalate	ND	15		µg/L	1	11/17/2005
Carbazole	ND	10		µg/L	1	11/17/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/17/2005
4-Chloroaniline	ND	20		µg/L	1	11/17/2005
2-Chloronaphthalene	ND	10		µg/L	1	11/17/2005
2-Chlorophenol	ND	10		µg/L	1	11/17/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/17/2005
Chrysene	ND	15		µg/L	1	11/17/2005
Di-n-butyl phthalate	ND	10		µg/L	1	11/17/2005
Di-n-octyl phthalate	ND	15		µg/L	1	11/17/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/17/2005
Dibenzofuran	ND	10		µg/L	1	11/17/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	11/17/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	11/17/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	11/17/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/17/2005
Diethyl phthalate	ND	10		µg/L	1	11/17/2005
Dimethyl phthalate	ND	10		µg/L	1	11/17/2005
2,4-Dichlorophenol	ND	10		µg/L	1	11/17/2005
2,4-Dimethylphenol	ND	10		µg/L	1	11/17/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/17/2005
2,4-Dinitrophenol	ND	50		µg/L	1	11/17/2005
2,4-Dinitrotoluene	ND	10		µg/L	1	11/17/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	11/17/2005
Fluoranthene	ND	10		µg/L	1	11/17/2005
Fluorene	ND	10		µg/L	1	11/17/2005
Hexachlorobenzene	ND	10		µg/L	1	11/17/2005
Hexachlorobutadiene	ND	10		µg/L	1	11/17/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/17/2005

Qualifiers:
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Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	10		µg/L	1	11/17/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/17/2005
Isophorone	ND	10		µg/L	1	11/17/2005
2-Methylnaphthalene	ND	10		µg/L	1	11/17/2005
2-Methylphenol	ND	15		µg/L	1	11/17/2005
3+4-Methylphenol	ND	20		µg/L	1	11/17/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/17/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	11/17/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/17/2005
Naphthalene	ND	10		µg/L	1	11/17/2005
2-Nitroaniline	ND	50		µg/L	1	11/17/2005
3-Nitroaniline	ND	50		µg/L	1	11/17/2005
4-Nitroaniline	ND	20		µg/L	1	11/17/2005
Nitrobenzene	ND	10		µg/L	1	11/17/2005
2-Nitrophenol	ND	15		µg/L	1	11/17/2005
4-Nitrophenol	ND	50		µg/L	1	11/17/2005
Pentachlorophenol	ND	50		µg/L	1	11/17/2005
Phenanthrene	ND	10		µg/L	1	11/17/2005
Phenol	ND	10		µg/L	1	11/17/2005
Pyrene	ND	15		µg/L	1	11/17/2005
Pyridine	ND	30		µg/L	1	11/17/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/17/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/17/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/17/2005
Surr: 2,4,6-Tribromophenol	70.8	16.6-150		%REC	1	11/17/2005
Surr: 2-Fluorobiphenyl	61.1	19.6-134		%REC	1	11/17/2005
Surr: 2-Fluorophenol	49.0	9.54-113		%REC	1	11/17/2005
Surr: 4-Terphenyl-d14	76.1	22.7-145		%REC	1	11/17/2005
Surr: Nitrobenzene-d5	57.8	14.6-134		%REC	1	11/17/2005
Surr: Phenol-d5	32.4	10.7-80.3		%REC	1	11/17/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	37	0.010		µmhos/cm	1	11/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	11/14/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	11/17/2005 11:16:14 AM
Barium	0.051	0.020		mg/L	1	11/17/2005 11:16:14 AM
Cadmium	ND	0.0020		mg/L	1	11/17/2005 11:16:14 AM
Calcium	4.6	1.0		mg/L	1	11/17/2005 11:16:14 AM
Chromium	ND	0.0060		mg/L	1	11/17/2005 11:16:14 AM
Lead	ND	0.0050		mg/L	1	11/17/2005 11:16:14 AM

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511124
Project: Water at Condensate Return Tank
Lab ID: 0511124-01

Client Sample ID: Condensate Leak
Collection Date: 11/11/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	ND	1.0		mg/L	1	11/17/2005 11:16:14 AM
Potassium	ND	1.0		mg/L	1	11/17/2005 11:16:14 AM
Selenium	ND	0.050		mg/L	1	11/17/2005 11:16:14 AM
Silver	ND	0.0050		mg/L	1	11/17/2005 11:16:14 AM
Sodium	ND	1.0		mg/L	1	11/17/2005 11:16:14 AM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	8.53	0.010		pH units	1	11/18/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17278** Test Code: **E300** Units: **mg/L** Analysis Date **11/11/2005** Prep Date

Client ID: Run ID: **LC_051111A** SeqNo: **421730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9185** Batch ID: **9185** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/17/2005** Prep Date **11/14/2005**
Client ID: Run ID: **ELMO_051117A** SeqNo: **424365**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Method Blank

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
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

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50						
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						
Surr: 2,4,6-Tribromophenol	145.7	0	200	0	72.9	16.6	150	0
Surr: 2-Fluorobiphenyl	70.68	0	100	0	70.7	19.6	134	0
Surr: 2-Fluorophenol	114.8	0	200	0	57.4	9.54	113	0
Surr: 4-Terphenyl-d14	88.34	0	100	0	88.3	22.7	145	0
Surr: Nitrobenzene-d5	67.28	0	100	0	67.3	14.6	134	0
Surr: Phenol-d5	73.12	0	200	0	36.6	10.7	80.3	0

Sample ID **MB-9184** Batch ID: **9184** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/14/2005** Prep Date **11/14/2005**
Client ID: Run ID: **MI-LA254_051114A** SeqNo: **422036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9199** Batch ID: **9199** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/17/2005 11:00:56 A** Prep Date **11/15/2005**
Client ID: Run ID: **ICP_051117A** SeqNo: **423291**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	0.0003728	0.002									J
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	0.0004823	0.005									J
Sodium	ND	1									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Method Blank

Sample ID **5ml rb** Batch ID: **R17297** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/15/2005** Prep Date

Client ID: Run ID: **THOR_051115A** SeqNo: **422319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	0.506	1									J
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

11/19

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	10.46	0	10	0	105	69.9	130	0
Surr: 4-Bromofluorobenzene	10.26	0	10	0	103	71.2	123	0
Surr: Dibromofluoromethane	11.42	0	10	0	114	73.9	134	0
Surr: Toluene-d8	11.03	0	10	0	110	81.9	122	0

13/19

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 21-Nov-05

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0511124-01C DUP** Batch ID: **R17347** Test Code: **E150.1** Units: **pH units** Analysis Date **11/18/2005** Prep Date

Client ID: **Condensate Leak** Run ID: **WC_051117G** SeqNo: **423683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.49	0.01	0	0	0	0	0	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Date: *21-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-ST300-05023** Batch ID: **R17278** Test Code: **E300** Units: **mg/L** Analysis Date **11/11/2005** Prep Date

Client ID: Run ID: **LC_051111A** SeqNo: **421731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4869	0.1	0.5	0	97.4	90	110	0			
Chloride	4.634	0.1	5	0	92.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9198	0.1	1	0	92.0	90	110	0			
Nitrogen, Nitrate (As N)	2.388	0.1	2.5	0	95.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.837	0.5	5	0	96.7	90	110	0			
Sulfate	9.668	0.5	10	0	96.7	90	110	0			

Sample ID **100ng lcs** Batch ID: **R17297** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/15/2005** Prep Date

Client ID: Run ID: **THOR_051115A** SeqNo: **422320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.87	1	20	0	99.4	79.3	136	0			
Toluene	21.12	1	20	0	106	65.5	123	0			
Chlorobenzene	20.12	1	20	0	101	85.6	126	0			
1,1-Dichloroethene	22.63	1	20	0	113	72.7	135	0			
Trichloroethene (TCE)	20.67	1	20	0	103	85.6	119	0			

Sample ID **100ng lcsd** Batch ID: **R17297** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/16/2005** Prep Date

Client ID: Run ID: **THOR_051115A** SeqNo: **422545**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.45	1	20	0	107	81.4	130	19.87	7.62	11	
Toluene	20.43	1	20	0	102	65.5	123	21.12	3.33	12.2	
Chlorobenzene	19.96	1	20	0	99.8	89.6	134	20.12	0.808	12	
1,1-Dichloroethene	22.16	1	20	0	111	75.1	120	22.63	2.07	19.3	
Trichloroethene (TCE)	19.96	1	20	0	99.8	75.8	110	20.67	3.52	15.5	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9185** Batch ID: **9185** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/17/2005** Prep Date **11/14/2005**
Client ID: Run ID: **ELMO_051117A** SeqNo: **424366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.72	10	100	0	75.7	11	123	0			
4-Chloro-3-methylphenol	140.7	20	200	0	70.4	15.4	119	0			
2-Chlorophenol	141	10	200	0	70.5	12.2	122	0			
1,4-Dichlorobenzene	68.12	10	100	0	68.1	16.9	100	0			
2,4-Dinitrotoluene	71.96	10	100	0	72.0	13	138	0			
N-Nitrosodi-n-propylamine	68.28	10	100	0	68.3	9.93	122	0			
4-Nitrophenol	87.36	50	200	0	43.7	-20.5	87.4	0			
Pentachlorophenol	129.2	50	200	0	64.6	-0.355	114	0			
Phenol	76.18	10	200	0	38.1	7.53	73.1	0			
Pyrene	80.9	15	100	0	80.9	12.6	140	0			
1,2,4-Trichlorobenzene	66.78	10	100	0	66.8	17.4	98.7	0			

Sample ID **LCSD-9185** Batch ID: **9185** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/17/2005** Prep Date **11/14/2005**
Client ID: Run ID: **ELMO_051117A** SeqNo: **424368**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.94	10	100	0	75.9	11	123	75.72	0.290	30.5	
4-Chloro-3-methylphenol	145.9	20	200	0	72.9	15.4	119	140.7	3.60	28.6	
2-Chlorophenol	128.1	10	200	0	64.0	12.2	122	141	9.59	107	
1,4-Dichlorobenzene	59.16	10	100	0	59.2	16.9	100	68.12	14.1	62.1	
2,4-Dinitrotoluene	71.68	10	100	0	71.7	13	138	71.96	0.390	14.7	
N-Nitrosodi-n-propylamine	66.94	10	100	0	66.9	9.93	122	68.28	1.98	30.3	
4-Nitrophenol	56.1	50	200	0	28.1	12.5	87.4	87.36	43.6	36.3	R
Pentachlorophenol	74.34	50	200	0	37.2	3.55	114	129.2	53.9	49	R
Phenol	75.02	10	200	0	37.5	7.53	73.1	76.18	1.53	52.4	
Pyrene	82.6	15	100	0	82.6	12.6	140	80.9	2.08	16.3	
1,2,4-Trichlorobenzene	62.1	10	100	0	62.1	17.4	98.7	66.78	7.26	36.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-9184**	Batch ID: **9184**	Test Code: **SW7470**	Units: **mg/L**	Analysis Date **11/14/2005**	Prep Date **11/14/2005**
Client ID:		Run ID: **MI-LA254_051114A**		SeqNo: **422037**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004712	0.0002	0.005	0	94.2	80	120	0			

Sample ID **LCSD-9184**	Batch ID: **9184**	Test Code: **SW7470**	Units: **mg/L**	Analysis Date **11/14/2005**	Prep Date **11/14/2005**
Client ID:		Run ID: **MI-LA254_051114A**		SeqNo: **422051**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004592	0.0002	0.005	0	91.8	80	120	0.004712	2.59	0	

Sample ID **LCS-9199**	Batch ID: **9199**	Test Code: **SW6010A**	Units: **mg/L**	Analysis Date **11/17/2005 11:03:34 A**	Prep Date **11/15/2005**
Client ID:		Run ID: **ICP_051117A**		SeqNo: **423292**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.478	0.02	0.5	0	95.6	80	120	0			
Barium	0.467	0.02	0.5	0	93.4	80	120	0			
Cadmium	0.4706	0.002	0.5	0.0003728	94.1	80	120	0			
Calcium	52.36	1	50	0	105	80	120	0			
Chromium	0.4743	0.006	0.5	0	94.9	80	120	0			
Lead	0.4736	0.005	0.5	0	94.7	80	120	0			
Magnesium	52.77	1	50	0	106	80	120	0			
Potassium	55.53	1	50	0	111	80	120	0			
Selenium	0.4616	0.05	0.5	0	92.3	80	120	0			
Silver	0.4803	0.005	0.5	0.0004823	96.0	80	120	0			
Sodium	56.54	1	50	0	113	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511124
Project: Water at Condensate Return Tank

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9199** Batch ID: **9199** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/17/2005 11:06:32 A** Prep Date **11/15/2005**

Client ID: Run ID: **ICP_051117A** SeqNo: **423293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4825	0.02	0.5	0	96.5	80	120	0.478	0.949	20	
Barium	0.4685	0.02	0.5	0	93.7	80	120	0.467	0.312	20	
Cadmium	0.471	0.002	0.5	0.0003728	94.1	80	120	0.4706	0.0773	20	
Calcium	51.81	1	50	0	104	80	120	52.36	1.06	20	
Chromium	0.4733	0.006	0.5	0	94.7	80	120	0.4743	0.210	20	
Lead	0.4725	0.005	0.5	0	94.5	80	120	0.4736	0.235	20	
Magnesium	52.4	1	50	0	105	80	120	52.77	0.688	20	
Potassium	55.08	1	50	0	110	80	120	55.53	0.809	20	
Selenium	0.4647	0.05	0.5	0	92.9	80	120	0.4616	0.672	20	
Silver	0.4843	0.005	0.5	0.0004823	96.8	80	120	0.4803	0.834	20	
Sodium	56.4	1	50	0	113	80	120	56.54	0.239	20	

18 / 19

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 11/11/2005

Work Order Number 0511124 | Received by AT

Checklist completed by _____ (Signature) Date 11/11/05

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7
Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Water at Condensate Return Tank East of Tank 576
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 4/c

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
11-11-05	1030	H_2O	Condensate Leak					0511124-1								X			X	X	X				

Date: 11-11-05 Time: 1440 Relinquished By: (Signature) Steve Morris
Received By: (Signature) 11/11/05 1440
Date: Time: Relinquished By: (Signature)
Received By: (Signature)

Remarks: RUSH
Gen Chem = Cations, Anions, pH, and Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 17, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Water 11-3-2005 Order No.: 0511031

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/3/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *17-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0511031
Collection Date: 11/3/2005 9:30:00 AM
Project: Stormwater Separator Water 11-3-2005
Lab ID: 0511031-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	130	5.0		mg/L	50	11/5/2005
Chloride	190	0.50		mg/L	5	11/4/2005
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/4/2005
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/4/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/4/2005
Sulfate	1500	25		mg/L	50	11/5/2005
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	160	20		µg/L	20	11/5/2005
Toluene	210	20		µg/L	20	11/5/2005
Ethylbenzene	ND	20		µg/L	20	11/5/2005
Methyl tert-butyl ether (MTBE)	ND	20		µg/L	20	11/5/2005
1,2,4-Trimethylbenzene	150	20		µg/L	20	11/5/2005
1,3,5-Trimethylbenzene	57	20		µg/L	20	11/5/2005
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	11/5/2005
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	11/5/2005
Naphthalene	68	40		µg/L	20	11/5/2005
1-Methylnaphthalene	ND	80		µg/L	20	11/5/2005
2-Methylnaphthalene	100	80		µg/L	20	11/5/2005
Acetone	ND	200		µg/L	20	11/5/2005
Bromobenzene	ND	20		µg/L	20	11/5/2005
Bromochloromethane	ND	20		µg/L	20	11/5/2005
Bromodichloromethane	ND	20		µg/L	20	11/5/2005
Bromoform	ND	20		µg/L	20	11/5/2005
Bromomethane	ND	40		µg/L	20	11/5/2005
2-Butanone	ND	200		µg/L	20	11/5/2005
Carbon disulfide	ND	200		µg/L	20	11/5/2005
Carbon Tetrachloride	ND	40		µg/L	20	11/5/2005
Chlorobenzene	ND	20		µg/L	20	11/5/2005
Chloroethane	ND	40		µg/L	20	11/5/2005
Chloroform	ND	20		µg/L	20	11/5/2005
Chloromethane	ND	20		µg/L	20	11/5/2005
2-Chlorotoluene	ND	20		µg/L	20	11/5/2005
4-Chlorotoluene	ND	20		µg/L	20	11/5/2005
cis-1,2-DCE	ND	20		µg/L	20	11/5/2005
cis-1,3-Dichloropropene	ND	20		µg/L	20	11/5/2005
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	11/5/2005
Dibromochloromethane	ND	20		µg/L	20	11/5/2005
Dibromomethane	ND	40		µg/L	20	11/5/2005
1,2-Dichlorobenzene	ND	20		µg/L	20	11/5/2005
1,3-Dichlorobenzene	ND	20		µg/L	20	11/5/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *17-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0511031
Collection Date: 11/3/2005 9:30:00 AM
Project: Stormwater Separator Water 11-3-2005
Lab ID: 0511031-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	20		µg/L	20	11/5/2005
Dichlorodifluoromethane	ND	20		µg/L	20	11/5/2005
1,1-Dichloroethane	ND	20		µg/L	20	11/5/2005
1,1-Dichloroethene	ND	20		µg/L	20	11/5/2005
1,2-Dichloropropane	ND	20		µg/L	20	11/5/2005
1,3-Dichloropropane	ND	20		µg/L	20	11/5/2005
2,2-Dichloropropane	ND	20		µg/L	20	11/5/2005
1,1-Dichloropropene	ND	20		µg/L	20	11/5/2005
Hexachlorobutadiene	ND	20		µg/L	20	11/5/2005
2-Hexanone	ND	200		µg/L	20	11/5/2005
Isopropylbenzene	ND	20		µg/L	20	11/5/2005
4-Isopropyltoluene	ND	20		µg/L	20	11/5/2005
4-Methyl-2-pentanone	ND	200		µg/L	20	11/5/2005
Methylene Chloride	ND	60		µg/L	20	11/5/2005
n-Butylbenzene	ND	20		µg/L	20	11/5/2005
n-Propylbenzene	ND	20		µg/L	20	11/5/2005
sec-Butylbenzene	ND	20		µg/L	20	11/5/2005
Styrene	ND	20		µg/L	20	11/5/2005
tert-Butylbenzene	ND	20		µg/L	20	11/5/2005
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	11/5/2005
1,1,2,2-Tetrachloroethane	ND	20		µg/L	20	11/5/2005
Tetrachloroethene (PCE)	ND	20		µg/L	20	11/5/2005
trans-1,2-DCE	ND	20		µg/L	20	11/5/2005
trans-1,3-Dichloropropene	ND	20		µg/L	20	11/5/2005
1,2,3-Trichlorobenzene	ND	20		µg/L	20	11/5/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	20	11/5/2005
1,1,1-Trichloroethane	ND	20		µg/L	20	11/5/2005
1,1,2-Trichloroethane	ND	20		µg/L	20	11/5/2005
Trichloroethene (TCE)	ND	20		µg/L	20	11/5/2005
Trichlorofluoromethane	ND	20		µg/L	20	11/5/2005
1,2,3-Trichloropropane	ND	40		µg/L	20	11/5/2005
Vinyl chloride	ND	20		µg/L	20	11/5/2005
Xylenes, Total	790	20		µg/L	20	11/5/2005
Surr: 1,2-Dichloroethane-d4	117	69.9-130		%REC	20	11/5/2005
Surr: 4-Bromofluorobenzene	100	71.2-123		%REC	20	11/5/2005
Surr: Dibromofluoromethane	115	73.9-134		%REC	20	11/5/2005
Surr: Toluene-d8	106	81.9-122		%REC	20	11/5/2005
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	160	13		µg/L	1	11/10/2005 2:52:34 PM
1-Methylnaphthalene	ND	13		µg/L	1	11/10/2005 2:52:34 PM
2-Methylnaphthalene	30	13		µg/L	1	11/10/2005 2:52:34 PM
Acenaphthylene	ND	13		µg/L	1	11/10/2005 2:52:34 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *17-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0511031
Collection Date: 11/3/2005 9:30:00 AM
Project: Stormwater Separator Water 11-3-2005
Lab ID: 0511031-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Acenaphthene	ND	13		µg/L	1	11/10/2005 2:52:34 PM
Fluorene	ND	4.0		µg/L	1	11/10/2005 2:52:34 PM
Phenanthrene	7.5	3.0		µg/L	1	11/10/2005 2:52:34 PM
Anthracene	ND	3.0		µg/L	1	11/10/2005 2:52:34 PM
Fluoranthene	ND	1.5		µg/L	1	11/10/2005 2:52:34 PM
Pyrene	ND	1.5		µg/L	1	11/10/2005 2:52:34 PM
Benz(a)anthracene	ND	0.10		µg/L	1	11/10/2005 2:52:34 PM
Chrysene	ND	1.0		µg/L	1	11/10/2005 2:52:34 PM
Benzo(b)fluoranthene	ND	0.25		µg/L	1	11/10/2005 2:52:34 PM
Benzo(k)fluoranthene	ND	0.10		µg/L	1	11/10/2005 2:52:34 PM
Benzo(a)pyrene	0.10	0.10		µg/L	1	11/10/2005 2:52:34 PM
Dibenz(a,h)anthracene	ND	0.20		µg/L	1	11/10/2005 2:52:34 PM
Benzo(g,h,i)perylene	0.45	0.15		µg/L	1	11/10/2005 2:52:34 PM
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	1	11/10/2005 2:52:34 PM
Surr: Benzo(e)pyrene	64.8	54-102		%REC	1	11/10/2005 2:52:34 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **TES**
Specific Conductance	5300	0.010		µmhos/cm	1	11/15/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	11/10/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	11/7/2005 1:21:43 PM
Barium	0.18	0.020		mg/L	1	11/7/2005 1:21:43 PM
Cadmium	ND	0.0020		mg/L	1	11/7/2005 1:21:43 PM
Calcium	35	1.0		mg/L	1	11/7/2005 1:21:43 PM
Chromium	0.020	0.0060		mg/L	1	11/7/2005 1:21:43 PM
Lead	ND	0.0050		mg/L	1	11/7/2005 1:21:43 PM
Magnesium	14	1.0		mg/L	1	11/7/2005 1:21:43 PM
Potassium	34	1.0		mg/L	1	11/7/2005 1:21:43 PM
Selenium	ND	0.050		mg/L	1	11/7/2005 1:21:43 PM
Silver	ND	0.0050		mg/L	1	11/7/2005 1:21:43 PM
Sodium	1100	100		mg/L	100	11/7/2005 2:10:09 PM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	7.43	0.010		pH units	1	11/7/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *17-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17184** Test Code: **E300** Units: **mg/L** Analysis Date **11/3/2005** Prep Date
Client ID: Run ID: **LC_051103A** SeqNo: **418338**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID **MB** Batch ID: **R17201** Test Code: **E300** Units: **mg/L** Analysis Date **11/4/2005** Prep Date
Client ID: Run ID: **LC_051104A** SeqNo: **419210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9137** Batch ID: **9137** Test Code: **SW8310** Units: **µg/L** Analysis Date **11/10/2005 11:40:34 A** Prep Date **11/7/2005**
Client ID: Run ID: **HUGO_051110A** SeqNo: **421042**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.89	0	10	0	78.9	54	102	0			

Sample ID **MB-9164** Batch ID: **9164** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/10/2005** Prep Date **11/10/2005**
Client ID: Run ID: **MI-LA254_051110A** SeqNo: **421003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9127** Batch ID: **9127** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/7/2005 1:01:53 PM** Prep Date **11/4/2005**
Client ID: Run ID: **ICP_051107A** SeqNo: **419608**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	0.0007002	0.006									J
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	0.3219	1									J
Selenium	ND	0.05									
Silver	0.001081	0.005									J
Sodium	0.2175	1									J

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *17-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb** Batch ID: **R17194** Test Code: **SW8260B** Units: **µg/L** Analysis Date **11/4/2005** Prep Date

Client ID: Run ID: **VAL_051104A** SeqNo: **418944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.732	0	10	0	97.3	69.9	130	0
Surr: 4-Bromofluorobenzene	10.91	0	10	0	109	71.2	123	0
Surr: Dibromofluoromethane	9.646	0	10	0	96.5	73.9	134	0
Surr: Toluene-d8	10.4	0	10	0	104	81.9	122	0

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Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *17-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0511031-01C DUP** Batch ID: **R17205** Test Code: **E150.1** Units: **pH units** Analysis Date **11/7/2005** Prep Date

Client ID: **SW Sep Water Ou** Run ID: **WC_051107C** SeqNo: **419344**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.44	0.01	0	0	0	0	0	0			

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Qualifiers:

ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *17-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-ST300-05022** Batch ID: **R17184** Test Code: **E300** Units: **mg/L** Analysis Date: **11/3/2005** Prep Date:

Client ID: Run ID: **LC_051103A** SeqNo: **418339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.467	0.1	0.5	0	93.4	90	110	0			
Chloride	4.597	0.1	5	0	91.9	90	110	0			
Nitrogen, Nitrite (As N)	0.9174	0.1	1	0	91.7	90	110	0			
Nitrogen, Nitrate (As N)	2.357	0.1	2.5	0	94.3	90	110	0			
Phosphorus, Orthophosphate (As P)	4.851	0.5	5	0	97.0	90	110	0			
Sulfate	9.532	0.5	10	0	95.3	90	110	0			

Sample ID: **LCS** Batch ID: **R17201** Test Code: **E300** Units: **mg/L** Analysis Date: **11/4/2005** Prep Date:

Client ID: Run ID: **LC_051104A** SeqNo: **419212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.974	0.1	1	0	97.4	90	110	0			
Nitrogen, Nitrate (As N)	2.432	0.1	2.5	0	97.3	90	110	0			

Sample ID: **LCS-ST300-05022** Batch ID: **R17201** Test Code: **E300** Units: **mg/L** Analysis Date: **11/5/2005** Prep Date:

Client ID: Run ID: **LC_051104A** SeqNo: **419821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5129	0.1	0.5	0	103	90	110	0			
Chloride	4.798	0.1	5	0	96.0	90	110	0			
Nitrogen, Nitrite (As N)	0.9737	0.1	1	0	97.4	90	110	0			
Nitrogen, Nitrate (As N)	2.432	0.1	2.5	0	97.3	90	110	0			
Phosphorus, Orthophosphate (As P)	4.967	0.5	5	0	99.3	90	110	0			
Sulfate	9.824	0.5	10	0	98.2	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **100ng lcs** Batch ID: **R17194** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **11/4/2005** Prep Date:
Client ID: Run ID: **VAL_051104A** SeqNo: **418945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.74	1	20	0	98.7	79.3	136	0			
Toluene	19.35	1	20	0	96.8	65.5	123	0			
Chlorobenzene	19.46	1	20	0	97.3	85.6	126	0			
1,1-Dichloroethene	20.21	1	20	0	101	72.7	135	0			
Trichloroethene (TCE)	18.61	1	20	0	93.1	85.6	119	0			

Sample ID: **100ng lcs** Batch ID: **R17194** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **11/5/2005** Prep Date:
Client ID: Run ID: **VAL_051104A** SeqNo: **419062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.02	1	20	0	100	79.3	136	0			
Toluene	19.75	1	20	0	98.7	65.5	123	0			
Chlorobenzene	19.72	1	20	0	98.6	85.6	126	0			
1,1-Dichloroethene	18.57	1	20	0	92.8	72.7	135	0			
Trichloroethene (TCE)	19.49	1	20	0	97.5	85.6	119	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-9137** Batch ID: **9137** Test Code: **SW8310** Units: **µg/L** Analysis Date: **11/10/2005 12:28:34 P** Prep Date: **11/7/2005**
Client ID: Run ID: **HUGO_051110A** SeqNo: **421043**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	21.34	2.5	40	0	53.4	34.8	97.4	0			
1-Methylnaphthalene	22.46	2.5	40.1	0	56.0	34.7	100	0			
2-Methylnaphthalene	22.28	2.5	40	0	55.7	35	98.1	0			
Acenaphthylene	24.68	2.5	40.1	0	61.5	48.3	95.1	0			
Acenaphthene	24.19	2.5	40	0	60.5	45	95	0			
Fluorene	2.59	0.8	4.01	0	64.6	46.8	93.4	0			
Phenanthrene	1.41	0.6	2.01	0	70.1	48.7	104	0			
Anthracene	1.42	0.6	2.01	0	70.6	47.5	102	0			
Fluoranthene	2.83	0.3	4.01	0	70.6	46.3	108	0			
Pyrene	2.88	0.3	4.01	0	71.8	43.8	109	0			
Benz(a)anthracene	0.31	0.02	0.401	0	77.3	40.3	115	0			
Chrysene	1.53	0.2	2.01	0	76.1	42.6	107	0			
Benzo(b)fluoranthene	0.39	0.05	0.501	0	77.8	48.6	107	0			
Benzo(k)fluoranthene	0.18	0.02	0.25	0	72.0	23.3	136	0			
Benzo(a)pyrene	0.18	0.02	0.251	0	71.7	33.4	117	0			
Dibenz(a,h)anthracene	0.37	0.04	0.501	0	73.9	27.3	139	0			
Benzo(g,h,i)perylene	0.34	0.03	0.5	0	68.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.737	0.08	1.002	0	73.6	39.9	125	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9137** Batch ID: **9137** Test Code: **SW8310** Units: **µg/L** Analysis Date: **11/10/2005 1:16:34 PM** Prep Date: **11/7/2005**
Client ID: Run ID: **HUGO_051110A** SeqNo: **421044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	28.18	2.5	40	0	70.5	34.8	97.4	21.34	27.6	32.1	
1-Methylnaphthalene	28.39	2.5	40.1	0	70.8	34.7	100	22.46	23.3	32.7	
2-Methylnaphthalene	28.32	2.5	40	0	70.8	35	98.1	22.28	23.9	34	
Acenaphthylene	29.96	2.5	40.1	0	74.7	48.3	95.1	24.68	19.3	38.8	
Acenaphthene	29.21	2.5	40	0	73.0	45	95	24.19	18.8	38.6	
Fluorene	3.02	0.8	4.01	0	75.3	46.8	93.4	2.59	15.3	39.3	
Phenanthrene	1.58	0.6	2.01	0	78.6	48.7	104	1.41	11.4	25	
Anthracene	1.54	0.6	2.01	0	76.6	47.5	102	1.42	8.11	23.9	
Fluoranthene	3.15	0.3	4.01	0	78.6	46.3	108	2.83	10.7	15.7	
Pyrene	3.14	0.3	4.01	0	78.3	43.8	109	2.88	8.64	15.3	
Benz(a)anthracene	0.32	0.02	0.401	0	79.8	40.3	115	0.31	3.17	119	
Chrysene	1.6	0.2	2.01	0	79.6	42.6	107	1.53	4.47	16.6	
Benzo(b)fluoranthene	0.4	0.05	0.501	0	79.8	48.6	107	0.39	2.53	21.7	
Benzo(k)fluoranthene	0.2	0.02	0.25	0	80.0	23.3	136	0.18	10.5	19.4	
Benzo(a)pyrene	0.2	0.02	0.251	0	79.7	33.4	117	0.18	10.5	16.7	
Dibenz(a,h)anthracene	0.41	0.04	0.501	0	81.8	27.3	139	0.37	10.3	17.3	
Benzo(g,h,i)perylene	0.32	0.03	0.5	0	64.0	38.2	117	0.34	6.06	118	
Indeno(1,2,3-cd)pyrene	0.819	0.08	1.002	0	81.7	39.9	125	0.737	10.5	17.7	

Sample ID: **LCS-9164** Batch ID: **9164** Test Code: **SW7470** Units: **mg/L** Analysis Date: **11/10/2005** Prep Date: **11/10/2005**
Client ID: Run ID: **MI-LA254_051110A** SeqNo: **421004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005086	0.0002	0.005	0	102	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9164** Batch ID: **9164** Test Code: **SW7470** Units: **mg/L** Analysis Date: **11/10/2005** Prep Date: **11/10/2005**
Client ID: Run ID: **MI-LA254_051110A** SeqNo: **421011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004908	0.0002	0.005	0	98.2	80	120	0.005086	3.56	0	

Sample ID: **LCS-9127** Batch ID: **9127** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **11/7/2005 1:04:59 PM** Prep Date: **11/4/2005**
Client ID: Run ID: **ICP_051107A** SeqNo: **419609**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4856	0.02	0.5	0	97.1	80	120	0			
Barium	0.4762	0.02	0.5	0	95.2	80	120	0			
Cadmium	0.4748	0.002	0.5	0	95.0	80	120	0			
Calcium	49.95	1	50	0	99.9	80	120	0			
Chromium	0.4859	0.006	0.5	0.0007002	97.0	80	120	0			
Lead	0.4725	0.005	0.5	0	94.5	80	120	0			
Magnesium	47.92	1	50	0	95.8	80	120	0			
Potassium	49.72	1	50	0.3219	98.8	80	120	0			
Selenium	0.48	0.05	0.5	0	96.0	80	120	0			
Silver	0.4691	0.005	0.5	0.001081	93.6	80	120	0			
Sodium	50.91	1	50	0.2175	101	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511031
Project: Stormwater Separator Water 11-3-2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-9127** Batch ID: **9127** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **11/7/2005 1:07:58 PM** Prep Date: **11/4/2005**
Client ID: Run ID: **ICP_051107A** SeqNo: **419610**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4933	0.02	0.5	0	98.7	80	120	0.4856	1.57	20	
Barium	0.4775	0.02	0.5	0	95.5	80	120	0.4762	0.271	20	
Cadmium	0.4714	0.002	0.5	0	94.3	80	120	0.4748	0.713	20	
Calcium	49.84	1	50	0	99.7	80	120	49.95	0.213	20	
Chromium	0.4848	0.006	0.5	0.0007002	96.8	80	120	0.4859	0.230	20	
Lead	0.4666	0.005	0.5	0	93.3	80	120	0.4725	1.26	20	
Magnesium	47.85	1	50	0	95.7	80	120	47.92	0.144	20	
Potassium	49.52	1	50	0.3219	98.4	80	120	49.72	0.405	20	
Selenium	0.4617	0.05	0.5	0	92.3	80	120	0.48	3.88	20	
Silver	0.4688	0.005	0.5	0.001081	93.5	80	120	0.4691	0.0594	20	
Sodium	51.06	1	50	0.2175	102	80	120	50.91	0.297	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN Date and Time Received: 11/3/2005

Work Order Number 0511031 Received by AT

Checklist completed by _____ 11/3/05
Signature Date

Matrix Carrier name Client drop-off

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? **17°** *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

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: Giant Refining Company - Ciniza
Address: Route 3, Box 7, Gallup, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: Stormwater Separator Water 11-3-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 17

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.	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)	RCRA 8 Metals Total	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem	8310 PAH			Air Bubbles or Headspace (Y or N)
11-3-05	0930	H_2O	SW Sep. Water Out				0511031-1								X			X		X	X			

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
11-3-05	1320	Steve Morris	11/3/05 1320
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH
Gen Chem = Cations, Anions, pH, and conductivity.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 11, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 10/31/2005 Order No.: 0511030

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 11/3/2005 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

Hall Environmental Analysis Laboratory

Date: *11-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 TO EP-1
Lab Order: 0511030
Collection Date: 11/3/2005 8:15:00 AM
Project: AL-2 to EP-1 Week of 10/31/2005
Lab ID: 0511030-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	10	11/9/2005 10:34:58 PM
Benzene	17	5.0		µg/L	10	11/9/2005 10:34:58 PM
Toluene	12	5.0		µg/L	10	11/9/2005 10:34:58 PM
Ethylbenzene	6.2	5.0		µg/L	10	11/9/2005 10:34:58 PM
Xylenes, Total	21	5.0		µg/L	10	11/9/2005 10:34:58 PM
Surr: 4-Bromofluorobenzene	110	82.2-119		%REC	10	11/9/2005 10:34:58 PM
EPA METHOD 8310: PAHS						Analyst: **JMP**
Naphthalene	560	130		µg/L	10	11/11/2005 3:39:45 AM
1-Methylnaphthalene	ND	130		µg/L	10	11/11/2005 3:39:45 AM
2-Methylnaphthalene	ND	130		µg/L	10	11/11/2005 3:39:45 AM
Acenaphthylene	ND	130		µg/L	10	11/11/2005 3:39:45 AM
Acenaphthene	ND	130		µg/L	10	11/11/2005 3:39:45 AM
Fluorene	110	40		µg/L	10	11/11/2005 3:39:45 AM
Phenanthrene	190	30		µg/L	10	11/11/2005 3:39:45 AM
Anthracene	ND	30		µg/L	10	11/11/2005 3:39:45 AM
Fluoranthene	ND	15		µg/L	10	11/11/2005 3:39:45 AM
Pyrene	32	15		µg/L	10	11/11/2005 3:39:45 AM
Benz(a)anthracene	ND	1.0		µg/L	10	11/11/2005 3:39:45 AM
Chrysene	ND	10		µg/L	10	11/11/2005 3:39:45 AM
Benzo(b)fluoranthene	11	2.5		µg/L	10	11/11/2005 3:39:45 AM
Benzo(k)fluoranthene	ND	1.0		µg/L	10	11/11/2005 3:39:45 AM
Benzo(a)pyrene	4.0	1.0		µg/L	10	11/11/2005 3:39:45 AM
Dibenz(a,h)anthracene	ND	2.0		µg/L	10	11/11/2005 3:39:45 AM
Benzo(g,h,i)perylene	ND	1.5		µg/L	10	11/11/2005 3:39:45 AM
Indeno(1,2,3-cd)pyrene	ND	4.0		µg/L	10	11/11/2005 3:39:45 AM
Surr: Benzo(e)pyrene	57.0	54-102		%REC	10	11/11/2005 3:39:45 AM
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	0.0015	0.00020		mg/L	1	11/10/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	11/7/2005 1:17:44 PM
Arsenic	ND	0.020		mg/L	1	11/7/2005 1:17:44 PM
Beryllium	ND	0.0030		mg/L	1	11/7/2005 1:17:44 PM
Cadmium	ND	0.0020		mg/L	1	11/7/2005 1:17:44 PM
Chromium	0.0085	0.0060		mg/L	1	11/7/2005 1:17:44 PM
Copper	0.023	0.0060		mg/L	1	11/7/2005 1:17:44 PM
Lead	ND	0.0050		mg/L	1	11/7/2005 1:17:44 PM
Nickel	0.015	0.010		mg/L	1	11/7/2005 1:17:44 PM
Selenium	ND	0.050		mg/L	1	11/7/2005 1:17:44 PM
Silver	ND	0.0050		mg/L	1	11/7/2005 1:17:44 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *11-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005
Lab ID: 0511030-01

Client Sample ID: AL-2 TO EP-1
Collection Date: 11/3/2005 8:15:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Thallium	ND	0.010		mg/L	1	11/7/2005 1:17:44 PM
Zinc	2.3	0.25		mg/L	5	11/7/2005 2:13:17 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Date: *11-Nov-05*

Hall Environmental Analysis Laboratory

QC SUMMARY REPORT

Method Blank

CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

Sample ID **Reagent Blank 5m** Batch ID: **R17244** Test Code: **SW8021** Units: **µg/L** Analysis Date **11/9/2005 9:13:51 AM** Prep Date

Client ID: Run ID: **PIDFID_051109A** SeqNo: **420725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.77	0	20	0	104	82.2	119	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9137** Batch ID: **9137** Test Code: **SW8310** Units: **µg/L** Analysis Date **11/10/2005 11:40:34 A** Prep Date **11/7/2005**
Client ID: Run ID: **HUGO_051110A** SeqNo: **421042**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	ND	0.04									
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	7.89	0	10	0	78.9	54	102	0			

Sample ID **MB-9164** Batch ID: **9164** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/10/2005** Prep Date **11/10/2005**
Client ID: Run ID: **MI-LA254_051110A** SeqNo: **421003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

QC SUMMARY REPORT

Method Blank

Sample ID **MB-9127** Batch ID: **9127** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/7/2005 1:01:53 PM** Prep Date **11/4/2005**
Client ID: Run ID: **ICP_051107A** SeqNo: **419608**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.008607	0.01									J
Arsenic	ND	0.02									
Beryllium	0.0001233	0.003									J
Cadmium	ND	0.002									
Chromium	0.0007002	0.006									J
Copper	0.000676	0.006									J
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	0.001081	0.005									J
Thallium	ND	0.05									
Zinc	0.001523	0.05									J

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Date: *11-Nov-05*

Hall Environmental Analysis Laboratory

CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **BTEX lcs 100ng** Batch ID: **R17244** Test Code: **SW8021** Units: **µg/L** Analysis Date **11/10/2005 2:09:59 AM** Prep Date
Client ID: Run ID: **PIDFID_051109A** SeqNo: **420726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17.5	2.5	20	0	87.5	64.5	133	0			
Benzene	19.91	0.5	20	0	99.5	88.5	114	0			
Toluene	18.31	0.5	20	0	91.5	87.2	114	0			
Ethylbenzene	18.63	0.5	20	0	93.2	88.6	113	0			
Xylenes, Total	37.73	0.5	40	0	94.3	83.3	114	0			

6/11

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9137** Batch ID: **9137** Test Code: **SW8310** Units: **µg/L** Analysis Date **11/10/2005 12:28:34 P** Prep Date **11/7/2005**
Client ID: Run ID: **HUGO_051110A** SeqNo: **421043**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	21.34	2.5	40	0	53.4	34.8	97.4	0			
1-Methylnaphthalene	22.46	2.5	40.1	0	56.0	34.7	100	0			
2-Methylnaphthalene	22.28	2.5	40	0	55.7	35	98.1	0			
Acenaphthylene	24.68	2.5	40.1	0	61.5	48.3	95.1	0			
Acenaphthene	24.19	2.5	40	0	60.5	45	95	0			
Fluorene	2.59	0.8	4.01	0	64.6	46.8	93.4	0			
Phenanthrene	1.41	0.6	2.01	0	70.1	48.7	104	0			
Anthracene	1.42	0.6	2.01	0	70.6	47.5	102	0			
Fluoranthene	2.83	0.3	4.01	0	70.6	46.3	108	0			
Pyrene	2.88	0.3	4.01	0	71.8	43.8	109	0			
Benz(a)anthracene	0.31	0.02	0.401	0	77.3	40.3	115	0			
Chrysene	1.53	0.2	2.01	0	76.1	42.6	107	0			
Benzo(b)fluoranthene	0.39	0.05	0.501	0	77.8	48.6	107	0			
Benzo(k)fluoranthene	0.18	0.02	0.25	0	72.0	23.3	136	0			
Benzo(a)pyrene	0.18	0.02	0.251	0	71.7	33.4	117	0			
Dibenz(a,h)anthracene	0.37	0.04	0.501	0	73.9	27.3	139	0			
Benzo(g,h,i)perylene	0.34	0.03	0.5	0	68.0	38.2	117	0			
Indeno(1,2,3-cd)pyrene	0.737	0.08	1.002	0	73.6	39.9	125	0			

7/11

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9137** Batch ID: **9137** Test Code: **SW8310** Units: **µg/L** Analysis Date **11/10/2005 1:16:34 PM** Prep Date **11/7/2005**
Client ID: Run ID: **HUGO_051110A** SeqNo: **421044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	28.18	2.5	40	0	70.5	34.8	97.4	21.34	27.6	32.1	
1-Methylnaphthalene	28.39	2.5	40.1	0	70.8	34.7	100	22.46	23.3	32.7	
2-Methylnaphthalene	28.32	2.5	40	0	70.8	35	98.1	22.28	23.9	34	
Acenaphthylene	29.96	2.5	40.1	0	74.7	48.3	95.1	24.68	19.3	38.8	
Acenaphthene	29.21	2.5	40	0	73.0	45	95	24.19	18.8	38.6	
Fluorene	3.02	0.8	4.01	0	75.3	46.8	93.4	2.59	15.3	39.3	
Phenanthrene	1.58	0.6	2.01	0	78.6	48.7	104	1.41	11.4	25	
Anthracene	1.54	0.6	2.01	0	76.6	47.5	102	1.42	8.11	23.9	
Fluoranthene	3.15	0.3	4.01	0	78.6	46.3	108	2.83	10.7	15.7	
Pyrene	3.14	0.3	4.01	0	78.3	43.8	109	2.88	8.64	15.3	
Benz(a)anthracene	0.32	0.02	0.401	0	79.8	40.3	115	0.31	3.17	119	
Chrysene	1.6	0.2	2.01	0	79.6	42.6	107	1.53	4.47	16.6	
Benzo(b)fluoranthene	0.4	0.05	0.501	0	79.8	48.6	107	0.39	2.53	21.7	
Benzo(k)fluoranthene	0.2	0.02	0.25	0	80.0	23.3	136	0.18	10.5	19.4	
Benzo(a)pyrene	0.2	0.02	0.251	0	79.7	33.4	117	0.18	10.5	16.7	
Dibenz(a,h)anthracene	0.41	0.04	0.501	0	81.8	27.3	139	0.37	10.3	17.3	
Benzo(g,h,i)perylene	0.32	0.03	0.5	0	64.0	38.2	117	0.34	6.06	118	
Indeno(1,2,3-cd)pyrene	0.819	0.08	1.002	0	81.7	39.9	125	0.737	10.5	17.7	

Sample ID **LCS-9164** Batch ID: **9164** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/10/2005** Prep Date **11/10/2005**
Client ID: Run ID: **MI-LA254_051110A** SeqNo: **421004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005086	0.0002	0.005	0	102	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9164** Batch ID: **9164** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/10/2005** Prep Date **11/10/2005**
Client ID: Run ID: **MI-LA254_051110A** SeqNo: **421011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004908	0.0002	0.005	0	98.2	80	120	0.005086	3.56	0	

Sample ID **LCS-9127** Batch ID: **9127** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/7/2005 1:04:59 PM** Prep Date **11/4/2005**
Client ID: Run ID: **ICP_051107A** SeqNo: **419609**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.501	0.01	0.5	0.008607	98.5	80	120	0			
Arsenic	0.4856	0.02	0.5	0	97.1	80	120	0			
Beryllium	0.5025	0.003	0.5	0.0001233	100	80	120	0			
Cadmium	0.4748	0.002	0.5	0	95.0	80	120	0			
Chromium	0.4859	0.006	0.5	0.0007002	97.0	80	120	0			
Copper	0.4771	0.006	0.5	0.000676	95.3	80	120	0			
Lead	0.4725	0.005	0.5	0	94.5	80	120	0			
Nickel	0.4632	0.01	0.5	0	92.6	80	120	0			
Selenium	0.48	0.05	0.5	0	96.0	80	120	0			
Silver	0.4691	0.005	0.5	0.001081	93.6	80	120	0			
Thallium	0.4869	0.05	0.5	0	97.4	80	120	0			
Zinc	0.4892	0.05	0.5	0.001523	97.5	80	120	0			

9/11

Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0511030
Project: AL-2 to EP-1 Week of 10/31/2005

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID **LCSD-9127** Batch ID: **9127** Test Code: **SW6010A** Units: **mg/L** Analysis Date **11/7/2005 1:07:58 PM** Prep Date **11/4/2005**
Client ID: Run ID: **ICP_051107A** SeqNo: **419610**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4959	0.01	0.5	0.008607	97.5	80	120	0.501	1.02	20	
Arsenic	0.4933	0.02	0.5	0	98.7	80	120	0.4856	1.57	20	
Beryllium	0.5025	0.003	0.5	0.0001233	100	80	120	0.5025	0.00114	20	
Cadmium	0.4714	0.002	0.5	0	94.3	80	120	0.4748	0.713	20	
Chromium	0.4848	0.006	0.5	0.0007002	96.8	80	120	0.4859	0.230	20	
Copper	0.4777	0.006	0.5	0.000676	95.4	80	120	0.4771	0.118	20	
Lead	0.4666	0.005	0.5	0	93.3	80	120	0.4725	1.26	20	
Nickel	0.4643	0.01	0.5	0	92.9	80	120	0.4632	0.243	20	
Selenium	0.4617	0.05	0.5	0	92.3	80	120	0.48	3.88	20	
Silver	0.4688	0.005	0.5	0.001081	93.5	80	120	0.4691	0.0594	20	
Thallium	0.4819	0.05	0.5	0	96.4	80	120	0.4869	1.02	20	
Zinc	0.4853	0.05	0.5	0.001523	96.8	80	120	0.4892	0.785	20	

10/11

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Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 11/3/2005

Work Order Number 0511030 | Received by AT

Checklist completed by _____ 11/3/05
Signature Date

Matrix | Carrier name Client drop-off

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? **17°** *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

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: Giant Refining Company - Ciniza
Address: Route 3, Box 7 Gallup, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: AL-2 to EP-1 Week of 10-31-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 17°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
11-3-05	0815	H_2O	AL-2 to EP-1				0511030-1

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX + MTBE	8310 PAH	PAL Total Metals		Air Bubbles or Headspace (Y or N)
												X	X	X		

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
11-3-05	1315	Steve Morris		11/3/05 1315
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 08, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Water

Order No.: 0510258

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/26/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *08-Nov-05*

CLIENT: Giant Refining Co
Project: Stormwater Separator Water
Lab Order: 0510258

CASE NARRATIVE

The 8270 sample was extracted at a x5 diltion due to the amount of emulsion formed from a straight extraction.

Hall Environmental Analysis Laboratory

Date: *08-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510258
Collection Date: 10/26/2005 8:00:00 AM
Project: Stormwater Separator Water
Lab ID: 0510258-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	120	5.0		mg/L	50	11/1/2005
Chloride	160	0.50		mg/L	5	10/26/2005
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	10/26/2005
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	10/26/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	10/26/2005
Sulfate	2500	25		mg/L	50	11/1/2005
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	99	20		µg/L	20	10/29/2005
Toluene	190	20		µg/L	20	10/29/2005
Ethylbenzene	ND	20		µg/L	20	10/29/2005
Methyl tert-butyl ether (MTBE)	ND	20		µg/L	20	10/29/2005
1,2,4-Trimethylbenzene	160	20		µg/L	20	10/29/2005
1,3,5-Trimethylbenzene	70	20		µg/L	20	10/29/2005
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	10/29/2005
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	10/29/2005
Naphthalene	52	40		µg/L	20	10/29/2005
1-Methylnaphthalene	84	80		µg/L	20	10/29/2005
2-Methylnaphthalene	96	80		µg/L	20	10/29/2005
Acetone	ND	200		µg/L	20	10/29/2005
Bromobenzene	ND	20		µg/L	20	10/29/2005
Bromochloromethane	ND	20		µg/L	20	10/29/2005
Bromodichloromethane	ND	20		µg/L	20	10/29/2005
Bromoform	ND	20		µg/L	20	10/29/2005
Bromomethane	ND	40		µg/L	20	10/29/2005
2-Butanone	ND	200		µg/L	20	10/29/2005
Carbon disulfide	ND	200		µg/L	20	10/29/2005
Carbon Tetrachloride	ND	40		µg/L	20	10/29/2005
Chlorobenzene	ND	20		µg/L	20	10/29/2005
Chloroethane	ND	40		µg/L	20	10/29/2005
Chloroform	ND	20		µg/L	20	10/29/2005
Chloromethane	ND	20		µg/L	20	10/29/2005
2-Chlorotoluene	ND	20		µg/L	20	10/29/2005
4-Chlorotoluene	ND	20		µg/L	20	10/29/2005
cis-1,2-DCE	ND	20		µg/L	20	10/29/2005
cis-1,3-Dichloropropene	ND	20		µg/L	20	10/29/2005
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	10/29/2005
Dibromochloromethane	ND	20		µg/L	20	10/29/2005
Dibromomethane	ND	40		µg/L	20	10/29/2005
1,2-Dichlorobenzene	ND	20		µg/L	20	10/29/2005
1,3-Dichlorobenzene	ND	20		µg/L	20	10/29/2005

Qualifiers:
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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Lab Order: 0510258
Project: Stormwater Separator Water
Lab ID: 0510258-01

Client Sample ID: SW Sep. Water Out
Collection Date: 10/26/2005 8:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	20		µg/L	20	10/29/2005
Dichlorodifluoromethane	ND	20		µg/L	20	10/29/2005
1,1-Dichloroethane	ND	20		µg/L	20	10/29/2005
1,1-Dichloroethene	ND	20		µg/L	20	10/29/2005
1,2-Dichloropropane	ND	20		µg/L	20	10/29/2005
1,3-Dichloropropane	ND	20		µg/L	20	10/29/2005
2,2-Dichloropropane	ND	20		µg/L	20	10/29/2005
1,1-Dichloropropene	ND	20		µg/L	20	10/29/2005
Hexachlorobutadiene	ND	20		µg/L	20	10/29/2005
2-Hexanone	ND	200		µg/L	20	10/29/2005
Isopropylbenzene	ND	20		µg/L	20	10/29/2005
4-Isopropyltoluene	ND	20		µg/L	20	10/29/2005
4-Methyl-2-pentanone	ND	200		µg/L	20	10/29/2005
Methylene Chloride	ND	60		µg/L	20	10/29/2005
n-Butylbenzene	ND	20		µg/L	20	10/29/2005
n-Propylbenzene	ND	20		µg/L	20	10/29/2005
sec-Butylbenzene	ND	20		µg/L	20	10/29/2005
Styrene	ND	20		µg/L	20	10/29/2005
tert-Butylbenzene	ND	20		µg/L	20	10/29/2005
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	10/29/2005
1,1,2,2-Tetrachloroethane	ND	20		µg/L	20	10/29/2005
Tetrachloroethene (PCE)	ND	20		µg/L	20	10/29/2005
trans-1,2-DCE	ND	20		µg/L	20	10/29/2005
trans-1,3-Dichloropropene	ND	20		µg/L	20	10/29/2005
1,2,3-Trichlorobenzene	ND	20		µg/L	20	10/29/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	20	10/29/2005
1,1,1-Trichloroethane	ND	20		µg/L	20	10/29/2005
1,1,2-Trichloroethane	ND	20		µg/L	20	10/29/2005
Trichloroethene (TCE)	ND	20		µg/L	20	10/29/2005
Trichlorofluoromethane	ND	20		µg/L	20	10/29/2005
1,2,3-Trichloropropane	ND	40		µg/L	20	10/29/2005
Vinyl chloride	ND	20		µg/L	20	10/29/2005
Xylenes, Total	880	20		µg/L	20	10/29/2005
Surr: 1,2-Dichloroethane-d4	102	69.9-130		%REC	20	10/29/2005
Surr: 4-Bromofluorobenzene	102	71.2-123		%REC	20	10/29/2005
Surr: Dibromofluoromethane	100	73.9-134		%REC	20	10/29/2005
Surr: Toluene-d8	103	81.9-122		%REC	20	10/29/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	11/1/2005
Acenaphthylene	ND	50		µg/L	1	11/1/2005
Aniline	ND	100		µg/L	1	11/1/2005
Anthracene	ND	50		µg/L	1	11/1/2005

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *08-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510258
Collection Date: 10/26/2005 8:00:00 AM
Project: Stormwater Separator Water
Lab ID: 0510258-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	50		µg/L	1	11/1/2005
Benz(a)anthracene	ND	75		µg/L	1	11/1/2005
Benzo(a)pyrene	ND	75		µg/L	1	11/1/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	11/1/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/1/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	11/1/2005
Benzoic acid	ND	250		µg/L	1	11/1/2005
Benzyl alcohol	ND	100		µg/L	1	11/1/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/1/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	11/1/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	11/1/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	11/1/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/1/2005
Butyl benzyl phthalate	ND	75		µg/L	1	11/1/2005
Carbazole	ND	50		µg/L	1	11/1/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	11/1/2005
4-Chloroaniline	ND	100		µg/L	1	11/1/2005
2-Chloronaphthalene	ND	50		µg/L	1	11/1/2005
2-Chlorophenol	ND	50		µg/L	1	11/1/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	11/1/2005
Chrysene	ND	75		µg/L	1	11/1/2005
Di-n-butyl phthalate	ND	50		µg/L	1	11/1/2005
Di-n-octyl phthalate	ND	75		µg/L	1	11/1/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/1/2005
Dibenzofuran	ND	50		µg/L	1	11/1/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	11/1/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	11/1/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	11/1/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	11/1/2005
Diethyl phthalate	ND	50		µg/L	1	11/1/2005
Dimethyl phthalate	ND	50		µg/L	1	11/1/2005
2,4-Dichlorophenol	ND	50		µg/L	1	11/1/2005
2,4-Dimethylphenol	ND	50		µg/L	1	11/1/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	11/1/2005
2,4-Dinitrophenol	ND	250		µg/L	1	11/1/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	11/1/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	11/1/2005
Fluoranthene	ND	50		µg/L	1	11/1/2005
Fluorene	ND	50		µg/L	1	11/1/2005
Hexachlorobenzene	ND	50		µg/L	1	11/1/2005
Hexachlorobutadiene	ND	50		µg/L	1	11/1/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/1/2005

Qualifiers:
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* - Value exceeds Maximum Contaminant Level
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R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510258
Collection Date: 10/26/2005 8:00:00 AM
Project: Stormwater Separator Water
Lab ID: 0510258-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	50		µg/L	1	11/1/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/1/2005
Isophorone	ND	50		µg/L	1	11/1/2005
2-Methylnaphthalene	ND	50		µg/L	1	11/1/2005
2-Methylphenol	ND	75		µg/L	1	11/1/2005
3+4-Methylphenol	ND	100		µg/L	1	11/1/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/1/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	11/1/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/1/2005
Naphthalene	ND	50		µg/L	1	11/1/2005
2-Nitroaniline	ND	250		µg/L	1	11/1/2005
3-Nitroaniline	ND	250		µg/L	1	11/1/2005
4-Nitroaniline	ND	100		µg/L	1	11/1/2005
Nitrobenzene	ND	50		µg/L	1	11/1/2005
2-Nitrophenol	ND	75		µg/L	1	11/1/2005
4-Nitrophenol	ND	250		µg/L	1	11/1/2005
Pentachlorophenol	ND	250		µg/L	1	11/1/2005
Phenanthrene	ND	50		µg/L	1	11/1/2005
Phenol	ND	50		µg/L	1	11/1/2005
Pyrene	ND	75		µg/L	1	11/1/2005
Pyridine	ND	150		µg/L	1	11/1/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/1/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/1/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	11/1/2005
Surr: 2,4,6-Tribromophenol	27.6	16.6-150		%REC	1	11/1/2005
Surr: 2-Fluorobiphenyl	71.8	19.6-134		%REC	1	11/1/2005
Surr: 2-Fluorophenol	22.6	9.54-113		%REC	1	11/1/2005
Surr: 4-Terphenyl-d14	75.6	22.7-145		%REC	1	11/1/2005
Surr: Nitrobenzene-d5	70.6	14.6-134		%REC	1	11/1/2005
Surr: Phenol-d6	33.7	10.7-80.3		%REC	1	11/1/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	6200	0.010		µmhos/cm	1	10/28/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	11/2/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	49	1.0		mg/L	1	10/28/2005 1:13:42 PM
Magnesium	14	1.0		mg/L	1	10/28/2005 1:13:42 PM
Potassium	32	1.0		mg/L	1	10/28/2005 1:13:42 PM
Sodium	1400	100		mg/L	100	10/28/2005 1:42:56 PM
EPA METHOD 150.1: PH						Analyst: **TES**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *08-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510258
Collection Date: 10/26/2005 8:00:00 AM
Project: Stormwater Separator Water
Lab ID: 0510258-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
pH	7.16	0.010		pH units	1	10/28/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *08-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17140** Test Code: **E300** Units: **mg/L** Analysis Date **10/31/2005** Prep Date
Client ID: Run ID: **LC_051031A** SeqNo: **417317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID **MBLK** Batch ID: **R17151** Test Code: **E300** Units: **mg/L** Analysis Date **11/1/2005** Prep Date
Client ID: Run ID: **LC_051101A** SeqNo: **417563**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9064** Batch ID: **9064** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/1/2005** Prep Date **10/27/2005**
Client ID: Run ID: **ELMO_051101A** SeqNo: **417647**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

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
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

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
Pentachlorophenol	4.4	50							J
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							
Surr: 2,4,6-Tribromophenol	137.9	0	200	0	69.0	16.6	150	0	
Surr: 2-Fluorobiphenyl	65.5	0	100	0	65.5	19.6	134	0	
Surr: 2-Fluorophenol	108.5	0	200	0	54.3	9.54	113	0	
Surr: 4-Terphenyl-d14	73.72	0	100	0	73.7	22.7	145	0	
Surr: Nitrobenzene-d5	65.82	0	100	0	65.8	14.6	134	0	
Surr: Phenol-d6	80.2	0	200	0	40.1	10.7	80.3	0	

Sample ID **MB-9112** Batch ID: **9112** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/2/2005** Prep Date **11/2/2005**
Client ID: Run ID: **MI-LA254_051102A** SeqNo: **417779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

10/21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9066** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 12:18:27 P** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									

11/21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *08-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb** Batch ID: **R17125** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/28/2005** Prep Date

Client ID: Run ID: **VAL_051028A** SeqNo: **416323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	10.74	0	10	0	107	69.9	130	0
Surr: 4-Bromofluorobenzene	10.14	0	10	0	101	71.2	123	0
Surr: Dibromofluoromethane	10.47	0	10	0	105	73.9	134	0
Surr: Toluene-d8	9.73	0	10	0	97.3	81.9	122	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R17140** Test Code: **E300** Units: **mg/L** Analysis Date **10/31/2005** Prep Date
Client ID: Run ID: **LC_051031A** SeqNo: **417318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5114	0.1	0.5	0	102	90	110	0			
Chloride	4.69	0.1	5	0	93.8	90	110	0			
Nitrogen, Nitrite (As N)	0.9663	0.1	1	0	96.6	90	110	0			
Nitrogen, Nitrate (As N)	2.4	0.1	2.5	0	96.0	90	110	0			
Phosphorus, Orthophosphate (As P)	4.786	0.5	5	0	95.7	90	110	0			
Sulfate	9.59	0.5	10	0	95.9	90	110	0			

Sample ID **LCS-ST300-05022** Batch ID: **R17151** Test Code: **E300** Units: **mg/L** Analysis Date **11/1/2005** Prep Date
Client ID: Run ID: **LC_051101A** SeqNo: **417564**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4584	0.1	0.5	0	91.7	90	110	0			
Chloride	4.596	0.1	5	0	91.9	90	110	0			
Nitrogen, Nitrite (As N)	0.9009	0.1	1	0	90.1	90	110	0			
Nitrogen, Nitrate (As N)	2.319	0.1	2.5	0	92.8	90	110	0			
Phosphorus, Orthophosphate (As P)	4.665	0.5	5	0	93.3	90	110	0			
Sulfate	9.354	0.5	10	0	93.5	90	110	0			

Sample ID **100ng lcs** Batch ID: **R17125** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/28/2005** Prep Date
Client ID: Run ID: **VAL_051028A** SeqNo: **416326**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.19	1	20	0	106	79.3	136	0			
Toluene	17.45	1	20	0	87.2	65.5	123	0			
Chlorobenzene	19.78	1	20	0	98.9	85.6	126	0			
1,1-Dichloroethene	22.34	1	20	0	112	72.7	135	0			
Trichloroethene (TCE)	19.61	1	20	0	98.1	85.6	119	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9064** Batch ID: **9064** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/1/2005** Prep Date **10/27/2005**
Client ID: Run ID: **ELMO_051101A** SeqNo: **417648**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	72.26	10	100	0	72.3	11	123	0			
4-Chloro-3-methylphenol	140.3	20	200	0	70.2	15.4	119	0			
2-Chlorophenol	144.9	10	200	0	72.4	12.2	122	0			
1,4-Dichlorobenzene	65.2	10	100	0	65.2	16.9	100	0			
2,4-Dinitrotoluene	69.6	10	100	0	69.6	13	138	0			
N-Nitrosodi-n-propylamine	65.92	10	100	0	65.9	9.93	122	0			
4-Nitrophenol	72.82	50	200	0	36.4	-20.5	87.4	0			
Pentachlorophenol	97.68	50	200	4.4	46.6	-0.355	114	0			
Phenol	84.06	10	200	0	42.0	7.53	73.1	0			
Pyrene	69.3	15	100	0	69.3	12.6	140	0			
1,2,4-Trichlorobenzene	63.32	10	100	0	63.3	17.4	98.7	0			

Sample ID **LCSD-9064** Batch ID: **9064** Test Code: **SW8270C** Units: **µg/L** Analysis Date **11/1/2005** Prep Date **10/27/2005**
Client ID: Run ID: **ELMO_051101A** SeqNo: **417650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	72.96	10	100	0	73.0	11	123	72.26	0.964	30.5	
4-Chloro-3-methylphenol	141.9	20	200	0	71.0	15.4	119	140.3	1.12	28.6	
2-Chlorophenol	135.6	10	200	0	67.8	12.2	122	144.9	6.62	107	
1,4-Dichlorobenzene	62.2	10	100	0	62.2	16.9	100	65.2	4.71	62.1	
2,4-Dinitrotoluene	73.26	10	100	0	73.3	13	138	69.6	5.12	14.7	
N-Nitrosodi-n-propylamine	65.78	10	100	0	65.8	9.93	122	65.92	0.213	30.3	
4-Nitrophenol	79.12	50	200	0	39.6	12.5	87.4	72.82	8.29	36.3	
Pentachlorophenol	106.8	50	200	4.4	51.2	3.55	114	97.68	8.94	49	
Phenol	78.62	10	200	0	39.3	7.53	73.1	84.06	6.69	52.4	
Pyrene	76.22	15	100	0	76.2	12.6	140	69.3	9.51	16.3	
1,2,4-Trichlorobenzene	62.5	10	100	0	62.5	17.4	98.7	63.32	1.30	36.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9112** Batch ID: **9112** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/2/2005** Prep Date **11/2/2005**
Client ID: Run ID: **MI-LA254_051102A** SeqNo: **417780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004561	0.0002	0.005	0	91.2	80	120	0			

Sample ID **LCSD-9112** Batch ID: **9112** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/2/2005** Prep Date **11/2/2005**
Client ID: Run ID: **MI-LA254_051102A** SeqNo: **417804**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005068	0.0002	0.005	0	101	80	120	0.004561	10.5	0	

Sample ID **LCS-9066** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 12:21:44 P** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5098	0.02	0.5	0	102	80	120	0			
Barium	0.4772	0.02	0.5	0	95.4	80	120	0			
Cadmium	0.4829	0.002	0.5	0	96.6	80	120	0			
Calcium	51.27	1	50	0	103	80	120	0			
Chromium	0.4836	0.006	0.5	0	96.7	80	120	0			
Lead	0.482	0.005	0.5	0	96.4	80	120	0			
Magnesium	51.48	1	50	0	103	80	120	0			
Potassium	53.1	1	50	0	106	80	120	0			
Selenium	0.4779	0.05	0.5	0	95.6	80	120	0			
Silver	0.4909	0.005	0.5	0	98.2	80	120	0			
Sodium	55.24	1	50	0	110	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9066** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 12:24:58 P** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.512	0.02	0.5	0	102	80	120	0.5098	0.433	20	
Barium	0.4704	0.02	0.5	0	94.1	80	120	0.4772	1.45	20	
Cadmium	0.4784	0.002	0.5	0	95.7	80	120	0.4829	0.940	20	
Calcium	50.59	1	50	0	101	80	120	51.27	1.34	20	
Chromium	0.4756	0.006	0.5	0	95.1	80	120	0.4836	1.67	20	
Lead	0.4809	0.005	0.5	0	96.2	80	120	0.482	0.222	20	
Magnesium	50.52	1	50	0	101	80	120	51.48	1.88	20	
Potassium	52.44	1	50	0	105	80	120	53.1	1.24	20	
Selenium	0.4751	0.05	0.5	0	95.0	80	120	0.4779	0.587	20	
Silver	0.4833	0.005	0.5	0	96.7	80	120	0.4909	1.55	20	
Sodium	54.66	1	50	0	109	80	120	55.24	1.06	20	

Sample ID **DOC 1** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 1:58:44 PM** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5017	0.02	0.5	0	100	80	120	0			
Barium	0.4725	0.02	0.5	0	94.5	80	120	0			
Cadmium	0.4757	0.002	0.5	0	95.1	80	120	0			
Calcium	48.9	1	50	0	97.8	80	120	0			
Chromium	0.4752	0.006	0.5	0	95.0	80	120	0			
Lead	0.4779	0.005	0.5	0	95.6	80	120	0			
Magnesium	48.69	1	50	0	97.4	80	120	0			
Potassium	50.66	1	50	0	101	80	120	0			
Selenium	0.462	0.05	0.5	0	92.4	80	120	0			
Silver	0.4801	0.005	0.5	0	96.0	80	120	0			
Sodium	51.87	1	50	0	104	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **DOC 2** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 2:02:01 PM** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.506	0.02	0.5	0	101	80	120	0			
Barium	0.4724	0.02	0.5	0	94.5	80	120	0			
Cadmium	0.4798	0.002	0.5	0	96.0	80	120	0			
Calcium	49.62	1	50	0	99.2	80	120	0			
Chromium	0.4772	0.006	0.5	0	95.4	80	120	0			
Lead	0.4804	0.005	0.5	0	96.1	80	120	0			
Magnesium	49.65	1	50	0	99.3	80	120	0			
Potassium	51.46	1	50	0	103	80	120	0			
Selenium	0.4678	0.05	0.5	0	93.6	80	120	0			
Silver	0.4854	0.005	0.5	0	97.1	80	120	0			
Sodium	52.73	1	50	0	105	80	120	0			

Sample ID **DOC 3** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 2:05:14 PM** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5068	0.02	0.5	0	101	80	120	0			
Barium	0.4758	0.02	0.5	0	95.2	80	120	0			
Cadmium	0.4821	0.002	0.5	0	96.4	80	120	0			
Calcium	49.25	1	50	0	98.5	80	120	0			
Chromium	0.4789	0.006	0.5	0	95.8	80	120	0			
Lead	0.4822	0.005	0.5	0	96.4	80	120	0			
Magnesium	49.47	1	50	0	98.9	80	120	0			
Potassium	51.22	1	50	0	102	80	120	0			
Selenium	0.4659	0.05	0.5	0	93.2	80	120	0			
Silver	0.4868	0.005	0.5	0	97.4	80	120	0			
Sodium	52.58	1	50	0	105	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510258
Project: Stormwater Separator Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **DOC 4** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 2:17:59 PM** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416105**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4801	0.02	0.5	0	96.0	80	120	0			
Barium	0.4769	0.02	0.5	0	95.4	80	120	0			
Cadmium	0.4802	0.002	0.5	0	96.0	80	120	0			
Calcium	48.34	1	50	0	96.7	80	120	0			
Chromium	0.4762	0.006	0.5	0	95.2	80	120	0			
Lead	0.4752	0.005	0.5	0	95.0	80	120	0			
Magnesium	49.33	1	50	0	98.7	80	120	0			
Potassium	50.96	1	50	0	102	80	120	0			
Selenium	0.4522	0.05	0.5	0	90.4	80	120	0			
Silver	0.4926	0.005	0.5	0	98.5	80	120	0			
Sodium	53.03	1	50	0	106	80	120	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/26/2005

Work Order Number 0510258 | Received by SSB

Checklist completed by  10/26/05
Signature | Date

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 595 722 0210

Project Name: Stormwater Separator Water
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 4°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
10/26/05	0800	H_2O	SW Sep. Water Out					0510258 -1

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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem	CATIONS	pH	EC	Air Bubbles or Headspace (Y or N)
							X			X	X	X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
10/26/05	1315	Steve Morris	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 10/26/05 12:15

Remarks: RUSH
Gen Chem = Cations, Anions, pH, and Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 07, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week 10/24/2005

Order No.: 0510259

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/26/2005 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

Hall Environmental Analysis Laboratory

Date: *07-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 TO EP-1
Lab Order: 0510259
Collection Date: 10/26/2005 8:30:00 AM
Project: AL-2 to EP-1 Week 10/24/2005
Lab ID: 0510259-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	85	2.0		mg/L	2	11/2/2005 3:41:23 PM
Motor Oil Range Organics (MRO)	ND	10		mg/L	2	11/2/2005 3:41:23 PM
Surr: DNOP	85.4	58-140		%REC	2	11/2/2005 3:41:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	11/1/2005 3:54:24 PM
Surr: BFB	111	79.7-118		%REC	10	11/1/2005 3:54:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	10	11/1/2005 3:54:24 PM
Benzene	6.2	5.0		µg/L	10	11/1/2005 3:54:24 PM
Toluene	5.5	5.0		µg/L	10	11/1/2005 3:54:24 PM
Ethylbenzene	ND	5.0		µg/L	10	11/1/2005 3:54:24 PM
Xylenes, Total	13	5.0		µg/L	10	11/1/2005 3:54:24 PM
Surr: 4-Bromofluorobenzene	109	82.2-119		%REC	10	11/1/2005 3:54:24 PM
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	0.0019	0.00020		mg/L	1	11/2/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	10/28/2005 1:17:45 PM
Arsenic	ND	0.020		mg/L	1	10/28/2005 1:17:45 PM
Beryllium	ND	0.0030		mg/L	1	10/28/2005 1:17:45 PM
Cadmium	ND	0.0020		mg/L	1	10/28/2005 1:17:45 PM
Chromium	0.0073	0.0060		mg/L	1	10/28/2005 1:17:45 PM
Copper	0.017	0.0060		mg/L	1	10/28/2005 1:17:45 PM
Lead	ND	0.0050		mg/L	1	10/28/2005 1:17:45 PM
Nickel	ND	0.010		mg/L	1	10/28/2005 1:17:45 PM
Selenium	ND	0.050		mg/L	1	10/28/2005 1:17:45 PM
Silver	ND	0.0050		mg/L	1	10/28/2005 1:17:45 PM
Thallium	ND	0.010		mg/L	1	10/28/2005 1:17:45 PM
Zinc	1.8	0.10		mg/L	2	10/28/2005 1:39:19 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT

Method Blank

Sample ID **MB-9103**	Batch ID: **9103**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date **11/2/2005 2:03:50 PM**	Prep Date **11/1/2005**
Client ID:		Run ID: **FID(17A) 2_051102A**		SeqNo: **418008**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.014	0	1	0	101	58	140	0			

Sample ID **Reagent Blank 5m**	Batch ID: **R17148**	Test Code: **SW8015**	Units: **mg/L**	Analysis Date **11/1/2005 9:37:31 AM**	Prep Date
Client ID:		Run ID: **PIDFID_051101A**		SeqNo: **417556**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	21.35	0	20	0	107	79.7	118	0			

Sample ID **Reagent Blank 5m**	Batch ID: **R17148**	Test Code: **SW8021**	Units: **µg/L**	Analysis Date **11/1/2005 9:37:31 AM**	Prep Date
Client ID:		Run ID: **PIDFID_051101A**		SeqNo: **417475**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.17	0	20	0	101	82.2	119	0			

Sample ID **MB-9112**	Batch ID: **9112**	Test Code: **SW7470**	Units: **mg/L**	Analysis Date **11/2/2005**	Prep Date **11/2/2005**
Client ID:		Run ID: **MI-LA254_051102A**		SeqNo: **417779**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9066** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 12:18:27 P** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	0.0008113	0.006									J
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *07-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-9103** Batch ID: **9103** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/2/2005 2:36:20 PM** Prep Date **11/1/2005**
Client ID: Run ID: **FID(17A) 2_051102A** SeqNo: **418009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.924	1	5	0	98.5	81.2	149	0			

Sample ID **LCSD-9103** Batch ID: **9103** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/2/2005 3:08:51 PM** Prep Date **11/1/2005**
Client ID: Run ID: **FID(17A) 2_051102A** SeqNo: **418010**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.978	1	5	0	99.6	81.2	149	4.924	1.09	23	

Sample ID **GRO lcs 2.5ug** Batch ID: **R17148** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/2/2005 12:07:41 AM** Prep Date
Client ID: Run ID: **PIDFID_051101A** SeqNo: **417557**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4864	0.05	0.5	0	97.3	82.6	114	0			

Sample ID **GRO lcsd 2.5ug** Batch ID: **R17148** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/2/2005 2:41:02 AM** Prep Date
Client ID: Run ID: **PIDFID_051101A** SeqNo: **417558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4522	0.05	0.5	0	90.4	82.6	114	0.4864	7.29	8.39	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **BTEX lcs 100ng** Batch ID: **R17148** Test Code: **SW8021** Units: **µg/L** Analysis Date **11/2/2005 12:38:33 AM** Prep Date
Client ID: Run ID: **PIDFID_051101A** SeqNo: **417476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	16.38	2.5	20	0	81.9	64.5	133	0			
Benzene	20.71	0.5	20	0	104	88.5	114	0			
Toluene	19.18	0.5	20	0	95.9	87.2	114	0			
Ethylbenzene	19.25	0.5	20	0	96.3	88.6	113	0			
Xylenes, Total	39.15	0.5	40	0	97.9	83.3	114	0			

Sample ID **BTEX lcsd 100ng** Batch ID: **R17148** Test Code: **SW8021** Units: **µg/L** Analysis Date **11/2/2005 1:09:18 AM** Prep Date
Client ID: Run ID: **PIDFID_051101A** SeqNo: **417477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	16.23	2.5	20	0	81.1	64.5	133	16.38	0.947	28	
Benzene	20.76	0.5	20	0	104	88.5	114	20.71	0.244	27	
Toluene	19.06	0.5	20	0	95.3	87.2	114	19.18	0.618	19	
Ethylbenzene	19.66	0.5	20	0	98.3	88.6	113	19.25	2.10	10	
Xylenes, Total	39.51	0.5	40	0	98.8	83.3	114	39.15	0.910	13	

Sample ID **LCS-9112** Batch ID: **9112** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/2/2005** Prep Date **11/2/2005**
Client ID: Run ID: **MI-LA254_051102A** SeqNo: **417780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004561	0.0002	0.005	0	91.2	80	120	0			

Sample ID **LCSD-9112** Batch ID: **9112** Test Code: **SW7470** Units: **mg/L** Analysis Date **11/2/2005** Prep Date **11/2/2005**
Client ID: Run ID: **MI-LA254_051102A** SeqNo: **417804**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005068	0.0002	0.005	0	101	80	120	0.004561	10.5	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9066** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 12:21:44 P** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.494	0.01	0.5	0	98.8	80	120	0			
Arsenic	0.5098	0.02	0.5	0	102	80	120	0			
Beryllium	0.5119	0.003	0.5	0	102	80	120	0			
Cadmium	0.4829	0.002	0.5	0	96.6	80	120	0			
Chromium	0.4836	0.006	0.5	0	96.7	80	120	0			
Copper	0.4969	0.006	0.5	0.0008113	99.2	80	120	0			
Lead	0.482	0.005	0.5	0	96.4	80	120	0			
Nickel	0.4706	0.01	0.5	0	94.1	80	120	0			
Selenium	0.4779	0.05	0.5	0	95.6	80	120	0			
Silver	0.4909	0.005	0.5	0	98.2	80	120	0			
Thallium	0.4817	0.01	0.5	0	96.3	80	120	0			
Zinc	0.4759	0.05	0.5	0	95.2	80	120	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9066** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 12:24:58 P** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4876	0.01	0.5	0	97.5	80	120	0.494	1.29	20	
Arsenic	0.512	0.02	0.5	0	102	80	120	0.5098	0.433	20	
Beryllium	0.5111	0.003	0.5	0	102	80	120	0.5119	0.160	20	
Cadmium	0.4784	0.002	0.5	0	95.7	80	120	0.4829	0.940	20	
Chromium	0.4756	0.006	0.5	0	95.1	80	120	0.4836	1.67	20	
Copper	0.4884	0.006	0.5	0.0008113	97.5	80	120	0.4969	1.74	20	
Lead	0.4809	0.005	0.5	0	96.2	80	120	0.482	0.222	20	
Nickel	0.463	0.01	0.5	0	92.6	80	120	0.4706	1.63	20	
Selenium	0.4751	0.05	0.5	0	95.0	80	120	0.4779	0.587	20	
Silver	0.4833	0.005	0.5	0	96.7	80	120	0.4909	1.55	20	
Thallium	0.4769	0.01	0.5	0	95.4	80	120	0.4817	1.00	20	
Zinc	0.4725	0.05	0.5	0	94.5	80	120	0.4759	0.706	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **DOC 1** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 1:58:44 PM** Prep Date **10/27/2005**
Client ID: Run ID: **ICP_051028A** SeqNo: **416101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4748	0.01	0.5	0	95.0	80	120	0			
Arsenic	0.5017	0.02	0.5	0	100	80	120	0			
Beryllium	0.5055	0.003	0.5	0	101	80	120	0			
Cadmium	0.4757	0.002	0.5	0	95.1	80	120	0			
Chromium	0.4752	0.006	0.5	0	95.0	80	120	0			
Copper	0.4854	0.006	0.5	0.0008113	96.9	80	120	0			
Lead	0.4779	0.005	0.5	0	95.6	80	120	0			
Nickel	0.4644	0.01	0.5	0	92.9	80	120	0			
Selenium	0.462	0.05	0.5	0	92.4	80	120	0			
Silver	0.4801	0.005	0.5	0	96.0	80	120	0			
Thallium	0.4732	0.01	0.5	0	94.6	80	120	0			
Zinc	0.4747	0.05	0.5	0	94.9	80	120	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **DOC 2** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 2:02:01 PM** Prep Date **10/27/2005**

Client ID: Run ID: **ICP_051028A** SeqNo: **416102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4819	0.01	0.5	0	96.4	80	120	0			
Arsenic	0.506	0.02	0.5	0	101	80	120	0			
Beryllium	0.5089	0.003	0.5	0	102	80	120	0			
Cadmium	0.4798	0.002	0.5	0	96.0	80	120	0			
Chromium	0.4772	0.006	0.5	0	95.4	80	120	0			
Copper	0.4891	0.006	0.5	0.0008113	97.7	80	120	0			
Lead	0.4804	0.005	0.5	0	96.1	80	120	0			
Nickel	0.4698	0.01	0.5	0	94.0	80	120	0			
Selenium	0.4678	0.05	0.5	0	93.6	80	120	0			
Silver	0.4854	0.005	0.5	0	97.1	80	120	0			
Thallium	0.4853	0.01	0.5	0	97.1	80	120	0			
Zinc	0.4767	0.05	0.5	0	95.3	80	120	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **DOC 3** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 2:05:14 PM** Prep Date **10/27/2005**

Client ID: Run ID: **ICP_051028A** SeqNo: **416103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4786	0.01	0.5	0	95.7	80	120	0			
Arsenic	0.5068	0.02	0.5	0	101	80	120	0			
Beryllium	0.5126	0.003	0.5	0	103	80	120	0			
Cadmium	0.4821	0.002	0.5	0	96.4	80	120	0			
Chromium	0.4789	0.006	0.5	0	95.8	80	120	0			
Copper	0.4913	0.006	0.5	0.0008113	98.1	80	120	0			
Lead	0.4822	0.005	0.5	0	96.4	80	120	0			
Nickel	0.469	0.01	0.5	0	93.8	80	120	0			
Selenium	0.4659	0.05	0.5	0	93.2	80	120	0			
Silver	0.4868	0.005	0.5	0	97.4	80	120	0			
Thallium	0.4831	0.01	0.5	0	96.6	80	120	0			
Zinc	0.4766	0.05	0.5	0	95.3	80	120	0			

10/12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510259
Project: AL-2 to EP-1 Week 10/24/2005

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **DOC 4** Batch ID: **9066** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 2:17:59 PM** Prep Date **10/27/2005**

Client ID: Run ID: **ICP_051028A** SeqNo: **416105**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4857	0.01	0.5	0	97.1	80	120	0			
Arsenic	0.4801	0.02	0.5	0	96.0	80	120	0			
Beryllium	0.4998	0.003	0.5	0	100	80	120	0			
Cadmium	0.4802	0.002	0.5	0	96.0	80	120	0			
Chromium	0.4762	0.006	0.5	0	95.2	80	120	0			
Copper	0.5002	0.006	0.5	0.0008113	99.9	80	120	0			
Lead	0.4752	0.005	0.5	0	95.0	80	120	0			
Nickel	0.4678	0.01	0.5	0	93.6	80	120	0			
Selenium	0.4522	0.05	0.5	0	90.4	80	120	0			
Silver	0.4926	0.005	0.5	0	98.5	80	120	0			
Thallium	0.475	0.01	0.5	0	95.0	80	120	0			
Zinc	0.4714	0.05	0.5	0	94.3	80	120	0			

11/12

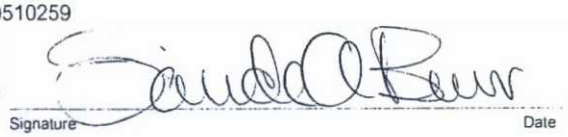
Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/26/2005

Work Order Number 0510259 | Received by SSB

Checklist completed by  Signature 10/26/05 Date

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 9210

Project Name: AL-2 to EP-1 Week of 10-24-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 4°

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

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
10/26/05	0830	H_2O	AL-2 to EP-1					0510259-1			X										X	X			

Remarks: RUSH

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
10/26/05	1320	Steve Morris	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
			10/26/05 1320

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 04, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Water 10/20/05 Order No.: 0510202

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/20/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Project: Stormwater Separator Water 10/20/05
Lab Order: 0510202

CASE NARRATIVE

EPA Method 8270 was analyzed at a x5 dilution due to the apparent hydrocarbon odor.

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0510202
Collection Date: 10/20/2005 11:30:00 AM
Project: Stormwater Separator Water 10/20/05
Lab ID: 0510202-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.4	0.50		mg/L	5	10/22/2005
Chloride	550	2.0		mg/L	20	11/1/2005
Nitrogen, Nitrite (As N)	3.3	0.50		mg/L	5	10/22/2005
Nitrogen, Nitrate (As N)	0.67	0.50		mg/L	5	10/22/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	10/22/2005
Sulfate	1400	10		mg/L	20	11/1/2005
Nitrate (As N)+Nitrite (As N)	5.5	0.50		mg/L	5	11/1/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	91	20		µg/L	20	10/25/2005
Toluene	ND	20		µg/L	20	10/25/2005
Ethylbenzene	ND	20		µg/L	20	10/25/2005
Methyl tert-butyl ether (MTBE)	ND	20		µg/L	20	10/25/2005
1,2,4-Trimethylbenzene	280	20		µg/L	20	10/25/2005
1,3,5-Trimethylbenzene	130	20		µg/L	20	10/25/2005
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	10/25/2005
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	10/25/2005
Naphthalene	51	40		µg/L	20	10/25/2005
1-Methylnaphthalene	100	80		µg/L	20	10/25/2005
2-Methylnaphthalene	120	80		µg/L	20	10/25/2005
Acetone	ND	200		µg/L	20	10/25/2005
Bromobenzene	ND	20		µg/L	20	10/25/2005
Bromochloromethane	ND	20		µg/L	20	10/25/2005
Bromodichloromethane	ND	20		µg/L	20	10/25/2005
Bromoform	ND	20		µg/L	20	10/25/2005
Bromomethane	ND	40		µg/L	20	10/25/2005
2-Butanone	ND	200		µg/L	20	10/25/2005
Carbon disulfide	ND	200		µg/L	20	10/25/2005
Carbon Tetrachloride	ND	40		µg/L	20	10/25/2005
Chlorobenzene	ND	20		µg/L	20	10/25/2005
Chloroethane	ND	40		µg/L	20	10/25/2005
Chloroform	ND	20		µg/L	20	10/25/2005
Chloromethane	ND	20		µg/L	20	10/25/2005
2-Chlorotoluene	ND	20		µg/L	20	10/25/2005
4-Chlorotoluene	ND	20		µg/L	20	10/25/2005
cis-1,2-DCE	ND	20		µg/L	20	10/25/2005
cis-1,3-Dichloropropene	ND	20		µg/L	20	10/25/2005
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	10/25/2005
Dibromochloromethane	ND	20		µg/L	20	10/25/2005
Dibromomethane	ND	40		µg/L	20	10/25/2005
1,2-Dichlorobenzene	ND	20		µg/L	20	10/25/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0510202
Collection Date: 10/20/2005 11:30:00 AM
Project: Stormwater Separator Water 10/20/05
Lab ID: 0510202-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,3-Dichlorobenzene	ND	20		µg/L	20	10/25/2005
1,4-Dichlorobenzene	ND	20		µg/L	20	10/25/2005
Dichlorodifluoromethane	ND	20		µg/L	20	10/25/2005
1,1-Dichloroethane	ND	20		µg/L	20	10/25/2005
1,1-Dichloroethene	ND	20		µg/L	20	10/25/2005
1,2-Dichloropropane	ND	20		µg/L	20	10/25/2005
1,3-Dichloropropane	ND	20		µg/L	20	10/25/2005
2,2-Dichloropropane	ND	20		µg/L	20	10/25/2005
1,1-Dichloropropene	ND	20		µg/L	20	10/25/2005
Hexachlorobutadiene	ND	20		µg/L	20	10/25/2005
2-Hexanone	ND	200		µg/L	20	10/25/2005
Isopropylbenzene	ND	20		µg/L	20	10/25/2005
4-Isopropyltoluene	ND	20		µg/L	20	10/25/2005
4-Methyl-2-pentanone	ND	200		µg/L	20	10/25/2005
Methylene Chloride	ND	60		µg/L	20	10/25/2005
n-Butylbenzene	ND	20		µg/L	20	10/25/2005
n-Propylbenzene	ND	20		µg/L	20	10/25/2005
sec-Butylbenzene	ND	20		µg/L	20	10/25/2005
Styrene	ND	20		µg/L	20	10/25/2005
tert-Butylbenzene	ND	20		µg/L	20	10/25/2005
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	10/25/2005
1,1,2,2-Tetrachloroethane	ND	20		µg/L	20	10/25/2005
Tetrachloroethene (PCE)	ND	20		µg/L	20	10/25/2005
trans-1,2-DCE	ND	20		µg/L	20	10/25/2005
trans-1,3-Dichloropropene	ND	20		µg/L	20	10/25/2005
1,2,3-Trichlorobenzene	ND	20		µg/L	20	10/25/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	20	10/25/2005
1,1,1-Trichloroethane	ND	20		µg/L	20	10/25/2005
1,1,2-Trichloroethane	ND	20		µg/L	20	10/25/2005
Trichloroethene (TCE)	ND	20		µg/L	20	10/25/2005
Trichlorofluoromethane	ND	20		µg/L	20	10/25/2005
1,2,3-Trichloropropane	ND	40		µg/L	20	10/25/2005
Vinyl chloride	ND	20		µg/L	20	10/25/2005
Xylenes, Total	1500	20		µg/L	20	10/25/2005
Surr: 1,2-Dichloroethane-d4	96.0	69.9-130		%REC	20	10/25/2005
Surr: 4-Bromofluorobenzene	98.0	71.2-123		%REC	20	10/25/2005
Surr: Dibromofluoromethane	93.5	73.9-134		%REC	20	10/25/2005
Surr: Toluene-d8	96.1	81.9-122		%REC	20	10/25/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	10/26/2005
Acenaphthylene	ND	50		µg/L	1	10/26/2005
Aniline	ND	100		µg/L	1	10/26/2005

Qualifiers:
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0510202
Collection Date: 10/20/2005 11:30:00 AM
Project: Stormwater Separator Water 10/20/05
Lab ID: 0510202-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Anthracene	ND	50		µg/L	1	10/26/2005
Azobenzene	ND	50		µg/L	1	10/26/2005
Benz(a)anthracene	ND	75		µg/L	1	10/26/2005
Benzo(a)pyrene	ND	75		µg/L	1	10/26/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	10/26/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	10/26/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	10/26/2005
Benzoic acid	ND	250		µg/L	1	10/26/2005
Benzyl alcohol	ND	100		µg/L	1	10/26/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	10/26/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	10/26/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	10/26/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	10/26/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	10/26/2005
Butyl benzyl phthalate	ND	75		µg/L	1	10/26/2005
Carbazole	ND	50		µg/L	1	10/26/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	10/26/2005
4-Chloroaniline	ND	100		µg/L	1	10/26/2005
2-Chloronaphthalene	ND	50		µg/L	1	10/26/2005
2-Chlorophenol	ND	50		µg/L	1	10/26/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	10/26/2005
Chrysene	ND	75		µg/L	1	10/26/2005
Di-n-butyl phthalate	ND	50		µg/L	1	10/26/2005
Di-n-octyl phthalate	ND	75		µg/L	1	10/26/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	10/26/2005
Dibenzofuran	ND	50		µg/L	1	10/26/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	10/26/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	10/26/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	10/26/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	10/26/2005
Diethyl phthalate	ND	50		µg/L	1	10/26/2005
Dimethyl phthalate	ND	50		µg/L	1	10/26/2005
2,4-Dichlorophenol	ND	50		µg/L	1	10/26/2005
2,4-Dimethylphenol	ND	50		µg/L	1	10/26/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	10/26/2005
2,4-Dinitrophenol	ND	250		µg/L	1	10/26/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	10/26/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	10/26/2005
Fluoranthene	ND	50		µg/L	1	10/26/2005
Fluorene	ND	50		µg/L	1	10/26/2005
Hexachlorobenzene	ND	50		µg/L	1	10/26/2005
Hexachlorobutadiene	ND	50		µg/L	1	10/26/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0510202
Collection Date: 10/20/2005 11:30:00 AM
Project: Stormwater Separator Water 10/20/05
Lab ID: 0510202-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorocyclopentadiene	ND	50		µg/L	1	10/26/2005
Hexachloroethane	ND	50		µg/L	1	10/26/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	10/26/2005
Isophorone	ND	50		µg/L	1	10/26/2005
2-Methylnaphthalene	ND	50		µg/L	1	10/26/2005
2-Methylphenol	ND	75		µg/L	1	10/26/2005
3+4-Methylphenol	ND	100		µg/L	1	10/26/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	10/26/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	10/26/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	10/26/2005
Naphthalene	ND	50		µg/L	1	10/26/2005
2-Nitroaniline	ND	250		µg/L	1	10/26/2005
3-Nitroaniline	ND	250		µg/L	1	10/26/2005
4-Nitroaniline	ND	100		µg/L	1	10/26/2005
Nitrobenzene	ND	50		µg/L	1	10/26/2005
2-Nitrophenol	ND	75		µg/L	1	10/26/2005
4-Nitrophenol	ND	250		µg/L	1	10/26/2005
Pentachlorophenol	ND	250		µg/L	1	10/26/2005
Phenanthrene	ND	50		µg/L	1	10/26/2005
Phenol	ND	50		µg/L	1	10/26/2005
Pyrene	ND	75		µg/L	1	10/26/2005
Pyridine	ND	150		µg/L	1	10/26/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	10/26/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	10/26/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	10/26/2005
Surr: 2,4,6-Tribromophenol	68.3	16.6-150		%REC	1	10/26/2005
Surr: 2-Fluorobiphenyl	61.8	19.6-134		%REC	1	10/26/2005
Surr: 2-Fluorophenol	37.0	9.54-113		%REC	1	10/26/2005
Surr: 4-Terphenyl-d14	78.0	22.7-145		%REC	1	10/26/2005
Surr: Nitrobenzene-d5	65.8	14.6-134		%REC	1	10/26/2005
Surr: Phenol-d6	18.0	10.7-80.3		%REC	1	10/26/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	4800	0.010		µmhos/cm	1	10/28/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/27/2005 5:12:33 PM
Barium	0.13	0.020		mg/L	1	10/27/2005 5:12:33 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 5:12:33 PM
Calcium	89	1.0		mg/L	1	10/27/2005 5:12:33 PM
Chromium	0.014	0.0060		mg/L	1	10/27/2005 5:12:33 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Water Out
Lab Order: 0510202
Collection Date: 10/20/2005 11:30:00 AM
Project: Stormwater Separator Water 10/20/05
Lab ID: 0510202-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Lead	ND	0.0050		mg/L	1	10/28/2005 9:55:31 AM
Magnesium	19	1.0		mg/L	1	10/27/2005 5:12:33 PM
Potassium	16	1.0		mg/L	1	10/27/2005 5:12:33 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 5:12:33 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 5:12:33 PM
Sodium	1000	100		mg/L	100	10/28/2005 10:42:36 AM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	7.94	0.010		pH units	1	10/28/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17038** Test Code: **E300** Units: **mg/L** Analysis Date **10/21/2005** Prep Date

Client ID: Run ID: **WC_051021D** SeqNo: **413479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID **MBLK** Batch ID: **R17140** Test Code: **E300** Units: **mg/L** Analysis Date **10/31/2005** Prep Date

Client ID: Run ID: **LC_051031A** SeqNo: **417317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17151** Test Code: **E300** Units: **mg/L** Analysis Date **11/1/2005** Prep Date

Client ID: Run ID: **LC_051101A** SeqNo: **417563**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

8/22

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9023** Batch ID: **9023** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/26/2005** Prep Date **10/24/2005**
Client ID: Run ID: **ELMO_051026A** SeqNo: **415322**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

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
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

10/22

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	102.9	0	200	0	51.4	16.6	150	0	
Surr: 2-Fluorobiphenyl	44.64	0	100	0	44.6	19.6	134	0	
Surr: 2-Fluorophenol	104.7	0	200	0	52.3	9.54	113	0	
Surr: 4-Terphenyl-d14	83.74	0	100	0	83.7	22.7	145	0	
Surr: Nitrobenzene-d5	58.22	0	100	0	58.2	14.6	134	0	
Surr: Phenol-d6	62.2	0	200	0	31.1	10.7	80.3	0	

Sample ID **MB-9056** Batch ID: **9056** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/26/2005** Prep Date **10/26/2005**
Client ID: Run ID: **MI-LA254_051026A** SeqNo: **415137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

11/22

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:15:57 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Magnesium	ND	1									
Potassium	0.1242	1									J
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									

Sample ID **MB-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 9:04:57 AM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.005									

12/22

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

Sample ID **5mL rb** Batch ID: **R17079** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/25/2005** Prep Date

Client ID: Run ID: **NEPTUNE_051025A** SeqNo: **414930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.808	0	10	0	98.1	69.9	130	0
Surr: 4-Bromofluorobenzene	9.688	0	10	0	96.9	71.2	123	0
Surr: Dibromofluoromethane	8.856	0	10	0	88.6	73.9	134	0
Surr: Toluene-d8	10.08	0	10	0	101	81.9	122	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Sample Duplicate

Sample ID **0510202-01C DUP** Batch ID: **R17116** Test Code: **E120.1** Units: **µmhos/cm** Analysis Date **10/28/2005** Prep Date

Client ID: **SW Sep Water Ou** Run ID: **WC_051028B** SeqNo: **416161**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	4890	0.01	0	0	0	0	0	4770	2.48	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *04-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R17038** Test Code: **E300** Units: **mg/L** Analysis Date **10/21/2005** Prep Date

Client ID: Run ID: **WC_051021D** SeqNo: **413480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4799	0.1	0.5	0	96.0	90	110	0			
Chloride	4.71	0.1	5	0	94.2	90	110	0			
Nitrogen, Nitrite (As N)	0.9544	0.1	1	0	95.4	90	110	0			
Nitrogen, Nitrate (As N)	2.379	0.1	2.5	0	95.2	90	110	0			
Phosphorus, Orthophosphate (As P)	4.757	0.5	5	0	95.1	90	110	0			
Sulfate	9.504	0.5	10	0	95.0	90	110	0			

Sample ID **LCS-ST300-05022** Batch ID: **R17140** Test Code: **E300** Units: **mg/L** Analysis Date **10/31/2005** Prep Date

Client ID: Run ID: **LC_051031A** SeqNo: **417318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5114	0.1	0.5	0	102	90	110	0			
Chloride	4.69	0.1	5	0	93.8	90	110	0			
Nitrogen, Nitrite (As N)	0.9663	0.1	1	0	96.6	90	110	0			
Nitrogen, Nitrate (As N)	2.4	0.1	2.5	0	96.0	90	110	0			
Phosphorus, Orthophosphate (As P)	4.786	0.5	5	0	95.7	90	110	0			
Sulfate	9.59	0.5	10	0	95.9	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R17151** Test Code: **E300** Units: **mg/L** Analysis Date **11/1/2005** Prep Date
Client ID: Run ID: **LC_051101A** SeqNo: **417564**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4584	0.1	0.5	0	91.7	90	110	0			
Chloride	4.596	0.1	5	0	91.9	90	110	0			
Nitrogen, Nitrite (As N)	0.9009	0.1	1	0	90.1	90	110	0			
Nitrogen, Nitrate (As N)	2.319	0.1	2.5	0	92.8	90	110	0			
Phosphorus, Orthophosphate (As P)	4.665	0.5	5	0	93.3	90	110	0			
Sulfate	9.354	0.5	10	0	93.5	90	110	0			

Sample ID **100ng lcs** Batch ID: **R17079** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/25/2005** Prep Date
Client ID: Run ID: **NEPTUNE_051025A** SeqNo: **414931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.11	1	20	0	101	79.3	136	0			
Toluene	17.24	1	20	0	86.2	65.5	123	0			
Chlorobenzene	19.72	1	20	0	98.6	85.6	126	0			
1,1-Dichloroethene	17.97	1	20	0	89.9	72.7	135	0			
Trichloroethene (TCE)	18.47	1	20	0	92.3	85.6	119	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9023** Batch ID: **9023** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/26/2005** Prep Date **10/24/2005**
Client ID: Run ID: **ELMO_051026A** SeqNo: **415323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	65.38	10	100	0	65.4	11	123	0			
4-Chloro-3-methylphenol	110.3	20	200	0	55.2	15.4	119	0			
2-Chlorophenol	136.2	10	200	0	68.1	12.2	122	0			
1,4-Dichlorobenzene	61.5	10	100	0	61.5	16.9	100	0			
2,4-Dinitrotoluene	52.16	10	100	0	52.2	13	138	0			
N-Nitrosodi-n-propylamine	57.72	10	100	0	57.7	9.93	122	0			
4-Nitrophenol	75.6	50	200	0	37.8	-20.5	87.4	0			
Pentachlorophenol	101.2	50	200	0	50.6	-0.355	114	0			
Phenol	73.7	10	200	0	36.9	7.53	73.1	0			
Pyrene	71.3	15	100	0	71.3	12.6	140	0			
1,2,4-Trichlorobenzene	52.4	10	100	0	52.4	17.4	98.7	0			

Sample ID **LCSD-9023** Batch ID: **9023** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/26/2005** Prep Date **10/24/2005**
Client ID: Run ID: **ELMO_051026A** SeqNo: **415324**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	64.36	10	100	0	64.4	11	123	65.38	1.57	30.5	
4-Chloro-3-methylphenol	104.6	20	200	0	52.3	15.4	119	110.3	5.29	28.6	
2-Chlorophenol	130.8	10	200	0	65.4	12.2	122	136.2	4.03	107	
1,4-Dichlorobenzene	60.42	10	100	0	60.4	16.9	100	61.5	1.77	62.1	
2,4-Dinitrotoluene	48.3	10	100	0	48.3	13	138	52.16	7.68	14.7	
N-Nitrosodi-n-propylamine	55.78	10	100	0	55.8	9.93	122	57.72	3.42	30.3	
4-Nitrophenol	77.7	50	200	0	38.9	12.5	87.4	75.6	2.74	36.3	
Pentachlorophenol	99.8	50	200	0	49.9	3.55	114	101.2	1.43	49	
Phenol	70.58	10	200	0	35.3	7.53	73.1	73.7	4.32	52.4	
Pyrene	71.12	15	100	0	71.1	12.6	140	71.3	0.253	16.3	
1,2,4-Trichlorobenzene	53.3	10	100	0	53.3	17.4	98.7	52.4	1.70	36.4	

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CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9056** Batch ID: **9056** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/26/2005** Prep Date **10/26/2005**
Client ID: Run ID: **MI-LA254_051026A** SeqNo: **415138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004627	0.0002	0.005	0	92.5	80	120	0			

Sample ID **LCSD-9056** Batch ID: **9056** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/26/2005** Prep Date **10/26/2005**
Client ID: Run ID: **MI-LA254_051026A** SeqNo: **415153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004765	0.0002	0.005	0	95.3	80	120	0.004627	2.94	0	

Sample ID **LCS-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:19:14 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4732	0.02	0.5	0	94.6	80	120	0			
Barium	0.4692	0.02	0.5	0	93.8	80	120	0			
Cadmium	0.4645	0.002	0.5	0	92.9	80	120	0			
Calcium	49.18	1	50	0	98.4	80	120	0			
Chromium	0.4691	0.006	0.5	0	93.8	80	120	0			
Magnesium	48.8	1	50	0	97.6	80	120	0			
Potassium	50.1	1	50	0.1242	100	80	120	0			
Selenium	0.4463	0.05	0.5	0	89.3	80	120	0			
Silver	0.465	0.005	0.5	0	93.0	80	120	0			
Sodium	52.32	1	50	0	105	80	120	0			

20/22

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510202
Project: Stormwater Separator Water 10/20/05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:21:36 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4697	0.02	0.5	0	93.9	80	120	0.4732	0.739	20	
Barium	0.4551	0.02	0.5	0	91.0	80	120	0.4692	3.06	20	
Cadmium	0.4561	0.002	0.5	0	91.2	80	120	0.4645	1.82	20	
Calcium	49.58	1	50	0	99.2	80	120	49.18	0.823	20	
Chromium	0.4598	0.006	0.5	0	92.0	80	120	0.4691	2.01	20	
Magnesium	49	1	50	0	98.0	80	120	48.8	0.406	20	
Potassium	50.1	1	50	0.1242	100	80	120	50.1	0.00219	20	
Selenium	0.4285	0.05	0.5	0	85.7	80	120	0.4463	4.06	20	
Silver	0.4501	0.005	0.5	0	90.0	80	120	0.465	3.25	20	
Sodium	52.9	1	50	0	106	80	120	52.32	1.10	20	

Sample ID **LCSD-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 9:12:58 AM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4704	0.005	0.5	0	94.1	80	120	0.4728	0.504	20	

Sample ID **LCS-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 9:20:56 AM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4728	0.005	0.5	0	94.6	80	120	0			

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B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/20/2005

Work Order Number 0510202 | Received by AT

Checklist completed by _____ 10/20/05
Signature Date

Matrix | Carrier name | Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Stormwater Separator Water 10/20/05
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 5°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
10/20/05	1130	H_2O	SW Sep. Water Out					0510202-1								X			X	X	X				

Date: 10/20/05 Time: 1612 Relinquished By: (Signature)
Received By: (Signature) 10/21/05 1612

Date: Time: Relinquished By: (Signature)
Received By: (Signature)

Remarks: Rush
Gen Chem = Cation, Anion, pH, + Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 03, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Water 10-13-05 Order No.: 0510136

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/14/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Project: Stormwater Separator Water 10-13-05
Lab Order: 0510136

CASE NARRATIVE

The reporting limts for EPA method 8270 have been elevated due to the amount of petroleum hydrocarbons in the sample.

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510136
Collection Date: 10/13/2005 2:00:00 PM
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	1.9	0.50		mg/L	5	10/14/2005
Chloride	170	0.50		mg/L	5	10/14/2005
Nitrogen, Nitrite (As N)	5.8	0.50		mg/L	5	10/14/2005
Nitrogen, Nitrate (As N)	6.0	0.50		mg/L	5	10/14/2005
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	10/14/2005
Sulfate	2200	25		mg/L	50	10/24/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	540	10		µg/L	10	10/18/2005
Toluene	690	10		µg/L	10	10/18/2005
Ethylbenzene	ND	10		µg/L	10	10/18/2005
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	10/18/2005
1,2,4-Trimethylbenzene	560	10		µg/L	10	10/18/2005
1,3,5-Trimethylbenzene	220	10		µg/L	10	10/18/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	10/18/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	10/18/2005
Naphthalene	170	20		µg/L	10	10/18/2005
1-Methylnaphthalene	190	40		µg/L	10	10/18/2005
2-Methylnaphthalene	260	40		µg/L	10	10/18/2005
Acetone	ND	100		µg/L	10	10/18/2005
Bromobenzene	ND	10		µg/L	10	10/18/2005
Bromochloromethane	ND	10		µg/L	10	10/18/2005
Bromodichloromethane	ND	10		µg/L	10	10/18/2005
Bromoform	ND	10		µg/L	10	10/18/2005
Bromomethane	ND	20		µg/L	10	10/18/2005
2-Butanone	ND	100		µg/L	10	10/18/2005
Carbon disulfide	ND	100		µg/L	10	10/18/2005
Carbon Tetrachloride	ND	20		µg/L	10	10/18/2005
Chlorobenzene	ND	10		µg/L	10	10/18/2005
Chloroethane	ND	20		µg/L	10	10/18/2005
Chloroform	ND	10		µg/L	10	10/18/2005
Chloromethane	ND	10		µg/L	10	10/18/2005
2-Chlorotoluene	ND	10		µg/L	10	10/18/2005
4-Chlorotoluene	ND	10		µg/L	10	10/18/2005
cis-1,2-DCE	ND	10		µg/L	10	10/18/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	10/18/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	10/18/2005
Dibromochloromethane	ND	10		µg/L	10	10/18/2005
Dibromomethane	ND	20		µg/L	10	10/18/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	10/18/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	10/18/2005

Qualifiers:
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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510136
Collection Date: 10/13/2005 2:00:00 PM
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	10		µg/L	10	10/18/2005
Dichlorodifluoromethane	ND	10		µg/L	10	10/18/2005
1,1-Dichloroethane	ND	10		µg/L	10	10/18/2005
1,1-Dichloroethene	ND	10		µg/L	10	10/18/2005
1,2-Dichloropropane	ND	10		µg/L	10	10/18/2005
1,3-Dichloropropane	ND	10		µg/L	10	10/18/2005
2,2-Dichloropropane	ND	10		µg/L	10	10/18/2005
1,1-Dichloropropene	ND	10		µg/L	10	10/18/2005
Hexachlorobutadiene	ND	10		µg/L	10	10/18/2005
2-Hexanone	ND	100		µg/L	10	10/18/2005
Isopropylbenzene	14	10		µg/L	10	10/18/2005
4-Isopropyltoluene	17	10		µg/L	10	10/18/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	10/18/2005
Methylene Chloride	ND	30		µg/L	10	10/18/2005
n-Butylbenzene	ND	10		µg/L	10	10/18/2005
n-Propylbenzene	ND	10		µg/L	10	10/18/2005
sec-Butylbenzene	ND	10		µg/L	10	10/18/2005
Styrene	ND	10		µg/L	10	10/18/2005
tert-Butylbenzene	ND	10		µg/L	10	10/18/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	10/18/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	10/18/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	10/18/2005
trans-1,2-DCE	ND	10		µg/L	10	10/18/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	10/18/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	10/18/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	10/18/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	10/18/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	10/18/2005
Trichloroethene (TCE)	ND	10		µg/L	10	10/18/2005
Trichlorofluoromethane	ND	10		µg/L	10	10/18/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	10/18/2005
Vinyl chloride	ND	10		µg/L	10	10/18/2005
Xylenes, Total	2500	20		µg/L	20	10/18/2005
Surr: 1,2-Dichloroethane-d4	92.4	69.9-130		%REC	10	10/18/2005
Surr: 4-Bromofluorobenzene	89.0	71.2-123		%REC	10	10/18/2005
Surr: Dibromofluoromethane	93.6	73.9-134		%REC	10	10/18/2005
Surr: Toluene-d8	92.6	81.9-122		%REC	10	10/18/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	10/21/2005
Acenaphthylene	ND	50		µg/L	1	10/21/2005
Aniline	ND	100		µg/L	1	10/21/2005
Anthracene	ND	50		µg/L	1	10/21/2005

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Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510136
Collection Date: 10/13/2005 2:00:00 PM
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	50		µg/L	1	10/21/2005
Benz(a)anthracene	ND	75		µg/L	1	10/21/2005
Benzo(a)pyrene	ND	75		µg/L	1	10/21/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	10/21/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	10/21/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	10/21/2005
Benzoic acid	ND	250		µg/L	1	10/21/2005
Benzyl alcohol	ND	100		µg/L	1	10/21/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	10/21/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	10/21/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	10/21/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	10/21/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	10/21/2005
Butyl benzyl phthalate	ND	75		µg/L	1	10/21/2005
Carbazole	ND	50		µg/L	1	10/21/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	10/21/2005
4-Chloroaniline	ND	100		µg/L	1	10/21/2005
2-Chloronaphthalene	ND	50		µg/L	1	10/21/2005
2-Chlorophenol	ND	50		µg/L	1	10/21/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	10/21/2005
Chrysene	ND	75		µg/L	1	10/21/2005
Di-n-butyl phthalate	ND	50		µg/L	1	10/21/2005
Di-n-octyl phthalate	ND	75		µg/L	1	10/21/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	10/21/2005
Dibenzofuran	ND	50		µg/L	1	10/21/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	10/21/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	10/21/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	10/21/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	10/21/2005
Diethyl phthalate	ND	50		µg/L	1	10/21/2005
Dimethyl phthalate	ND	50		µg/L	1	10/21/2005
2,4-Dichlorophenol	ND	50		µg/L	1	10/21/2005
2,4-Dimethylphenol	79	50		µg/L	1	10/21/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	10/21/2005
2,4-Dinitrophenol	ND	250		µg/L	1	10/21/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	10/21/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	10/21/2005
Fluoranthene	ND	50		µg/L	1	10/21/2005
Fluorene	ND	50		µg/L	1	10/21/2005
Hexachlorobenzene	ND	50		µg/L	1	10/21/2005
Hexachlorobutadiene	ND	50		µg/L	1	10/21/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	10/21/2005

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510136
Collection Date: 10/13/2005 2:00:00 PM
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	50		µg/L	1	10/21/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	10/21/2005
Isophorone	ND	50		µg/L	1	10/21/2005
2-Methylnaphthalene	ND	50		µg/L	1	10/21/2005
2-Methylphenol	ND	75		µg/L	1	10/21/2005
3+4-Methylphenol	ND	100		µg/L	1	10/21/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	10/21/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	10/21/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	10/21/2005
Naphthalene	ND	50		µg/L	1	10/21/2005
2-Nitroaniline	ND	250		µg/L	1	10/21/2005
3-Nitroaniline	ND	250		µg/L	1	10/21/2005
4-Nitroaniline	ND	100		µg/L	1	10/21/2005
Nitrobenzene	ND	50		µg/L	1	10/21/2005
2-Nitrophenol	ND	75		µg/L	1	10/21/2005
4-Nitrophenol	ND	250		µg/L	1	10/21/2005
Pentachlorophenol	ND	250		µg/L	1	10/21/2005
Phenanthrene	ND	50		µg/L	1	10/21/2005
Phenol	ND	50		µg/L	1	10/21/2005
Pyrene	ND	75		µg/L	1	10/21/2005
Pyridine	ND	150		µg/L	1	10/21/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	10/21/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	10/21/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	10/21/2005
Surr: 2,4,6-Tribromophenol	75.1	16.6-150		%REC	1	10/21/2005
Surr: 2-Fluorobiphenyl	58.1	19.6-134		%REC	1	10/21/2005
Surr: 2-Fluorophenol	54.3	9.54-113		%REC	1	10/21/2005
Surr: 4-Terphenyl-d14	78.3	22.7-145		%REC	1	10/21/2005
Surr: Nitrobenzene-d5	62.3	14.6-134		%REC	1	10/21/2005
Surr: Phenol-d6	36.3	10.7-80.3		%REC	1	10/21/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	5800	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/17/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	0.027	0.020		mg/L	1	10/24/2005 3:26:24 PM
Barium	0.091	0.020		mg/L	1	10/24/2005 3:26:24 PM
Cadmium	ND	0.0020		mg/L	1	10/24/2005 3:26:24 PM
Calcium	58	1.0		mg/L	1	10/24/2005 3:26:24 PM
Chromium	0.017	0.0060		mg/L	1	10/24/2005 3:26:24 PM
Lead	ND	0.0050		mg/L	1	10/24/2005 3:26:24 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Lab Order: 0510136
Project: Stormwater Separator Water 10-13-05
Lab ID: 0510136-01

Client Sample ID: SW Sep. Water Out
Collection Date: 10/13/2005 2:00:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	13	1.0		mg/L	1	10/24/2005 3:26:24 PM
Potassium	8.5	1.0		mg/L	1	10/24/2005 3:26:24 PM
Selenium	ND	0.050		mg/L	1	10/24/2005 3:26:24 PM
Silver	ND	0.0050		mg/L	1	10/24/2005 3:26:24 PM
Sodium	1200	20		mg/L	20	10/25/2005 9:48:53 AM
EPA METHOD 150.1: PH						Analyst: **TES**
pH	8.35	0.010		pH units	1	10/18/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R16980** Test Code: **E300** Units: **mg/L** Analysis Date **10/14/2005** Prep Date
Client ID: Run ID: **LC_051014A** SeqNo: **411864**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID **MBLK** Batch ID: **R16980** Test Code: **E300** Units: **mg/L** Analysis Date **10/14/2005** Prep Date
Client ID: Run ID: **LC_051014A** SeqNo: **411907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17066** Test Code: **E300** Units: **mg/L** Analysis Date **10/24/2005** Prep Date

Client ID: Run ID: **LC_051024A** SeqNo: **414296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8996** Batch ID: **8996** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/19/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413329**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

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	
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	5.26	10	J
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	

10/21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50						
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						
Surr: 2,4,6-Tribromophenol	138.7	0	200	0	69.4	16.6	150	0
Surr: 2-Fluorobiphenyl	60.58	0	100	0	60.6	19.6	134	0
Surr: 2-Fluorophenol	126	0	200	0	63.0	9.54	113	0
Surr: 4-Terphenyl-d14	84.2	0	100	0	84.2	22.7	145	0
Surr: Nitrobenzene-d5	75.16	0	100	0	75.2	14.6	134	0
Surr: Phenol-d6	76.74	0	200	0	38.4	10.7	80.3	0

Sample ID **MB-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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QC

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9015** Batch ID: **9015** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/24/2005 2:32:27 PM** Prep Date **10/21/2005**
Client ID: Run ID: **ICP_051024B** SeqNo: **414602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									J
Barium	0.00152	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									J
Potassium	0.1564	1									
Selenium	ND	0.05									
Silver	ND	0.005									J
Sodium	0.2702	1									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

Sample ID **5mL rb-b** Batch ID: **R16991** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/17/2005** Prep Date

Client ID: Run ID: **NEPTUNE_051017A** SeqNo: **412342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.208	0	10	0	92.1	69.9	130	0
Surr: 4-Bromofluorobenzene	9.238	0	10	0	92.4	71.2	123	0
Surr: Dibromofluoromethane	9.418	0	10	0	94.2	73.9	134	0
Surr: Toluene-d8	9.374	0	10	0	93.7	81.9	122	0

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R16980** Test Code: **E300** Units: **mg/L** Analysis Date **10/14/2005** Prep Date

Client ID: Run ID: **LC_051014A** SeqNo: **411865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4716	0.1	0.5	0	94.3	90	110	0			
Chloride	4.577	0.1	5	0	91.5	90	110	0			
Nitrogen, Nitrite (As N)	0.9484	0.1	1	0	94.8	90	110	0			
Nitrogen, Nitrate (As N)	2.299	0.1	2.5	0	91.9	90	110	0			
Phosphorus, Orthophosphate (As P)	4.599	0.5	5	0	92.0	90	110	0			
Sulfate	9.233	0.5	10	0	92.3	90	110	0			

Sample ID **LCS** Batch ID: **R16980** Test Code: **E300** Units: **mg/L** Analysis Date **10/14/2005** Prep Date

Client ID: Run ID: **LC_051014A** SeqNo: **411908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.465	0.1	0.5	0	93.0	90	110	0			
Chloride	4.5	0.1	5	0	90.0	90	110	0			
Nitrogen, Nitrite (As N)	0.8585	0.1	1	0	85.9	90	110	0			S
Nitrogen, Nitrate (As N)	2.297	0.1	2.5	0	91.9	90	110	0			
Phosphorus, Orthophosphate (As P)	3.719	0.5	5	0	74.4	90	110	0			S
Sulfate	9.51	0.5	10	0	95.1	90	110	0			

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R17066** Test Code: **E300** Units: **mg/L** Analysis Date **10/24/2005** Prep Date
Client ID: Run ID: **LC_051024A** SeqNo: **414301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5209	0.1	0.5	0	104	90	110	0			
Chloride	4.625	0.1	5	0	92.5	90	110	0			
Nitrogen, Nitrite (As N)	0.9219	0.1	1	0	92.2	90	110	0			
Nitrogen, Nitrate (As N)	2.335	0.1	2.5	0	93.4	90	110	0			
Phosphorus, Orthophosphate (As P)	4.628	0.5	5	0	92.6	90	110	0			
Sulfate	9.36	0.5	10	0	93.6	90	110	0			

Sample ID **100ng lcs** Batch ID: **R16991** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/17/2005** Prep Date
Client ID: Run ID: **NEPTUNE_051017A** SeqNo: **412343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.53	1	20	0	97.6	76.9	138	0			
Toluene	16.22	1	20	0	81.1	82.5	125	0			S
Chlorobenzene	18.88	1	20	0	94.4	89.6	134	0			
1,1-Dichloroethene	16.47	1	20	0	82.4	73.1	136	0			
Trichloroethene (TCE)	18.19	1	20	0	90.9	73.9	129	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8996** Batch ID: **8996** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/19/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413330**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	74.86	10	100	0	74.9	11	123	0			
4-Chloro-3-methylphenol	146	20	200	0	73.0	15.4	119	0			
2-Chlorophenol	160.1	10	200	0	80.1	12.2	122	0			
1,4-Dichlorobenzene	75.82	10	100	0	75.8	16.9	100	0			
2,4-Dinitrotoluene	72.1	10	100	0	72.1	13	138	0			
N-Nitrosodi-n-propylamine	69	10	100	0	69.0	9.93	122	0			
4-Nitrophenol	65.18	50	200	0	32.6	-20.5	87.4	0			
Pentachlorophenol	123.6	50	200	0	61.8	-0.355	114	0			
Phenol	88.6	10	200	0	44.3	7.53	73.1	0			
Pyrene	75.9	15	100	0	75.9	12.6	140	0			
1,2,4-Trichlorobenzene	69.84	10	100	0	69.8	17.4	98.7	0			

Sample ID **LCSD-8996** Batch ID: **8996** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/19/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413331**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	73.64	10	100	0	73.6	11	123	74.86	1.64	30.5	
4-Chloro-3-methylphenol	140.9	20	200	0	70.5	15.4	119	146	3.56	28.6	
2-Chlorophenol	157	10	200	0	78.5	12.2	122	160.1	2.01	107	
1,4-Dichlorobenzene	72.3	10	100	0	72.3	16.9	100	75.82	4.75	62.1	
2,4-Dinitrotoluene	70.96	10	100	0	71.0	13	138	72.1	1.59	14.7	
N-Nitrosodi-n-propylamine	66.18	10	100	0	66.2	9.93	122	69	4.17	30.3	
4-Nitrophenol	66.78	50	200	0	33.4	12.5	87.4	65.18	2.42	36.3	
Pentachlorophenol	120	50	200	0	60.0	3.55	114	123.6	2.94	49	
Phenol	88.54	10	200	0	44.3	7.53	73.1	88.6	0.0677	52.4	
Pyrene	74.8	15	100	0	74.8	12.6	140	75.9	1.46	16.3	
1,2,4-Trichlorobenzene	68.34	10	100	0	68.3	17.4	98.7	69.84	2.17	36.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004663	0.0002	0.005	0	93.3	75.2	134	0			

Sample ID **LCSD-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004783	0.0002	0.005	0	95.7	75.2	134	0.004663	2.54	0	

Sample ID **LCS-9015** Batch ID: **9015** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/24/2005 2:35:44 PM** Prep Date **10/21/2005**
Client ID: Run ID: **ICP_051024B** SeqNo: **414603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5233	0.02	0.5	0	105	80	120	0			
Barium	0.4835	0.02	0.5	0.00152	96.4	80	120	0			
Cadmium	0.4871	0.002	0.5	0	97.4	80	120	0			
Calcium	48.7	1	50	0	97.4	80	120	0			
Chromium	0.4839	0.006	0.5	0	96.8	80	120	0			
Lead	0.5089	0.005	0.5	0	102	80	120	0			
Magnesium	47.83	1	50	0	95.7	80	120	0			
Potassium	49.99	1	50	0.1564	99.7	80	120	0			
Selenium	0.4649	0.05	0.5	0	93.0	80	120	0			
Silver	0.4906	0.005	0.5	0	98.1	80	120	0			
Sodium	50.54	1	50	0.2702	101	80	120	0			

19/21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510136
Project: Stormwater Separator Water 10-13-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9015** Batch ID: **9015** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/24/2005 2:39:04 PM** Prep Date **10/21/2005**
Client ID: Run ID: **ICP_051024B** SeqNo: **414604**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5246	0.02	0.5	0	105	80	120	0.5233	0.238	20	
Barium	0.4908	0.02	0.5	0.00152	97.8	80	120	0.4835	1.50	20	
Cadmium	0.4951	0.002	0.5	0	99.0	80	120	0.4871	1.62	20	
Calcium	49.37	1	50	0	98.7	80	120	48.7	1.36	20	
Chromium	0.4923	0.006	0.5	0	98.5	80	120	0.4839	1.71	20	
Lead	0.5165	0.005	0.5	0	103	80	120	0.5089	1.47	20	
Magnesium	48.84	1	50	0	97.7	80	120	47.83	2.09	20	
Potassium	50.69	1	50	0.1564	101	80	120	49.99	1.39	20	
Selenium	0.4754	0.05	0.5	0	95.1	80	120	0.4649	2.23	20	
Silver	0.4994	0.005	0.5	0	99.9	80	120	0.4906	1.78	20	
Sodium	51.45	1	50	0.2702	102	80	120	50.54	1.78	20	

20 / 21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/14/2005

Work Order Number 0510136 | Received by AT

Checklist completed by _____ 10/14/05
Signature | Date

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Stormwater Separator Water 10-13-05
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 5°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
10/13/05	1400	H_2O	SW Sep Water Outfall					0510136-1								X			X	X	X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
10/14/05	0835	Steve Morris	10/14/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 0835

Remarks: RUSH
Gen Chem = cations, anions, pH, + Cond.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 03, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 10-10-05 Order No.: 0510135

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/14/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0510135
Collection Date: 10/13/2005 2:30:00 PM
Project: AL-2 to EP-1 Week of 10-10-05
Lab ID: 0510135-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	25		µg/L	10	10/20/2005 8:11:50 PM
Benzene	21	5.0		µg/L	10	10/20/2005 8:11:50 PM
Toluene	29	5.0		µg/L	10	10/20/2005 8:11:50 PM
Ethylbenzene	8.0	5.0		µg/L	10	10/20/2005 8:11:50 PM
Xylenes, Total	49	5.0		µg/L	10	10/20/2005 8:11:50 PM
Surr: 4-Bromofluorobenzene	108	82.2-119		%REC	10	10/20/2005 8:11:50 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	22	20		µg/L	1	10/21/2005
Acenaphthylene	ND	20		µg/L	1	10/21/2005
Aniline	ND	40		µg/L	1	10/21/2005
Anthracene	ND	20		µg/L	1	10/21/2005
Azobenzene	ND	20		µg/L	1	10/21/2005
Benz(a)anthracene	ND	30		µg/L	1	10/21/2005
Benzo(a)pyrene	ND	30		µg/L	1	10/21/2005
Benzo(b)fluoranthene	ND	30		µg/L	1	10/21/2005
Benzo(g,h,i)perylene	ND	20		µg/L	1	10/21/2005
Benzo(k)fluoranthene	ND	20		µg/L	1	10/21/2005
Benzoic acid	ND	100		µg/L	1	10/21/2005
Benzyl alcohol	ND	40		µg/L	1	10/21/2005
Bis(2-chloroethoxy)methane	ND	20		µg/L	1	10/21/2005
Bis(2-chloroethyl)ether	ND	30		µg/L	1	10/21/2005
Bis(2-chloroisopropyl)ether	ND	30		µg/L	1	10/21/2005
Bis(2-ethylhexyl)phthalate	ND	30		µg/L	1	10/21/2005
4-Bromophenyl phenyl ether	ND	20		µg/L	1	10/21/2005
Butyl benzyl phthalate	ND	30		µg/L	1	10/21/2005
Carbazole	ND	20		µg/L	1	10/21/2005
4-Chloro-3-methylphenol	ND	40		µg/L	1	10/21/2005
4-Chloroaniline	ND	40		µg/L	1	10/21/2005
2-Chloronaphthalene	ND	20		µg/L	1	10/21/2005
2-Chlorophenol	ND	20		µg/L	1	10/21/2005
4-Chlorophenyl phenyl ether	ND	30		µg/L	1	10/21/2005
Chrysene	ND	30		µg/L	1	10/21/2005
Di-n-butyl phthalate	ND	20		µg/L	1	10/21/2005
Di-n-octyl phthalate	ND	30		µg/L	1	10/21/2005
Dibenz(a,h)anthracene	ND	20		µg/L	1	10/21/2005
Dibenzofuran	ND	20		µg/L	1	10/21/2005
1,2-Dichlorobenzene	ND	20		µg/L	1	10/21/2005
1,3-Dichlorobenzene	ND	20		µg/L	1	10/21/2005
1,4-Dichlorobenzene	ND	20		µg/L	1	10/21/2005
3,3´-Dichlorobenzidine	ND	30		µg/L	1	10/21/2005

Qualifiers:
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B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0510135
Collection Date: 10/13/2005 2:30:00 PM
Project: AL-2 to EP-1 Week of 10-10-05
Lab ID: 0510135-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Diethyl phthalate	ND	20		µg/L	1	10/21/2005
Dimethyl phthalate	ND	20		µg/L	1	10/21/2005
2,4-Dichlorophenol	ND	20		µg/L	1	10/21/2005
2,4-Dimethylphenol	31	20		µg/L	1	10/21/2005
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	10/21/2005
2,4-Dinitrophenol	ND	100		µg/L	1	10/21/2005
2,4-Dinitrotoluene	ND	20		µg/L	1	10/21/2005
2,6-Dinitrotoluene	ND	20		µg/L	1	10/21/2005
Fluoranthene	ND	20		µg/L	1	10/21/2005
Fluorene	96	20		µg/L	1	10/21/2005
Hexachlorobenzene	ND	20		µg/L	1	10/21/2005
Hexachlorobutadiene	ND	20		µg/L	1	10/21/2005
Hexachlorocyclopentadiene	ND	20		µg/L	1	10/21/2005
Hexachloroethane	62	20		µg/L	1	10/21/2005
Indeno(1,2,3-cd)pyrene	ND	20		µg/L	1	10/21/2005
Isophorone	ND	20		µg/L	1	10/21/2005
2-Methylnaphthalene	170	20		µg/L	1	10/21/2005
2-Methylphenol	ND	30		µg/L	1	10/21/2005
3+4-Methylphenol	ND	40		µg/L	1	10/21/2005
N-Nitrosodi-n-propylamine	ND	20		µg/L	1	10/21/2005
N-Nitrosodimethylamine	ND	20		µg/L	1	10/21/2005
N-Nitrosodiphenylamine	ND	20		µg/L	1	10/21/2005
Naphthalene	25	20		µg/L	1	10/21/2005
2-Nitroaniline	ND	100		µg/L	1	10/21/2005
3-Nitroaniline	ND	100		µg/L	1	10/21/2005
4-Nitroaniline	ND	40		µg/L	1	10/21/2005
Nitrobenzene	ND	20		µg/L	1	10/21/2005
2-Nitrophenol	ND	30		µg/L	1	10/21/2005
4-Nitrophenol	ND	100		µg/L	1	10/21/2005
Pentachlorophenol	ND	100		µg/L	1	10/21/2005
Phenanthrene	170	20		µg/L	1	10/21/2005
Phenol	ND	20		µg/L	1	10/21/2005
Pyrene	31	30		µg/L	1	10/21/2005
Pyridine	ND	60		µg/L	1	10/21/2005
1,2,4-Trichlorobenzene	ND	20		µg/L	1	10/21/2005
2,4,5-Trichlorophenol	ND	20		µg/L	1	10/21/2005
2,4,6-Trichlorophenol	ND	30		µg/L	1	10/21/2005
Surr: 2,4,6-Tribromophenol	90.4	16.6-150		%REC	1	10/21/2005
Surr: 2-Fluorobiphenyl	77.8	19.6-134		%REC	1	10/21/2005
Surr: 2-Fluorophenol	43.8	9.54-113		%REC	1	10/21/2005
Surr: 4-Terphenyl-d14	94.5	22.7-145		%REC	1	10/21/2005
Surr: Nitrobenzene-d5	69.7	14.6-134		%REC	1	10/21/2005

Qualifiers:
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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0510135
Collection Date: 10/13/2005 2:30:00 PM
Project: AL-2 to EP-1 Week of 10-10-05
Lab ID: 0510135-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Phenol-d6	34.2	10.7-80.3		%REC	1	10/21/2005
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	0.00068	0.00020		mg/L	1	10/17/2005
EPA METHOD 6010B: DISSOLVED METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	10/19/2005 11:59:03 AM
Arsenic	ND	0.020		mg/L	1	10/19/2005 11:59:03 AM
Beryllium	ND	0.0030		mg/L	1	10/19/2005 11:59:03 AM
Cadmium	ND	0.0020		mg/L	1	10/19/2005 11:59:03 AM
Chromium	0.0090	0.0060		mg/L	1	10/19/2005 11:59:03 AM
Copper	0.012	0.0060		mg/L	1	10/19/2005 11:59:03 AM
Lead	0.0075	0.0050		mg/L	1	10/19/2005 11:59:03 AM
Nickel	0.042	0.010		mg/L	1	10/19/2005 11:59:03 AM
Selenium	ND	0.020		mg/L	1	10/19/2005 11:59:03 AM
Silver	ND	0.0050		mg/L	1	10/19/2005 11:59:03 AM
Thallium	ND	0.050		mg/L	1	10/19/2005 11:59:03 AM
Zinc	1.3	0.10		mg/L	2	10/19/2005 12:32:42 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	10/24/2005 3:22:24 PM
Arsenic	ND	0.020		mg/L	1	10/24/2005 3:22:24 PM
Beryllium	ND	0.0030		mg/L	1	10/24/2005 3:22:24 PM
Cadmium	ND	0.0020		mg/L	1	10/24/2005 3:22:24 PM
Chromium	ND	0.0060		mg/L	1	10/24/2005 3:22:24 PM
Copper	ND	0.0060		mg/L	1	10/24/2005 3:22:24 PM
Lead	ND	0.0050		mg/L	1	10/24/2005 3:22:24 PM
Nickel	0.040	0.010		mg/L	1	10/24/2005 3:22:24 PM
Selenium	ND	0.050		mg/L	1	10/24/2005 3:22:24 PM
Silver	ND	0.0050		mg/L	1	10/24/2005 3:22:24 PM
Thallium	ND	0.050		mg/L	1	10/24/2005 3:22:24 PM
Zinc	0.29	0.050		mg/L	1	10/24/2005 3:22:24 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT

Method Blank

Sample ID **Reagent Blank 5m** Batch ID: **R17025** Test Code: **SW8021** Units: **µg/L** Analysis Date **10/20/2005 8:23:40 AM** Prep Date

Client ID: Run ID: **PIDFID_051020A** SeqNo: **413182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.79	0	20	0	98.9	82.2	119	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8970** Batch ID: **8970** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/17/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413452**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Method Blank

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
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

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	111.5	0	200	0	55.7	16.6	150	0	
Surr: 2-Fluorobiphenyl	44.82	0	100	0	44.8	19.6	134	0	
Surr: 2-Fluorophenol	84.78	0	200	0	42.4	9.54	113	0	
Surr: 4-Terphenyl-d14	72.68	0	100	0	72.7	22.7	145	0	
Surr: Nitrobenzene-d5	51.52	0	100	0	51.5	14.6	134	0	
Surr: Phenol-d6	55.46	0	200	0	27.7	10.7	80.3	0	

Sample ID **MB-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB** Batch ID: **R17009** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/19/2005 10:06:30 A** Prep Date
Client ID: Run ID: **ICP_051019A** SeqNo: **412770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	0.0006294	0.01									J
Selenium	ND	0.02									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

8/15

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB** Batch ID: **R17009** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/19/2005 1:05:39 PM** Prep Date
Client ID: Run ID: **ICP_051019A** SeqNo: **412806**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.02									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

9 / 15

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9015** Batch ID: **9015** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/24/2005 2:32:27 PM** Prep Date **10/21/2005**
Client ID: Run ID: **ICP_051024B** SeqNo: **414602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	0.002731	0.05									J

10/15

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *03-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **BTEX lcs 100ng** Batch ID: **R17025** Test Code: **SW8021** Units: **µg/L** Analysis Date **10/20/2005 9:45:18 PM** Prep Date

Client ID: Run ID: **PIDFID_051020A** SeqNo: **413190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17.36	2.5	20	0	86.8	64.5	133	0			
Benzene	20.32	0.5	20	0	102	88.5	114	0			
Toluene	19.15	0.5	20	0	95.8	87.2	114	0			
Ethylbenzene	19.8	0.5	20	0	99.0	88.6	113	0			
Xylenes, Total	39.71	0.5	40	0	99.3	83.3	114	0			

Sample ID **LCS-8970** Batch ID: **8970** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/17/2005**

Client ID: Run ID: **ELMO_051019B** SeqNo: **413453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	83.66	10	100	0	83.7	11	123	0			
4-Chloro-3-methylphenol	155.3	20	200	0	77.6	15.4	119	0			
2-Chlorophenol	147.1	10	200	0	73.6	12.2	122	0			
1,4-Dichlorobenzene	65.28	10	100	0	65.3	16.9	100	0			
2,4-Dinitrotoluene	81.84	10	100	0	81.8	13	138	0			
N-Nitrosodi-n-propylamine	76.12	10	100	0	76.1	9.93	122	0			
4-Nitrophenol	69.32	50	200	0	34.7	-20.5	87.4	0			
Pentachlorophenol	140.7	50	200	0	70.3	-0.355	114	0			
Phenol	80.56	10	200	0	40.3	7.53	73.1	0			
Pyrene	81.62	15	100	0	81.6	12.6	140	0			
1,2,4-Trichlorobenzene	64.44	10	100	0	64.4	17.4	98.7	0			

11/15

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8970** Batch ID: **8970** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/21/2005** Prep Date **10/17/2005**
Client ID: Run ID: **ELMO_051019B** SeqNo: **413454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	66.84	10	100	0	66.8	11	123	83.66	22.4	30.5	
4-Chloro-3-methylphenol	119.7	20	200	0	59.8	15.4	119	155.3	25.9	28.6	
2-Chlorophenol	112.7	10	200	0	56.3	12.2	122	147.1	26.5	107	
1,4-Dichlorobenzene	52.08	10	100	0	52.1	16.9	100	65.28	22.5	62.1	
2,4-Dinitrotoluene	67.34	10	100	0	67.3	13	138	81.84	19.4	14.7	R
N-Nitrosodi-n-propylamine	58.6	10	100	0	58.6	9.93	122	76.12	26.0	30.3	
4-Nitrophenol	55.8	50	200	0	27.9	12.5	87.4	69.32	21.6	36.3	
Pentachlorophenol	117.4	50	200	0	58.7	3.55	114	140.7	18.0	49	
Phenol	65.2	10	200	0	32.6	7.53	73.1	80.56	21.1	52.4	
Pyrene	68.92	15	100	0	68.9	12.6	140	81.62	16.9	16.3	R
1,2,4-Trichlorobenzene	49.52	10	100	0	49.5	17.4	98.7	64.44	26.2	36.4	

Sample ID **LCS-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004663	0.0002	0.005	0	93.3	75.2	134	0			

Sample ID **LCSD-8972** Batch ID: **8972** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/17/2005** Prep Date **10/17/2005**
Client ID: Run ID: **MI-LA254_051117A** SeqNo: **412275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004783	0.0002	0.005	0	95.7	75.2	134	0.004663	2.54	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS** Batch ID: **R17009** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/19/2005 10:09:29 A** Prep Date

Client ID: Run ID: **ICP_051019A** SeqNo: **412771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5133	0.01	0.5	0	103	80	120	0			
Arsenic	0.5158	0.02	0.5	0	103	80	120	0			
Beryllium	0.5064	0.003	0.5	0	101	80	120	0			
Cadmium	0.5122	0.002	0.5	0	102	80	120	0			
Chromium	0.5083	0.006	0.5	0	102	80	120	0			
Copper	0.5126	0.006	0.5	0	103	80	120	0			
Lead	0.5088	0.005	0.5	0	102	80	120	0			
Nickel	0.4863	0.01	0.5	0.0006294	97.1	80	120	0			
Selenium	0.4789	0.02	0.5	0	95.8	80	120	0			
Silver	0.5096	0.005	0.5	0	102	80	120	0			
Thallium	0.5354	0.01	0.5	0	107	80	120	0			
Zinc	0.5051	0.05	0.5	0	101	80	120	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510135
Project: AL-2 to EP-1 Week of 10-10-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD** Batch ID: **R17009** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/19/2005 10:12:46 A** Prep Date

Client ID: Run ID: **ICP_051019A** SeqNo: **412772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5041	0.01	0.5	0	101	80	120	0.5133	1.81	20	
Arsenic	0.5024	0.02	0.5	0	100	80	120	0.5158	2.63	20	
Beryllium	0.4999	0.003	0.5	0	100	80	120	0.5064	1.29	20	
Cadmium	0.5055	0.002	0.5	0	101	80	120	0.5122	1.31	20	
Chromium	0.5049	0.006	0.5	0	101	80	120	0.5083	0.677	20	
Copper	0.5056	0.006	0.5	0	101	80	120	0.5126	1.38	20	
Lead	0.5067	0.005	0.5	0	101	80	120	0.5088	0.418	20	
Nickel	0.4806	0.01	0.5	0.0006294	96.0	80	120	0.4863	1.17	20	
Selenium	0.4768	0.02	0.5	0	95.4	80	120	0.4789	0.447	20	
Silver	0.5062	0.005	0.5	0	101	80	120	0.5096	0.671	20	
Thallium	0.5428	0.01	0.5	0	109	80	120	0.5354	1.37	20	
Zinc	0.4944	0.05	0.5	0	98.9	80	120	0.5051	2.14	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/14/2005

Work Order Number 0510135 | Received by AT

Checklist completed by [signature] (Signature) 10/14/05 (Date)

Matrix | Carrier name | Client drop-off

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: dissolved metal sample filtered + preserved in lab / AT 10/14/05

Corrective Action per steve. Collection time is 1430 not 845 /AT

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: AL-2 to EP-1 Week of 10-10-2005
Project #:
Project Manager: Steve Mona
Sampler: Steve Mona
Sample Temperature: 5

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
10/13/05	1430 AT 0845	H_2O	AL-2 to EP-1				0510135-1

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
10/14/05	0850	Steve Mona	10/14/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 0852

Remarks: RUSH

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)	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, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX + MTBE	PPL Metals Total + dissolved		Air Bubbles or Headspace (Y or N)
											X	X	X		

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

November 02, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 10-17-05

Order No.: 0510201

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/20/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

CLIENT: Giant Refining Co
Project: AL-2 to EP-1 Week of 10-17-05
Lab Order: 0510201

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_W, SAMPLE 0510201-01A: DNOP not recovered due to dilution

The PQL was raised for EPA method 8015 GRO and 8021 due to elevated levels of diesel range organics.

Hall Environmental Analysis Laboratory

Date: *02-Nov-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0510201
Collection Date: 10/20/2005 12:00:00 PM
Project: AL-2 to EP-1 Week of 10-17-05
Lab ID: 0510201-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	600	86		mg/L	85.714	10/27/2005 10:36:30 AM
Motor Oil Range Organics (MRO)	ND	430		mg/L	85.714	10/27/2005 10:36:30 AM
Surr: DNOP	0	58-140	S	%REC	85.714	10/27/2005 10:36:30 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	1.0		mg/L	20	10/31/2005 1:40:43 PM
Surr: BFB	116	79.7-118		%REC	20	10/31/2005 1:40:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	20	10/31/2005 1:40:43 PM
Benzene	ND	10		µg/L	20	10/31/2005 1:40:43 PM
Toluene	14	10		µg/L	20	10/31/2005 1:40:43 PM
Ethylbenzene	11	10		µg/L	20	10/31/2005 1:40:43 PM
Xylenes, Total	70	10		µg/L	20	10/31/2005 1:40:43 PM
Surr: 4-Bromofluorobenzene	112	82.2-119		%REC	20	10/31/2005 1:40:43 PM
EPA METHOD 245.1: MERCURY						Analyst: **CMC**
Mercury	0.0045	0.00020		mg/L	1	10/26/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	10/27/2005 5:08:29 PM
Arsenic	ND	0.020		mg/L	1	10/27/2005 5:08:29 PM
Beryllium	ND	0.0030		mg/L	1	10/27/2005 5:08:29 PM
Cadmium	ND	0.0020		mg/L	1	10/27/2005 5:08:29 PM
Chromium	0.015	0.0060		mg/L	1	10/27/2005 5:08:29 PM
Copper	0.067	0.0060		mg/L	1	10/27/2005 5:08:29 PM
Lead	0.018	0.0050		mg/L	1	10/28/2005 9:53:37 AM
Nickel	0.028	0.010		mg/L	1	10/27/2005 5:08:29 PM
Selenium	ND	0.050		mg/L	1	10/27/2005 5:08:29 PM
Silver	ND	0.0050		mg/L	1	10/27/2005 5:08:29 PM
Thallium	ND	0.010		mg/L	1	10/27/2005 5:08:29 PM
Zinc	3.3	0.25		mg/L	5	10/28/2005 10:39:51 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Work Order: 0510201
Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT

Method Blank

Sample ID **MB-9054** Batch ID: **9054** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/27/2005 3:31:02 AM** Prep Date **10/26/2005**
Client ID: Run ID: **FID(17A) 2_051026A** SeqNo: **415187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.252	0	1	0	125	58	140	0			

Sample ID **Reagent Blank 5m** Batch ID: **R17139** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/31/2005 8:13:11 AM** Prep Date
Client ID: Run ID: **PIDFID_051031A** SeqNo: **417028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	22.72	0	20	0	114	79.7	118	0			

Sample ID **Reagent Blank 5m** Batch ID: **R17139** Test Code: **SW8021** Units: **µg/L** Analysis Date **10/31/2005 8:13:11 AM** Prep Date
Client ID: Run ID: **PIDFID_051031A** SeqNo: **416877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	21.06	0	20	0	105	82.2	119	0			

Sample ID **MB-9056** Batch ID: **9056** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/26/2005** Prep Date **10/26/2005**
Client ID: Run ID: **MI-LA254_051026A** SeqNo: **415137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510201
Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:15:57 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									J
Beryllium	0.000151	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510201
Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/28/2005 9:04:57 AM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *02-Nov-05*

CLIENT: Giant Refining Co
Work Order: 0510201
Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-9054** Batch ID: **9054** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/27/2005 4:03:45 AM** Prep Date **10/26/2005**
Client ID: Run ID: **FID(17A) 2_051026A** SeqNo: **415188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.585	1	5	0	112	81.2	149	0			

Sample ID **LCSD-9054** Batch ID: **9054** Test Code: **SW8015** Units: **mg/L** Analysis Date **10/27/2005 4:36:37 AM** Prep Date **10/26/2005**
Client ID: Run ID: **FID(17A) 2_051026A** SeqNo: **415189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.522	1	5	0	110	81.2	149	5.585	1.12	23	

Sample ID **GRO lcs 2.5ug** Batch ID: **R17139** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/1/2005 1:58:22 AM** Prep Date
Client ID: Run ID: **PIDFID_051031A** SeqNo: **417046**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4828	0.05	0.5	0	96.6	82.6	114	0			

Sample ID **BTEX lcs 100ng** Batch ID: **R17139** Test Code: **SW8021** Units: **µg/L** Analysis Date **10/31/2005 12:07:58 P** Prep Date
Client ID: Run ID: **PIDFID_051031A** SeqNo: **416878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18.41	2.5	20	0	92.0	64.5	133	0			
Benzene	21.26	0.5	20	0	106	88.5	114	0			
Toluene	19.79	0.5	20	0	99.0	87.2	114	0			
Ethylbenzene	20.01	0.5	20	0	100	88.6	113	0			
Xylenes, Total	40.71	0.5	40	0	102	83.3	114	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510201
Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-9056** Batch ID: **9056** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/26/2005** Prep Date **10/26/2005**
Client ID: Run ID: **MI-LA254_051026A** SeqNo: **415138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004627	0.0002	0.005	0	92.5	80	120	0			

Sample ID **LCSD-9056** Batch ID: **9056** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/26/2005** Prep Date **10/26/2005**
Client ID: Run ID: **MI-LA254_051026A** SeqNo: **415153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004765	0.0002	0.005	0	95.3	80	120	0.004627	2.94	0	

Sample ID **LCS-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:19:14 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4933	0.01	0.5	0	98.7	80	120	0			
Arsenic	0.4732	0.02	0.5	0	94.6	80	120	0			
Beryllium	0.484	0.003	0.5	0.000151	96.8	80	120	0			
Cadmium	0.4645	0.002	0.5	0	92.9	80	120	0			
Chromium	0.4691	0.006	0.5	0	93.8	80	120	0			
Copper	0.4845	0.006	0.5	0	96.9	80	120	0			
Lead	0.4541	0.005	0.5	0	90.8	80	120	0			
Nickel	0.453	0.01	0.5	0	90.6	80	120	0			
Selenium	0.4463	0.05	0.5	0	89.3	80	120	0			
Silver	0.465	0.005	0.5	0	93.0	80	120	0			
Thallium	0.4693	0.01	0.5	0	93.9	80	120	0			
Zinc	0.4587	0.05	0.5	0	91.7	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0510201
Project: AL-2 to EP-1 Week of 10-17-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-9044** Batch ID: **9044** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/27/2005 4:21:36 PM** Prep Date **10/25/2005**
Client ID: Run ID: **ICP_051027A** SeqNo: **415918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4782	0.01	0.5	0	95.6	80	120	0.4933	3.11	20	
Arsenic	0.4697	0.02	0.5	0	93.9	80	120	0.4732	0.739	20	
Beryllium	0.4808	0.003	0.5	0.000151	96.1	80	120	0.484	0.666	20	
Cadmium	0.4561	0.002	0.5	0	91.2	80	120	0.4645	1.82	20	
Chromium	0.4598	0.006	0.5	0	92.0	80	120	0.4691	2.01	20	
Copper	0.4683	0.006	0.5	0	93.7	80	120	0.4845	3.40	20	
Lead	0.4461	0.005	0.5	0	89.2	80	120	0.4541	1.77	20	
Nickel	0.4391	0.01	0.5	0	87.8	80	120	0.453	3.13	20	
Selenium	0.4285	0.05	0.5	0	85.7	80	120	0.4463	4.06	20	
Silver	0.4501	0.005	0.5	0	90.0	80	120	0.465	3.25	20	
Thallium	0.4659	0.01	0.5	0	93.2	80	120	0.4693	0.732	20	
Zinc	0.4504	0.05	0.5	0	90.1	80	120	0.4587	1.83	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 10/20/2005

Work Order Number 0510201 | Received by AT

Checklist completed by _____ 10/20/05
Signature | Date

Matrix | Carrier name Client drop-off

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 _____

_____

_____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: AL-2 to EP-1 Week of 10-17-2005
Project #:
Project Manager: Steve Morris
Sampler:
Sample Temperature: 5

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	~~8270 (Semi-VOA)~~ 5 Cm	8021 BTEX + MTBE	PPL Metals Total	~~[illegible]~~ 5 Cm		Air Bubbles or Headspace (Y or N)
10/20/05	1200	H_2O	AL-2 to EP-1					0510201-1			X									~~X~~	X	X			

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
10/20/05	1610	Steve Morris	[signature] 10/20/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 1610

Remarks: Rush

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

October 24, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator 10-6-05 Order No.: 0510047

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 10/6/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Lab Order: 0510047
Project: Stormwater Separator 10-6-05
Lab ID: 0510047-01

Client Sample ID: SW Sep. Water Out
Collection Date: 10/6/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	3.4	0.50		mg/L	5	10/21/2005
Chloride	340	5.0		mg/L	50	10/15/2005
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	10/6/2005
Nitrogen, Nitrate (As N)	2.8	1.0		mg/L	10	10/6/2005
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	10/6/2005
Sulfate	1500	25		mg/L	50	10/15/2005
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	49	10		µg/L	10	10/8/2005
Toluene	24	10		µg/L	10	10/8/2005
Ethylbenzene	ND	10		µg/L	10	10/8/2005
Methyl tert-butyl ether (MTBE)	21	10		µg/L	10	10/8/2005
1,2,4-Trimethylbenzene	270	10		µg/L	10	10/8/2005
1,3,5-Trimethylbenzene	120	10		µg/L	10	10/8/2005
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	10/8/2005
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	10/8/2005
Naphthalene	110	20		µg/L	10	10/8/2005
1-Methylnaphthalene	250	40		µg/L	10	10/8/2005
2-Methylnaphthalene	270	40		µg/L	10	10/8/2005
Acetone	ND	100		µg/L	10	10/8/2005
Bromobenzene	ND	10		µg/L	10	10/8/2005
Bromochloromethane	ND	10		µg/L	10	10/8/2005
Bromodichloromethane	ND	10		µg/L	10	10/8/2005
Bromoform	ND	10		µg/L	10	10/8/2005
Bromomethane	ND	20		µg/L	10	10/8/2005
2-Butanone	ND	100		µg/L	10	10/8/2005
Carbon disulfide	ND	100		µg/L	10	10/8/2005
Carbon Tetrachloride	ND	20		µg/L	10	10/8/2005
Chlorobenzene	ND	10		µg/L	10	10/8/2005
Chloroethane	ND	20		µg/L	10	10/8/2005
Chloroform	ND	10		µg/L	10	10/8/2005
Chloromethane	ND	10		µg/L	10	10/8/2005
2-Chlorotoluene	ND	10		µg/L	10	10/8/2005
4-Chlorotoluene	ND	10		µg/L	10	10/8/2005
cis-1,2-DCE	ND	10		µg/L	10	10/8/2005
cis-1,3-Dichloropropene	ND	10		µg/L	10	10/8/2005
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	10/8/2005
Dibromochloromethane	ND	10		µg/L	10	10/8/2005
Dibromomethane	ND	20		µg/L	10	10/8/2005
1,2-Dichlorobenzene	ND	10		µg/L	10	10/8/2005
1,3-Dichlorobenzene	ND	10		µg/L	10	10/8/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510047
Collection Date: 10/6/2005 10:30:00 AM
Project: Stormwater Separator 10-6-05
Lab ID: 0510047-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	10		µg/L	10	10/8/2005
Dichlorodifluoromethane	ND	10		µg/L	10	10/8/2005
1,1-Dichloroethane	ND	10		µg/L	10	10/8/2005
1,1-Dichloroethene	ND	10		µg/L	10	10/8/2005
1,2-Dichloropropane	ND	10		µg/L	10	10/8/2005
1,3-Dichloropropane	ND	10		µg/L	10	10/8/2005
2,2-Dichloropropane	ND	10		µg/L	10	10/8/2005
1,1-Dichloropropene	ND	10		µg/L	10	10/8/2005
Hexachlorobutadiene	ND	10		µg/L	10	10/8/2005
2-Hexanone	ND	100		µg/L	10	10/8/2005
Isopropylbenzene	ND	10		µg/L	10	10/8/2005
4-Isopropyltoluene	14	10		µg/L	10	10/8/2005
4-Methyl-2-pentanone	ND	100		µg/L	10	10/8/2005
Methylene Chloride	ND	30		µg/L	10	10/8/2005
n-Butylbenzene	ND	10		µg/L	10	10/8/2005
n-Propylbenzene	ND	10		µg/L	10	10/8/2005
sec-Butylbenzene	ND	10		µg/L	10	10/8/2005
Styrene	ND	10		µg/L	10	10/8/2005
tert-Butylbenzene	ND	10		µg/L	10	10/8/2005
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	10/8/2005
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	10/8/2005
Tetrachloroethene (PCE)	ND	10		µg/L	10	10/8/2005
trans-1,2-DCE	ND	10		µg/L	10	10/8/2005
trans-1,3-Dichloropropene	ND	10		µg/L	10	10/8/2005
1,2,3-Trichlorobenzene	ND	10		µg/L	10	10/8/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	10	10/8/2005
1,1,1-Trichloroethane	ND	10		µg/L	10	10/8/2005
1,1,2-Trichloroethane	ND	10		µg/L	10	10/8/2005
Trichloroethene (TCE)	ND	10		µg/L	10	10/8/2005
Trichlorofluoromethane	ND	10		µg/L	10	10/8/2005
1,2,3-Trichloropropane	ND	20		µg/L	10	10/8/2005
Vinyl chloride	ND	10		µg/L	10	10/8/2005
Xylenes, Total	1200	10		µg/L	10	10/8/2005
Surr: 1,2-Dichloroethane-d4	96.5	69.9-130		%REC	10	10/8/2005
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	10	10/8/2005
Surr: Dibromofluoromethane	95.3	73.9-134		%REC	10	10/8/2005
Surr: Toluene-d8	96.3	81.9-122		%REC	10	10/8/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	10/12/2005
Acenaphthylene	ND	50		µg/L	1	10/12/2005
Aniline	ND	100		µg/L	1	10/12/2005
Anthracene	ND	50		µg/L	1	10/12/2005

Qualifiers:
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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510047
Collection Date: 10/6/2005 10:30:00 AM
Project: Stormwater Separator 10-6-05
Lab ID: 0510047-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Azobenzene	ND	50		µg/L	1	10/12/2005
Benz(a)anthracene	ND	75		µg/L	1	10/12/2005
Benzo(a)pyrene	ND	75		µg/L	1	10/12/2005
Benzo(b)fluoranthene	ND	75		µg/L	1	10/12/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	10/12/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	10/12/2005
Benzoic acid	ND	250		µg/L	1	10/12/2005
Benzyl alcohol	ND	100		µg/L	1	10/12/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	10/12/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	10/12/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	10/12/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	10/12/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	10/12/2005
Butyl benzyl phthalate	ND	75		µg/L	1	10/12/2005
Carbazole	ND	50		µg/L	1	10/12/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	10/12/2005
4-Chloroaniline	ND	100		µg/L	1	10/12/2005
2-Chloronaphthalene	ND	50		µg/L	1	10/12/2005
2-Chlorophenol	ND	50		µg/L	1	10/12/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	10/12/2005
Chrysene	ND	75		µg/L	1	10/12/2005
Di-n-butyl phthalate	ND	50		µg/L	1	10/12/2005
Di-n-octyl phthalate	ND	75		µg/L	1	10/12/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	10/12/2005
Dibenzofuran	ND	50		µg/L	1	10/12/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	10/12/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	10/12/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	10/12/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	10/12/2005
Diethyl phthalate	ND	50		µg/L	1	10/12/2005
Dimethyl phthalate	ND	50		µg/L	1	10/12/2005
2,4-Dichlorophenol	ND	50		µg/L	1	10/12/2005
2,4-Dimethylphenol	ND	50		µg/L	1	10/12/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	10/12/2005
2,4-Dinitrophenol	ND	250		µg/L	1	10/12/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	10/12/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	10/12/2005
Fluoranthene	ND	50		µg/L	1	10/12/2005
Fluorene	ND	50		µg/L	1	10/12/2005
Hexachlorobenzene	ND	50		µg/L	1	10/12/2005
Hexachlorobutadiene	ND	50		µg/L	1	10/12/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	10/12/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Lab Order: 0510047
Project: Stormwater Separator 10-6-05
Lab ID: 0510047-01

Client Sample ID: SW Sep. Water Out
Collection Date: 10/6/2005 10:30:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	50		µg/L	1	10/12/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	10/12/2005
Isophorone	ND	50		µg/L	1	10/12/2005
2-Methylnaphthalene	ND	50		µg/L	1	10/12/2005
2-Methylphenol	ND	75		µg/L	1	10/12/2005
3+4-Methylphenol	ND	100		µg/L	1	10/12/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	10/12/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	10/12/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	10/12/2005
Naphthalene	ND	50		µg/L	1	10/12/2005
2-Nitroaniline	ND	250		µg/L	1	10/12/2005
3-Nitroaniline	ND	250		µg/L	1	10/12/2005
4-Nitroaniline	ND	100		µg/L	1	10/12/2005
Nitrobenzene	ND	50		µg/L	1	10/12/2005
2-Nitrophenol	ND	75		µg/L	1	10/12/2005
4-Nitrophenol	ND	250		µg/L	1	10/12/2005
Pentachlorophenol	ND	250		µg/L	1	10/12/2005
Phenanthrene	ND	50		µg/L	1	10/12/2005
Phenol	ND	50		µg/L	1	10/12/2005
Pyrene	ND	75		µg/L	1	10/12/2005
Pyridine	ND	150		µg/L	1	10/12/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	10/12/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	10/12/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	10/12/2005
Surr: 2,4,6-Tribromophenol	77.7	16.6-150		%REC	1	10/12/2005
Surr: 2-Fluorobiphenyl	57.5	19.6-134		%REC	1	10/12/2005
Surr: 2-Fluorophenol	42.5	9.54-113		%REC	1	10/12/2005
Surr: 4-Terphenyl-d14	79.4	22.7-145		%REC	1	10/12/2005
Surr: Nitrobenzene-d5	52.8	14.6-134		%REC	1	10/12/2005
Surr: Phenol-d6	30.4	10.7-80.3		%REC	1	10/12/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	5200	0.010		µmhos/cm	1	10/17/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	10/10/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	10/13/2005 9:10:43 AM
Barium	0.22	0.020		mg/L	1	10/13/2005 9:10:43 AM
Cadmium	ND	0.0020		mg/L	1	10/13/2005 9:10:43 AM
Calcium	82	1.0		mg/L	1	10/13/2005 9:10:43 AM
Chromium	0.022	0.0060		mg/L	1	10/13/2005 9:10:43 AM
Lead	ND	0.0050		mg/L	1	10/13/2005 9:10:43 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep. Water Out
Lab Order: 0510047
Collection Date: 10/6/2005 10:30:00 AM
Project: Stormwater Separator 10-6-05
Lab ID: 0510047-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	19	1.0		mg/L	1	10/13/2005 9:10:43 AM
Potassium	9.9	1.0		mg/L	1	10/13/2005 9:10:43 AM
Selenium	ND	0.050		mg/L	1	10/13/2005 9:10:43 AM
Silver	ND	0.0050		mg/L	1	10/13/2005 9:10:43 AM
Sodium	1000	20		mg/L	20	10/13/2005 10:45:26 AM
EPA METHOD 150.1: PH						Analyst: **MAP**
pH	7.42	0.010		pH units	1	10/18/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R16905** Test Code: **E300** Units: **mg/L** Analysis Date **10/6/2005** Prep Date
Client ID: Run ID: **LC_051006A** SeqNo: **409651**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID **MBLK** Batch ID: **R16984** Test Code: **E300** Units: **mg/L** Analysis Date **10/15/2005** Prep Date
Client ID: Run ID: **LC_051015A** SeqNo: **412124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R17038** Test Code: **E300** Units: **mg/L** Analysis Date **10/21/2005** Prep Date

Client ID: Run ID: **WC_051021D** SeqNo: **413479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8926** Batch ID: **8926** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/13/2005** Prep Date **10/10/2005**
Client ID: Run ID: **ELMO_051013A** SeqNo: **411315**

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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

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
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

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	139.3	0	200	0	69.7	16.6	150	0	
Surr: 2-Fluorobiphenyl	56.6	0	100	0	56.6	19.6	134	0	
Surr: 2-Fluorophenol	93.34	0	200	0	46.7	9.54	113	0	
Surr: 4-Terphenyl-d14	83.88	0	100	0	83.9	22.7	145	0	
Surr: Nitrobenzene-d5	60.54	0	100	0	60.5	14.6	134	0	
Surr: Phenol-d6	68.94	0	200	0	34.5	10.7	80.3	0	

Sample ID **MB-8925** Batch ID: **8925** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/10/2005** Prep Date **10/10/2005**
Client ID: Run ID: **MI-LA254_051010B** SeqNo: **409763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8942** Batch ID: **8942** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/13/2005 9:08:24 AM** Prep Date **10/12/2005**
Client ID: Run ID: **ICP_051013A** SeqNo: **410968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb** Batch ID: **R16896** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/8/2005** Prep Date

Client ID: Run ID: **NEPTUNE_051007A** SeqNo: **409562**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	2									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1	
1,2-Dibromo-3-chloropropane	ND	2	
Dibromochloromethane	ND	1	
Dibromomethane	ND	2	
1,2-Dichlorobenzene	ND	1	
1,3-Dichlorobenzene	ND	1	
1,4-Dichlorobenzene	ND	1	
Dichlorodifluoromethane	ND	1	
1,1-Dichloroethane	ND	1	
1,1-Dichloroethene	ND	1	
1,2-Dichloropropane	ND	1	
1,3-Dichloropropane	ND	1	
2,2-Dichloropropane	ND	1	
1,1-Dichloropropene	ND	1	
Hexachlorobutadiene	ND	1	
2-Hexanone	ND	10	
Isopropylbenzene	ND	1	
4-Isopropyltoluene	ND	1	
4-Methyl-2-pentanone	ND	10	
Methylene Chloride	0.664	3	J
n-Butylbenzene	ND	1	
n-Propylbenzene	ND	1	
sec-Butylbenzene	ND	1	
Styrene	ND	1	
tert-Butylbenzene	ND	1	
1,1,1,2-Tetrachloroethane	ND	1	
1,1,2,2-Tetrachloroethane	ND	1	
Tetrachloroethene (PCE)	ND	1	
trans-1,2-DCE	ND	1	
trans-1,3-Dichloropropene	ND	1	
1,2,3-Trichlorobenzene	ND	1	
1,2,4-Trichlorobenzene	ND	1	
1,1,1-Trichloroethane	ND	1	

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT

Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.296	0	10	0	93.0	69.9	130	0
Surr: 4-Bromofluorobenzene	10.27	0	10	0	103	71.2	123	0
Surr: Dibromofluoromethane	8.812	0	10	0	88.1	73.9	134	0
Surr: Toluene-d8	9.762	0	10	0	97.6	81.9	122	0

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *24-Oct-05*

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R16905** Test Code: **E300** Units: **mg/L** Analysis Date **10/6/2005** Prep Date

Client ID: Run ID: **LC_051006A** SeqNo: **409652**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4824	0.1	0.5	0	96.5	90	110	0			
Chloride	4.836	0.1	5	0	96.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9767	0.1	1	0	97.7	90	110	0			
Nitrogen, Nitrate (As N)	2.46	0.1	2.5	0	98.4	90	110	0			
Phosphorus, Orthophosphate (As P)	5.061	0.5	5	0	101	90	110	0			
Sulfate	9.766	0.5	10	0	97.7	90	110	0			

Sample ID **LCS-ST300-05022** Batch ID: **R16984** Test Code: **E300** Units: **mg/L** Analysis Date **10/15/2005** Prep Date

Client ID: Run ID: **LC_051015A** SeqNo: **412125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4973	0.1	0.5	0	99.5	90	110	0			
Chloride	4.503	0.1	5	0	90.1	90	110	0			
Nitrogen, Nitrite (As N)	0.9194	0.1	1	0	91.9	90	110	0			
Nitrogen, Nitrate (As N)	2.254	0.1	2.5	0	90.2	90	110	0			
Phosphorus, Orthophosphate (As P)	4.599	0.5	5	0	92.0	90	110	0			
Sulfate	9.236	0.5	10	0	92.4	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-ST300-05022** Batch ID: **R17038** Test Code: **E300** Units: **mg/L** Analysis Date **10/21/2005** Prep Date

Client ID: Run ID: **WC_051021D** SeqNo: **413480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4799	0.1	0.5	0	96.0	90	110	0			
Chloride	4.71	0.1	5	0	94.2	90	110	0			
Nitrogen, Nitrite (As N)	0.9544	0.1	1	0	95.4	90	110	0			
Nitrogen, Nitrate (As N)	2.379	0.1	2.5	0	95.2	90	110	0			
Phosphorus, Orthophosphate (As P)	4.757	0.5	5	0	95.1	90	110	0			
Sulfate	9.504	0.5	10	0	95.0	90	110	0			

Sample ID **100ng lcs** Batch ID: **R16896** Test Code: **SW8260B** Units: **µg/L** Analysis Date **10/8/2005** Prep Date

Client ID: Run ID: **NEPTUNE_051007A** SeqNo: **409563**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.19	1	20	0	111	81.4	130	0			
Toluene	18.34	1	20	0	91.7	90.8	128	0			
Chlorobenzene	21.75	1	20	0	109	89.6	134	0			
1,1-Dichloroethene	21.18	1	20	0	106	75.1	120	0			
Trichloroethene (TCE)	20.08	1	20	0	100	75.8	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8926** Batch ID: **8926** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/12/2005** Prep Date **10/10/2005**
Client ID: Run ID: **ELMO_051012A** SeqNo: **410878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	69.98	10	100	0	70.0	11	123	0			
4-Chloro-3-methylphenol	136.9	20	200	0	68.4	15.4	119	0			
2-Chlorophenol	118.9	10	200	0	59.5	12.2	122	0			
1,4-Dichlorobenzene	53.66	10	100	0	53.7	16.9	100	0			
2,4-Dinitrotoluene	72.48	10	100	0	72.5	13	138	0			
N-Nitrosodi-n-propylamine	61.94	10	100	0	61.9	9.93	122	0			
4-Nitrophenol	85.66	50	200	0	42.8	-20.5	87.4	0			
Pentachlorophenol	118	50	200	0	59.0	-0.355	114	0			
Phenol	65.76	10	200	0	32.9	7.53	73.1	0			
Pyrene	69.34	15	100	0	69.3	12.6	140	0			
1,2,4-Trichlorobenzene	57.52	10	100	0	57.5	17.4	98.7	0			

Sample ID **LCSD-8926** Batch ID: **8926** Test Code: **SW8270C** Units: **µg/L** Analysis Date **10/12/2005** Prep Date **10/10/2005**
Client ID: Run ID: **ELMO_051012A** SeqNo: **410879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	60.52	10	100	0	60.5	11	123	69.98	14.5	30.5	
4-Chloro-3-methylphenol	122.1	20	200	0	61.1	15.4	119	136.9	11.4	28.6	
2-Chlorophenol	126.6	10	200	0	63.3	12.2	122	118.9	6.27	107	
1,4-Dichlorobenzene	56.4	10	100	0	56.4	16.9	100	53.66	4.98	62.1	
2,4-Dinitrotoluene	60.94	10	100	0	60.9	13	138	72.48	17.3	14.7	R
N-Nitrosodi-n-propylamine	57.66	10	100	0	57.7	9.93	122	61.94	7.16	30.3	
4-Nitrophenol	71.28	50	200	0	35.6	12.5	87.4	85.66	18.3	36.3	
Pentachlorophenol	108.7	50	200	0	54.4	3.55	114	118	8.19	49	
Phenol	68	10	200	0	34.0	7.53	73.1	65.76	3.35	52.4	
Pyrene	60.06	15	100	0	60.1	12.6	140	69.34	14.3	16.3	
1,2,4-Trichlorobenzene	57.6	10	100	0	57.6	17.4	98.7	57.52	0.139	36.4	

Qualifiers:
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CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8925** Batch ID: **8925** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/10/2005** Prep Date **10/10/2005**
Client ID: Run ID: **MI-LA254_051010B** SeqNo: **409764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005086	0.0002	0.005	0	102	75.2	134	0			

Sample ID **LCSD-8925** Batch ID: **8925** Test Code: **SW7470** Units: **mg/L** Analysis Date **10/10/2005** Prep Date **10/10/2005**
Client ID: Run ID: **MI-LA254_051010B** SeqNo: **409785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005046	0.0002	0.005	0	101	75.2	134	0.005086	0.791	0	

Sample ID **LCS-8942** Batch ID: **8942** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/13/2005 8:57:23 AM** Prep Date **10/12/2005**
Client ID: Run ID: **ICP_051013A** SeqNo: **410965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4832	0.02	0.5	0	96.6	80	120	0			
Barium	0.4715	0.02	0.5	0	94.3	80	120	0			
Cadmium	0.4698	0.002	0.5	0	94.0	80	120	0			
Calcium	47.15	1	50	0	94.3	80	120	0			
Chromium	0.4789	0.006	0.5	0	95.8	80	120	0			
Lead	0.4665	0.005	0.5	0	93.3	80	120	0			
Magnesium	47.03	1	50	0	94.1	80	120	0			
Potassium	48.57	1	50	0	97.1	80	120	0			
Selenium	0.4298	0.05	0.5	0	86.0	80	120	0			
Silver	0.4771	0.005	0.5	0	95.4	80	120	0			
Sodium	49.84	1	50	0	99.7	80	120	0			

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Qualifiers:
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J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0510047
Project: Stormwater Separator 10-6-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8942** Batch ID: **8942** Test Code: **SW6010A** Units: **mg/L** Analysis Date **10/13/2005 9:00:23 AM** Prep Date **10/12/2005**
Client ID: Run ID: **ICP_051013A** SeqNo: **410966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5071	0.02	0.5	0	101	80	120	0.4832	4.81	20	
Barium	0.4918	0.02	0.5	0	98.4	80	120	0.4715	4.21	20	
Cadmium	0.4892	0.002	0.5	0	97.8	80	120	0.4698	4.06	20	
Calcium	49.74	1	50	0	99.5	80	120	47.15	5.36	20	
Chromium	0.4988	0.006	0.5	0	99.8	80	120	0.4789	4.07	20	
Lead	0.4827	0.005	0.5	0	96.5	80	120	0.4665	3.39	20	
Magnesium	49.69	1	50	0	99.4	80	120	47.03	5.49	20	
Potassium	51.22	1	50	0	102	80	120	48.57	5.31	20	
Selenium	0.4515	0.05	0.5	0	90.3	80	120	0.4298	4.91	20	
Silver	0.4964	0.005	0.5	0	99.3	80	120	0.4771	3.96	20	
Sodium	52.86	1	50	0	106	80	120	49.84	5.88	20	

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Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN Date and Time Received: 10/6/2005

Work Order Number 0510047 Received by AT

Checklist completed by _____ Signature Date 10/6/05

Matrix Carrier name Client drop-off

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? 6° *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

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 7223833
Fax #: 505 722 0210

Project Name: Stormwater Separator Water 10-6-05
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 6

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
10/6/05	1030	H_2O	SW Sep. Water out					0510047-1

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
10/6/05	1450	Steve Morris	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature) 10/6/05 14:50

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)	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 Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
							X			X	X	X				

Remarks: RUSH
Gen Chem = Cations, Anions, pH, and Conductivity

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 30, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Stormwater Separator Effluent Water Order No.: 0509109

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 9/12/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Effluent
Lab Order: 0509109
Collection Date: 9/9/2005 11:30:00 AM
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Fluoride	2.1	0.50		mg/L	5	9/13/2005
Chloride	90	0.50		mg/L	5	9/13/2005
Phosphorus, Orthophosphate (As P)	2.6	2.5	H	mg/L	5	9/13/2005
Sulfate	2300	25		mg/L	50	9/16/2005
Nitrate (As N)+Nitrite (As N)	5.0	0.50		mg/L	5	9/15/2005
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	1.9	1.0		mg/L	1	9/21/2005 12:09:57 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/21/2005 12:09:57 PM
Surr: DNOP	126	58-140		%REC	1	9/21/2005 12:09:57 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	3.0	0.25		mg/L	5	9/17/2005 2:18:49 AM
Surr: BFB	113	79.7-118		%REC	5	9/17/2005 2:18:49 AM
EPA METHOD 8260B: VOLATILES						Analyst: **HLM**
Benzene	82	2.0		µg/L	2	9/14/2005
Toluene	290	20		µg/L	20	9/13/2005
Ethylbenzene	35	2.0		µg/L	2	9/14/2005
Methyl tert-butyl ether (MTBE)	3.8	2.0		µg/L	2	9/14/2005
1,2,4-Trimethylbenzene	110	2.0		µg/L	2	9/14/2005
1,3,5-Trimethylbenzene	91	2.0		µg/L	2	9/14/2005
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	9/14/2005
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	9/14/2005
Naphthalene	42	4.0		µg/L	2	9/14/2005
1-Methylnaphthalene	110	8.0		µg/L	2	9/14/2005
2-Methylnaphthalene	99	8.0		µg/L	2	9/14/2005
Acetone	ND	20		µg/L	2	9/14/2005
Bromobenzene	ND	2.0		µg/L	2	9/14/2005
Bromochloromethane	ND	2.0		µg/L	2	9/14/2005
Bromodichloromethane	ND	2.0		µg/L	2	9/14/2005
Bromoform	ND	2.0		µg/L	2	9/14/2005
Bromomethane	ND	4.0		µg/L	2	9/14/2005
2-Butanone	ND	20		µg/L	2	9/14/2005
Carbon disulfide	ND	20		µg/L	2	9/14/2005
Carbon Tetrachloride	ND	2.0		µg/L	2	9/14/2005
Chlorobenzene	ND	2.0		µg/L	2	9/14/2005
Chloroethane	ND	4.0		µg/L	2	9/14/2005
Chloroform	ND	2.0		µg/L	2	9/14/2005
Chloromethane	ND	2.0		µg/L	2	9/14/2005
2-Chlorotoluene	ND	2.0		µg/L	2	9/14/2005
4-Chlorotoluene	ND	2.0		µg/L	2	9/14/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Effluent
Lab Order: 0509109
Collection Date: 9/9/2005 11:30:00 AM
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
cis-1,2-DCE	2.1	2.0		µg/L	2	9/14/2005
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	9/14/2005
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	9/14/2005
Dibromochloromethane	ND	2.0		µg/L	2	9/14/2005
Dibromomethane	ND	4.0		µg/L	2	9/14/2005
1,2-Dichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,3-Dichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,4-Dichlorobenzene	ND	2.0		µg/L	2	9/14/2005
Dichlorodifluoromethane	ND	2.0		µg/L	2	9/14/2005
1,1-Dichloroethane	ND	2.0		µg/L	2	9/14/2005
1,1-Dichloroethene	ND	2.0		µg/L	2	9/14/2005
1,2-Dichloropropane	ND	2.0		µg/L	2	9/14/2005
1,3-Dichloropropane	ND	2.0		µg/L	2	9/14/2005
2,2-Dichloropropane	ND	2.0		µg/L	2	9/14/2005
1,1-Dichloropropene	ND	2.0		µg/L	2	9/14/2005
Hexachlorobutadiene	ND	2.0		µg/L	2	9/14/2005
2-Hexanone	ND	20		µg/L	2	9/14/2005
Isopropylbenzene	14	2.0		µg/L	2	9/14/2005
4-Isopropyltoluene	13	2.0		µg/L	2	9/14/2005
4-Methyl-2-pentanone	ND	20		µg/L	2	9/14/2005
Methylene Chloride	ND	6.0		µg/L	2	9/14/2005
n-Butylbenzene	14	2.0		µg/L	2	9/14/2005
n-Propylbenzene	4.5	2.0		µg/L	2	9/14/2005
sec-Butylbenzene	8.9	2.0		µg/L	2	9/14/2005
Styrene	ND	2.0		µg/L	2	9/14/2005
tert-Butylbenzene	ND	2.0		µg/L	2	9/14/2005
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	9/14/2005
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	2	9/14/2005
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	9/14/2005
trans-1,2-DCE	ND	2.0		µg/L	2	9/14/2005
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	9/14/2005
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	9/14/2005
1,1,1-Trichloroethane	ND	2.0		µg/L	2	9/14/2005
1,1,2-Trichloroethane	ND	2.0		µg/L	2	9/14/2005
Trichloroethene (TCE)	ND	2.0		µg/L	2	9/14/2005
Trichlorofluoromethane	ND	2.0		µg/L	2	9/14/2005
1,2,3-Trichloropropane	ND	4.0		µg/L	2	9/14/2005
Vinyl chloride	ND	2.0		µg/L	2	9/14/2005
Xylenes, Total	850	20		µg/L	20	9/13/2005
Surr: 1,2-Dichloroethane-d4	93.4	87.7-108		%REC	2	9/14/2005
Surr: 4-Bromofluorobenzene	104	88.4-125		%REC	2	9/14/2005

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Effluent
Lab Order: 0509109
Collection Date: 9/9/2005 11:30:00 AM
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Dibromofluoromethane	100	83.1-111		%REC	2	9/14/2005
Surr: Toluene-d8	97.1	85.9-109		%REC	2	9/14/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	10		µg/L	1	9/15/2005
Acenaphthylene	ND	10		µg/L	1	9/15/2005
Aniline	ND	10		µg/L	1	9/15/2005
Anthracene	ND	10		µg/L	1	9/15/2005
Azobenzene	ND	10		µg/L	1	9/15/2005
Benz(a)anthracene	ND	15		µg/L	1	9/15/2005
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2005
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2005
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2005
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2005
Benzoic acid	ND	50		µg/L	1	9/15/2005
Benzyl alcohol	ND	20		µg/L	1	9/15/2005
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2005
Bis(2-chloroethyl)ether	ND	15		µg/L	1	9/15/2005
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	9/15/2005
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	9/15/2005
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2005
Butyl benzyl phthalate	ND	15		µg/L	1	9/15/2005
Carbazole	ND	10		µg/L	1	9/15/2005
4-Chloro-3-methylphenol	ND	20		µg/L	1	9/15/2005
4-Chloroaniline	ND	20		µg/L	1	9/15/2005
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2005
2-Chlorophenol	ND	10		µg/L	1	9/15/2005
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	9/15/2005
Chrysene	ND	15		µg/L	1	9/15/2005
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2005
Di-n-octyl phthalate	ND	15		µg/L	1	9/15/2005
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2005
Dibenzofuran	ND	10		µg/L	1	9/15/2005
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2005
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2005
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2005
3,3'-Dichlorobenzidine	ND	15		µg/L	1	9/15/2005
Diethyl phthalate	ND	10		µg/L	1	9/15/2005
Dimethyl phthalate	ND	10		µg/L	1	9/15/2005
2,4-Dichlorophenol	ND	10		µg/L	1	9/15/2005
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2005
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	9/15/2005
2,4-Dinitrophenol	ND	50		µg/L	1	9/15/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Effluent
Lab Order: 0509109
Collection Date: 9/9/2005 11:30:00 AM
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2005
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2005
Fluoranthene	ND	10		µg/L	1	9/15/2005
Fluorene	ND	10		µg/L	1	9/15/2005
Hexachlorobenzene	ND	10		µg/L	1	9/15/2005
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2005
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2005
Hexachloroethane	ND	10		µg/L	1	9/15/2005
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2005
Isophorone	ND	10		µg/L	1	9/15/2005
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2005
2-Methylphenol	ND	15		µg/L	1	9/15/2005
3+4-Methylphenol	ND	10		µg/L	1	9/15/2005
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2005
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2005
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2005
Naphthalene	ND	10		µg/L	1	9/15/2005
2-Nitroaniline	ND	50		µg/L	1	9/15/2005
3-Nitroaniline	ND	50		µg/L	1	9/15/2005
4-Nitroaniline	ND	20		µg/L	1	9/15/2005
Nitrobenzene	ND	10		µg/L	1	9/15/2005
2-Nitrophenol	ND	15		µg/L	1	9/15/2005
4-Nitrophenol	ND	50		µg/L	1	9/15/2005
Pentachlorophenol	ND	50		µg/L	1	9/15/2005
Phenanthrene	ND	10		µg/L	1	9/15/2005
Phenol	ND	10		µg/L	1	9/15/2005
Pyrene	ND	15		µg/L	1	9/15/2005
Pyridine	ND	30		µg/L	1	9/15/2005
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2005
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2005
2,4,6-Trichlorophenol	ND	15		µg/L	1	9/15/2005
Surr: 2,4,6-Tribromophenol	79.6	16.6-150		%REC	1	9/15/2005
Surr: 2-Fluorobiphenyl	67.4	19.6-134		%REC	1	9/15/2005
Surr: 2-Fluorophenol	44.4	9.54-113		%REC	1	9/15/2005
Surr: 4-Terphenyl-d14	57.4	22.7-145		%REC	1	9/15/2005
Surr: Nitrobenzene-d5	63.4	14.6-134		%REC	1	9/15/2005
Surr: Phenol-d6	29.1	10.7-80.3		%REC	1	9/15/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **MAP**
Specific Conductance	5700	0.010		µmhos/cm	1	9/20/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	ND	0.00020		mg/L	1	9/13/2005

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: SW Sep Effluent
Lab Order: 0509109
Collection Date: 9/9/2005 11:30:00 AM
Project: Stormwater Separator Effluent Water
Lab ID: 0509109-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	9/29/2005 11:05:29 AM
Barium	0.063	0.020		mg/L	1	9/29/2005 11:05:29 AM
Cadmium	ND	0.0020		mg/L	1	9/29/2005 11:05:29 AM
Calcium	58	1.0		mg/L	1	9/29/2005 11:05:29 AM
Chromium	0.0072	0.0060		mg/L	1	9/29/2005 11:05:29 AM
Lead	ND	0.0050		mg/L	1	9/29/2005 11:05:29 AM
Magnesium	14	1.0		mg/L	1	9/29/2005 11:05:29 AM
Potassium	6.2	1.0		mg/L	1	9/29/2005 11:05:29 AM
Selenium	ND	0.050		mg/L	1	9/29/2005 11:05:29 AM
Silver	ND	0.0050		mg/L	1	9/29/2005 11:05:29 AM
Sodium	1200	100		mg/L	100	9/29/2005 12:23:00 PM
EPA METHOD 150.1: PH						Analyst: **MAP**
pH	7.09	0.010		pH units	1	9/23/2005

Qualifiers:

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R16631** Test Code: **E300** Units: **mg/L** Analysis Date **9/12/2005** Prep Date
Client ID: Run ID: **LC_050912A** SeqNo: **399210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID **MBLK** Batch ID: **R16660** Test Code: **E300** Units: **mg/L** Analysis Date **9/14/2005** Prep Date
Client ID: Run ID: **LC_050914A** SeqNo: **400301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID **MBLK** Batch ID: **R16660** Test Code: **E300** Units: **mg/L** Analysis Date **9/14/2005** Prep Date
Client ID: Run ID: **LC_050914A** SeqNo: **400340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R16676** Test Code: **E300** Units: **mg/L** Analysis Date **9/15/2005** Prep Date
Client ID: Run ID: **LC_050915A** SeqNo: **400686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									
Nitrate (As N)+Nitrite (As N)	ND	0.1									

Sample ID **MB-8767** Batch ID: **8767** Test Code: **SW8015** Units: **mg/L** Analysis Date **9/21/2005 10:32:22 AM** Prep Date **9/16/2005**
Client ID: Run ID: **FID(17A) 2_050920A** SeqNo: **402340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.318	0	1	0	132	58	140	0			

Sample ID **RB-II 5ml** Batch ID: **R16692** Test Code: **SW8015** Units: **mg/L** Analysis Date **9/16/2005 11:46:06 PM** Prep Date
Client ID: Run ID: **PIDFID_050916B** SeqNo: **401082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	20.06	0	20	0	100	79.7	118	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8746** Batch ID: **8746** Test Code: **SW8270C** Units: **µg/L** Analysis Date **9/15/2005** Prep Date **9/13/2005**
Client ID: Run ID: **ELMO_050915A** SeqNo: **400760**

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	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
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									

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Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

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
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	10
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

9/21

Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50									
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									
Surr: 2,4,6-Tribromophenol	138.8	0	200	0	69.4	16.6	150	0			
Surr: 2-Fluorobiphenyl	66.54	0	100	0	66.5	19.6	134	0			
Surr: 2-Fluorophenol	124.7	0	200	0	62.4	9.54	113	0			
Surr: 4-Terphenyl-d14	77.86	0	100	0	77.9	22.7	145	0			
Surr: Nitrobenzene-d5	70.12	0	100	0	70.1	14.6	134	0			
Surr: Phenol-d6	86.4	0	200	0	43.2	10.7	80.3	0			

Sample ID **MB-8742** Batch ID: **8742** Test Code: **SW7470** Units: **mg/L** Analysis Date **9/13/2005** Prep Date **9/13/2005**
Client ID: Run ID: **MI-LA254_050913B** SeqNo: **399552**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

10/21

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8823** Batch ID: **8823** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/29/2005 9:53:00 AM** Prep Date **9/27/2005**
Client ID: Run ID: **ICP_050929A** SeqNo: **405128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Lead	ND	0.005									
Magnesium	ND	1									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									

11/21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb** Batch ID: **R16641** Test Code: **SW8260B** Units: **µg/L** Analysis Date **9/13/2005** Prep Date

Client ID: Run ID: **VAL_050913A** SeqNo: **399592**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

12/21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers:
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CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1							
Trichloroethene (TCE)	ND	1							
Trichlorofluoromethane	ND	1							
1,2,3-Trichloropropane	0.482	2							J
Vinyl chloride	ND	1							
Xylenes, Total	ND	1							
Surr: 1,2-Dichloroethane-d4	9.492	0	10	0	94.9	87.7	108	0	
Surr: 4-Bromofluorobenzene	10.42	0	10	0	104	88.4	125	0	
Surr: Dibromofluoromethane	10.09	0	10	0	101	83.1	111	0	
Surr: Toluene-d8	9.582	0	10	0	95.8	85.9	109	0	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *30-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-ST300-05021** Batch ID: **R16631** Test Code: **E300** Units: **mg/L** Analysis Date **9/12/2005** Prep Date

Client ID: Run ID: **LC_050912A** SeqNo: **399211**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5202	0.1	0.5	0	104	90	110	0			
Chloride	4.815	0.1	5	0	96.3	90	110	0			
Phosphorus, Orthophosphate (As P)	4.88	0.5	5	0	97.6	90	110	0			
Sulfate	9.843	0.5	10	0	98.4	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.424	0.1	3.5	0	97.8	90	110	0			

Sample ID **LCS-ST300-05021** Batch ID: **R16660** Test Code: **E300** Units: **mg/L** Analysis Date **9/14/2005** Prep Date

Client ID: Run ID: **LC_050914A** SeqNo: **400302**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4679	0.1	0.5	0	93.6	90	110	0			
Chloride	4.575	0.1	5	0	91.5	90	110	0			
Phosphorus, Orthophosphate (As P)	4.701	0.5	5	0	94.0	90	110	0			
Sulfate	9.279	0.5	10	0	92.8	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.234	0.1	3.5	0	92.4	90	110	0			

Sample ID **LCS ST300-05021** Batch ID: **R16660** Test Code: **E300** Units: **mg/L** Analysis Date **9/14/2005** Prep Date

Client ID: Run ID: **LC_050914A** SeqNo: **400341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.523	0.1	0.5	0	105	90	110	0			
Phosphorus, Orthophosphate (As P)	4.849	0.5	5	0	97.0	90	110	0			
Sulfate	9.705	0.5	10	0	97.1	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.442	0.1	3.5	0	98.3	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-ST300-05021** Batch ID: **R16676** Test Code: **E300** Units: **mg/L** Analysis Date **9/15/2005** Prep Date
Client ID: Run ID: **LC_050915A** SeqNo: **400687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4769	0.1	0.5	0	95.4	90	110	0			
Chloride	4.684	0.1	5	0	93.7	90	110	0			
Phosphorus, Orthophosphate (As P)	4.835	0.5	5	0	96.7	90	110	0			
Sulfate	9.529	0.5	10	0	95.3	90	110	0			
Nitrate (As N)+Nitrite (As N)	3.351	0.1	3.5	0	95.7	90	110	0			

Sample ID **LCS-8767** Batch ID: **8767** Test Code: **SW8015** Units: **mg/L** Analysis Date **9/21/2005 11:05:28 AM** Prep Date **9/16/2005**
Client ID: Run ID: **FID(17A) 2_050920A** SeqNo: **402341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.532	1	5	0	131	81.2	149	0			

Sample ID **LCSD-8767** Batch ID: **8767** Test Code: **SW8015** Units: **mg/L** Analysis Date **9/21/2005 11:36:54 AM** Prep Date **9/16/2005**
Client ID: Run ID: **FID(17A) 2_050920A** SeqNo: **402344**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.253	1	5	0	105	81.2	149	6.532	21.7	23	

Sample ID **GRO lcs 2.5ug** Batch ID: **R16692** Test Code: **SW8015** Units: **mg/L** Analysis Date **9/17/2005 2:49:31 AM** Prep Date
Client ID: Run ID: **PIDFID_050916B** SeqNo: **401084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.553	0.05	0.5	0	111	82.6	114	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **GRO lcsd 2.5ug** Batch ID: **R16692** Test Code: **SW8015** Units: **mg/L** Analysis Date **9/17/2005 3:19:50 AM** Prep Date
Client ID: Run ID: **PIDFID_050916B** SeqNo: **401086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.05	0.5	0	104	82.6	114	0.553	6.15	8.39	

Sample ID **100ng lcs** Batch ID: **R16641** Test Code: **SW8260B** Units: **µg/L** Analysis Date **9/13/2005** Prep Date
Client ID: Run ID: **VAL_050913A** SeqNo: **399600**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.53	1	20	0	92.6	81.4	130	0			
Toluene	21.99	1	20	0	110	90.8	128	0			
Chlorobenzene	21.46	1	20	0	107	89.6	134	0			
1,1-Dichloroethene	19.24	1	20	0	96.2	75.1	120	0			
Trichloroethene (TCE)	17.35	1	20	0	86.7	75.8	110	0			

Sample ID **100ng lcs** Batch ID: **R16656** Test Code: **SW8260B** Units: **µg/L** Analysis Date **9/14/2005** Prep Date
Client ID: Run ID: **VAL_050914B** SeqNo: **400222**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.44	1	20	0	97.2	81.4	130	0			
Toluene	22.94	1	20	0	115	90.8	128	0			
Chlorobenzene	22.42	1	20	0	112	89.6	134	0			
1,1-Dichloroethene	21.96	1	20	0	110	75.1	120	0			
Trichloroethene (TCE)	19.14	1	20	0	95.7	75.8	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8746** Batch ID: **8746** Test Code: **SW8270C** Units: **µg/L** Analysis Date **9/15/2005** Prep Date **9/13/2005**
Client ID: Run ID: **ELMO_050915A** SeqNo: **400761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	73.54	10	100	0	73.5	11	123	0			
4-Chloro-3-methylphenol	149.3	20	200	0	74.7	15.4	119	0			
2-Chlorophenol	145.1	10	200	0	72.6	12.2	122	0			
1,4-Dichlorobenzene	63.92	10	100	0	63.9	16.9	100	0			
2,4-Dinitrotoluene	70.8	10	100	0	70.8	13	138	0			
N-Nitrosodi-n-propylamine	70.74	10	100	0	70.7	9.93	122	0			
4-Nitrophenol	80.04	50	200	0	40.0	-20.5	87.4	0			
Pentachlorophenol	134.3	50	200	0	67.2	-0.355	114	0			
Phenol	89.48	10	200	0	44.7	7.53	73.1	0			
Pyrene	74.06	15	100	0	74.1	12.6	140	0			
1,2,4-Trichlorobenzene	63.66	10	100	0	63.7	17.4	98.7	0			

Sample ID **LCSD-8746** Batch ID: **8746** Test Code: **SW8270C** Units: **µg/L** Analysis Date **9/15/2005** Prep Date **9/13/2005**
Client ID: Run ID: **ELMO_050915A** SeqNo: **400762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.62	10	100	0	75.6	11	123	73.54	2.79	30.5	
4-Chloro-3-methylphenol	153.9	20	200	0	77.0	15.4	119	149.3	3.05	28.6	
2-Chlorophenol	150.3	10	200	0	75.2	12.2	122	145.1	3.55	107	
1,4-Dichlorobenzene	66.08	10	100	0	66.1	16.9	100	63.92	3.32	62.1	
2,4-Dinitrotoluene	76.42	10	100	0	76.4	13	138	70.8	7.63	14.7	
N-Nitrosodi-n-propylamine	68.18	10	100	0	68.2	9.93	122	70.74	3.69	30.3	
4-Nitrophenol	90.32	50	200	0	45.2	12.5	87.4	80.04	12.1	36.3	
Pentachlorophenol	149.8	50	200	0	74.9	3.55	114	134.3	10.9	49	
Phenol	89.98	10	200	0	45.0	7.53	73.1	89.48	0.557	52.4	
Pyrene	73.82	15	100	0	73.8	12.6	140	74.06	0.325	16.3	
1,2,4-Trichlorobenzene	64	10	100	0	64.0	17.4	98.7	63.66	0.533	36.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8742** Batch ID: **8742** Test Code: **SW7470** Units: **mg/L** Analysis Date **9/13/2005** Prep Date **9/13/2005**
Client ID: Run ID: **MI-LA254_050913B** SeqNo: **399553**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004975	0.0002	0.005	0	99.5	75.2	134	0			

Sample ID **LCSD-8742** Batch ID: **8742** Test Code: **SW7470** Units: **mg/L** Analysis Date **9/13/2005** Prep Date **9/13/2005**
Client ID: Run ID: **MI-LA254_050913B** SeqNo: **399577**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00498	0.0002	0.005	0	99.6	75.2	134	0.004975	0.102	0	

Sample ID **LCS-8823** Batch ID: **8823** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/29/2005 9:56:02 AM** Prep Date **9/27/2005**
Client ID: Run ID: **ICP_050929A** SeqNo: **405129**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5041	0.02	0.5	0	101	80	120	0			
Barium	0.4623	0.02	0.5	0	92.5	80	120	0			
Cadmium	0.4612	0.002	0.5	0	92.2	80	120	0			
Calcium	49.25	1	50	0	98.5	80	120	0			
Chromium	0.4698	0.006	0.5	0	94.0	80	120	0			
Lead	0.4653	0.005	0.5	0	93.1	80	120	0			
Magnesium	47.33	1	50	0	94.7	80	120	0			
Potassium	49.46	1	50	0	98.9	80	120	0			
Selenium	0.4445	0.05	0.5	0	88.9	80	120	0			
Silver	0.4625	0.005	0.5	0	92.5	80	120	0			
Sodium	50.78	1	50	0	102	80	120	0			

19/21

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509109
Project: Stormwater Separator Effluent Water

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8823** Batch ID: **8823** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/29/2005 9:58:26 AM** Prep Date **9/27/2005**
Client ID: Run ID: **ICP_050929A** SeqNo: **405130**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4967	0.02	0.5	0	99.3	80	120	0.5041	1.48	20	
Barium	0.466	0.02	0.5	0	93.2	80	120	0.4623	0.785	20	
Cadmium	0.4626	0.002	0.5	0	92.5	80	120	0.4612	0.303	20	
Calcium	49.02	1	50	0	98.0	80	120	49.25	0.463	20	
Chromium	0.4692	0.006	0.5	0	93.8	80	120	0.4698	0.137	20	
Lead	0.4666	0.005	0.5	0	93.3	80	120	0.4653	0.289	20	
Magnesium	47.69	1	50	0	95.4	80	120	47.33	0.776	20	
Potassium	50.23	1	50	0	100	80	120	49.46	1.55	20	
Selenium	0.4472	0.05	0.5	0	89.4	80	120	0.4445	0.593	20	
Silver	0.4677	0.005	0.5	0	93.5	80	120	0.4625	1.11	20	
Sodium	50.07	1	50	0	100	80	120	50.78	1.40	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 9/12/2005

Work Order Number 0509109 | Received by AT

Checklist completed by _____ 9/12/05
Signature | Date

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company – Ciniza
Address: Route 3 Box 7
Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Stormwater Separator Effluent Water
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 1°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3		HEAL No.	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)	RCRA 8 Metals Total	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
9/9/05	1130	H_2O	SW Sep. Effluent					0509109-1			X					X			X	X	X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
9/12/05	0930	Steve Morris	[signature] 9/12/05 0930
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: Gen Chem = Cations, Anions, pH, + Conductivity
RUSH Add GRO/DRO at 4/12

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 21, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Oil/Water Sep. Secondary Containment Wat Order No.: 0509180

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 9/19/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *21-Sep-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	API Sep. 2nd Containment
Lab Order:	0509180	**Collection Date:**	9/15/2005 11:50:00 AM
Project:	Oil/Water Sep. Secondary Containment Water		
Lab ID:	0509180-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HLM
Benzene	150	10		µg/L	10	9/20/2005
Toluene	130	10		µg/L	10	9/20/2005
Ethylbenzene	ND	10		µg/L	10	9/20/2005
Methyl tert-butyl ether (MTBE)	1000	10		µg/L	10	9/20/2005
Xylenes, Total	58	10		µg/L	10	9/20/2005
Surr: 4-Bromofluorobenzene	105	86.1-121		%REC	10	9/20/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *21-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509180
Project: Oil/Water Sep. Secondary Containment Water

QC SUMMARY REPORT
Method Blank

Sample ID 5ml rb | Batch ID: R16716 | Test Code: SW8260B | Units: µg/L | Analysis Date 9/20/2005 | Prep Date
Client ID: | Run ID: VAL_050920A | SeqNo: 401902

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
Xylenes, Total	0.282	1									J
Surr: 4-Bromofluorobenzene	11.21	0	10	0	112	86.1	121	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *21-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509180
Project: Oil/Water Sep. Secondary Containment Water

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID 100ng lcs	Batch ID: R16716	Test Code: SW8260B	Units: µg/L	Analysis Date 9/20/2005	Prep Date
Client ID:		Run ID: VAL_050920A		SeqNo: 401905	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.27	1	20	0	96.4	80	130	0			
Toluene	23.3	1	20	0	117	77	121	0			

3 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 9/19/2005

Work Order Number 0509180 | Received by GLS

Checklist completed by Signature D. Schlappi Date 9-19-05

Matrix | Carrier name Client drop-off

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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☐ Level 4 ☐ Other:

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

Client: Giant Refining Company - Ciniza

Address: Route 3 Box 7 Gallup, NM 87301

Phone #: 505-722-3833

Fax #: 505-722-0210

Project Name: Oil/Water Separator Secondary Containment Water

Project #:

Project Manager: Steve Morris

Sampler: Johnny Sanchez

Sample Temperature: 4°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative HgCl$_2$	Preservative HNO$_3$		HEAL No.	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)	RCRA 8 Metals	Anions (F, Cl, NO$_3$, NO$_2$, PO$_4$, SO$_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021-BTEX				Air Bubbles or Headspace (Y or N)
9/15/05	1150	H_2O	API separator 2nd Containment Water					0509180 -1													X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
9/19/05	0840	Steve Morris	[signature] 9/19/05 @ 840
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH 48hr.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 20, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 9/5/05 Order No.: 0509108

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 9/12/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *20-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0509108
Collection Date: 9/9/2005 11:00:00 AM
Project: AL-2 to EP-1 Week of 9/5/05
Lab ID: 0509108-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	40	9/17/2005 4:20:59 AM
Benzene	ND	5.0		µg/L	10	9/19/2005 9:34:19 AM
Toluene	ND	5.0		µg/L	10	9/19/2005 9:34:19 AM
Ethylbenzene	ND	5.0		µg/L	10	9/19/2005 9:34:19 AM
Xylenes, Total	20	5.0		µg/L	10	9/19/2005 9:34:19 AM
Surr: 4-Bromofluorobenzene	105	82.2-119		%REC	10	9/19/2005 9:34:19 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	100		µg/L	10	9/15/2005
Acenaphthylene	ND	100		µg/L	10	9/15/2005
Aniline	ND	100		µg/L	10	9/15/2005
Anthracene	ND	100		µg/L	10	9/15/2005
Azobenzene	ND	100		µg/L	10	9/15/2005
Benz(a)anthracene	ND	150		µg/L	10	9/15/2005
Benzo(a)pyrene	ND	100		µg/L	10	9/15/2005
Benzo(b)fluoranthene	ND	100		µg/L	10	9/15/2005
Benzo(g,h,i)perylene	ND	100		µg/L	10	9/15/2005
Benzo(k)fluoranthene	ND	100		µg/L	10	9/15/2005
Benzoic acid	ND	500		µg/L	10	9/15/2005
Benzyl alcohol	ND	200		µg/L	10	9/15/2005
Bis(2-chloroethoxy)methane	ND	100		µg/L	10	9/15/2005
Bis(2-chloroethyl)ether	ND	150		µg/L	10	9/15/2005
Bis(2-chloroisopropyl)ether	ND	150		µg/L	10	9/15/2005
Bis(2-ethylhexyl)phthalate	ND	150		µg/L	10	9/15/2005
4-Bromophenyl phenyl ether	ND	100		µg/L	10	9/15/2005
Butyl benzyl phthalate	ND	150		µg/L	10	9/15/2005
Carbazole	ND	100		µg/L	10	9/15/2005
4-Chloro-3-methylphenol	ND	200		µg/L	10	9/15/2005
4-Chloroaniline	ND	200		µg/L	10	9/15/2005
2-Chloronaphthalene	ND	100		µg/L	10	9/15/2005
2-Chlorophenol	ND	100		µg/L	10	9/15/2005
4-Chlorophenyl phenyl ether	ND	150		µg/L	10	9/15/2005
Chrysene	ND	150		µg/L	10	9/15/2005
Di-n-butyl phthalate	ND	100		µg/L	10	9/15/2005
Di-n-octyl phthalate	ND	150		µg/L	10	9/15/2005
Dibenz(a,h)anthracene	ND	100		µg/L	10	9/15/2005
Dibenzofuran	120	100		µg/L	10	9/15/2005
1,2-Dichlorobenzene	ND	100		µg/L	10	9/15/2005
1,3-Dichlorobenzene	ND	100		µg/L	10	9/15/2005
1,4-Dichlorobenzene	ND	100		µg/L	10	9/15/2005
3,3'-Dichlorobenzidine	ND	150		µg/L	10	9/15/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0509108
Collection Date: 9/9/2005 11:00:00 AM
Project: AL-2 to EP-1 Week of 9/5/05
Lab ID: 0509108-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Diethyl phthalate	ND	100		µg/L	10	9/15/2005
Dimethyl phthalate	ND	100		µg/L	10	9/15/2005
2,4-Dichlorophenol	ND	100		µg/L	10	9/15/2005
2,4-Dimethylphenol	ND	100		µg/L	10	9/15/2005
4,6-Dinitro-2-methylphenol	ND	500		µg/L	10	9/15/2005
2,4-Dinitrophenol	ND	500		µg/L	10	9/15/2005
2,4-Dinitrotoluene	ND	100		µg/L	10	9/15/2005
2,6-Dinitrotoluene	ND	100		µg/L	10	9/15/2005
Fluoranthene	ND	100		µg/L	10	9/15/2005
Fluorene	340	100		µg/L	10	9/15/2005
Hexachlorobenzene	ND	100		µg/L	10	9/15/2005
Hexachlorobutadiene	ND	100		µg/L	10	9/15/2005
Hexachlorocyclopentadiene	ND	100		µg/L	10	9/15/2005
Hexachloroethane	ND	100		µg/L	10	9/15/2005
Indeno(1,2,3-cd)pyrene	ND	100		µg/L	10	9/15/2005
Isophorone	ND	100		µg/L	10	9/15/2005
2-Methylnaphthalene	ND	100		µg/L	10	9/15/2005
2-Methylphenol	ND	150		µg/L	10	9/15/2005
3+4-Methylphenol	ND	100		µg/L	10	9/15/2005
N-Nitrosodi-n-propylamine	ND	100		µg/L	10	9/15/2005
N-Nitrosodimethylamine	ND	100		µg/L	10	9/15/2005
N-Nitrosodiphenylamine	ND	100		µg/L	10	9/15/2005
Naphthalene	ND	100		µg/L	10	9/15/2005
2-Nitroaniline	ND	500		µg/L	10	9/15/2005
3-Nitroaniline	ND	500		µg/L	10	9/15/2005
4-Nitroaniline	ND	200		µg/L	10	9/15/2005
Nitrobenzene	ND	100		µg/L	10	9/15/2005
2-Nitrophenol	ND	150		µg/L	10	9/15/2005
4-Nitrophenol	ND	500		µg/L	10	9/15/2005
Pentachlorophenol	ND	500		µg/L	10	9/15/2005
Phenanthrene	390	100		µg/L	10	9/15/2005
Phenol	ND	100		µg/L	10	9/15/2005
Pyrene	ND	150		µg/L	10	9/15/2005
Pyridine	ND	300		µg/L	10	9/15/2005
1,2,4-Trichlorobenzene	ND	100		µg/L	10	9/15/2005
2,4,5-Trichlorophenol	ND	100		µg/L	10	9/15/2005
2,4,6-Trichlorophenol	ND	150		µg/L	10	9/15/2005
Surr: 2,4,6-Tribromophenol	78.4	16.6-150		%REC	10	9/15/2005
Surr: 2-Fluorobiphenyl	88.4	19.6-134		%REC	10	9/15/2005
Surr: 2-Fluorophenol	46.5	9.54-113		%REC	10	9/15/2005
Surr: 4-Terphenyl-d14	73.2	22.7-145		%REC	10	9/15/2005
Surr: Nitrobenzene-d5	70.2	14.6-134		%REC	10	9/15/2005

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0509108
Collection Date: 9/9/2005 11:00:00 AM
Project: AL-2 to EP-1 Week of 9/5/05
Lab ID: 0509108-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: Phenol-d6	30.8	10.7-80.3		%REC	10	9/15/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.012	0.0010		mg/L	5	9/13/2005
EPA METHOD 6010C: DISSOLVED METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	9/19/2005 3:42:11 PM
Arsenic	ND	0.020		mg/L	1	9/19/2005 3:42:11 PM
Beryllium	ND	0.0030		mg/L	1	9/19/2005 3:42:11 PM
Cadmium	ND	0.0020		mg/L	1	9/19/2005 3:42:11 PM
Chromium	0.0070	0.0060		mg/L	1	9/19/2005 3:42:11 PM
Copper	ND	0.0060		mg/L	1	9/19/2005 3:42:11 PM
Lead	ND	0.0050		mg/L	1	9/19/2005 3:42:11 PM
Nickel	0.027	0.010		mg/L	1	9/19/2005 3:42:11 PM
Selenium	ND	0.020		mg/L	1	9/19/2005 3:42:11 PM
Silver	ND	0.0050		mg/L	1	9/19/2005 3:42:11 PM
Thallium	ND	0.010		mg/L	1	9/19/2005 3:42:11 PM
Zinc	0.094	0.050		mg/L	1	9/19/2005 3:42:11 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	9/19/2005 10:23:10 AM
Arsenic	ND	0.020		mg/L	1	9/19/2005 10:23:10 AM
Beryllium	ND	0.0030		mg/L	1	9/19/2005 10:23:10 AM
Cadmium	ND	0.0020		mg/L	1	9/19/2005 10:23:10 AM
Chromium	0.014	0.0060		mg/L	1	9/19/2005 10:23:10 AM
Copper	0.031	0.0060	B	mg/L	1	9/19/2005 10:23:10 AM
Lead	0.0094	0.0050		mg/L	1	9/19/2005 10:23:10 AM
Nickel	0.036	0.010		mg/L	1	9/19/2005 10:23:10 AM
Selenium	ND	0.050		mg/L	1	9/19/2005 10:23:10 AM
Silver	ND	0.0050		mg/L	1	9/19/2005 10:23:10 AM
Thallium	ND	0.010		mg/L	1	9/19/2005 10:23:10 AM
Zinc	1.1	0.25		mg/L	5	9/19/2005 2:33:01 PM

Qualifiers:

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R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *20-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Method Blank

Sample ID **RB-II 5ml** Batch ID: **R16692** Test Code: **SW8021** Units: **µg/L** Analysis Date **9/16/2005 11:46:06 PM** Prep Date
Client ID: Run ID: **PIDFID_050916B** SeqNo: **401074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.26	0	20	0	96.3	82.2	119	0			

Sample ID **Reagent Blank 5m** Batch ID: **R16698** Test Code: **SW8021** Units: **µg/L** Analysis Date **9/19/2005 7:56:38 AM** Prep Date
Client ID: Run ID: **PIDFID_050919A** SeqNo: **401251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.67	0	20	0	98.4	82.2	119	0			

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Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8746** Batch ID: **8746** Test Code: **SW8270C** Units: **µg/L** Analysis Date **9/15/2005** Prep Date **9/13/2005**
Client ID: Run ID: **ELMO_050915A** SeqNo: **400760**

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	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
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									

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Method Blank

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
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	10
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

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Qualifiers: ND - Not Detected at the Reporting Limit
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CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50						
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						
Surr: 2,4,6-Tribromophenol	138.8	0	200	0	69.4	16.6	150	0
Surr: 2-Fluorobiphenyl	66.54	0	100	0	66.5	19.6	134	0
Surr: 2-Fluorophenol	124.7	0	200	0	62.4	9.54	113	0
Surr: 4-Terphenyl-d14	77.86	0	100	0	77.9	22.7	145	0
Surr: Nitrobenzene-d5	70.12	0	100	0	70.1	14.6	134	0
Surr: Phenol-d6	86.4	0	200	0	43.2	10.7	80.3	0

Sample ID **MB-8742** Batch ID: **8742** Test Code: **SW7470** Units: **mg/L** Analysis Date **9/13/2005** Prep Date **9/13/2005**
Client ID: Run ID: **MI-LA254_050913B** SeqNo: **399552**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Method Blank

Sample ID **MB** Batch ID: **R16711** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 3:28:22 PM** Prep Date
Client ID: Run ID: **ICP_050919A** SeqNo: **401491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.02									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

Sample ID **MB-8756** Batch ID: **8756** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 1:46:24 PM** Prep Date **9/15/2005**
Client ID: Run ID: **ICP_050919B** SeqNo: **401724**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	0.05									

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Qualifiers:
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J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8756** Batch ID: **8756** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 10:08:18 AM** Prep Date **9/15/2005**
Client ID: Run ID: **ICP_050919B** SeqNo: **401792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.01014	0.01									J
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	0.01422	0.006									
Lead	0.003863	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									

9/15

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

WOC

Hall Environmental Analysis Laboratory

Date: *20-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **BTEX lcs 100ng** Batch ID: **R16692** Test Code: **SW8021** Units: **µg/L** Analysis Date **9/17/2005 4:51:23 AM** Prep Date

Client ID: Run ID: **PIDFID_050916B** SeqNo: **401076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	15.79	2.5	20	0	79.0	64.5	133	0			
Benzene	20.64	0.5	20	0	103	88.5	114	0			
Toluene	19.66	0.5	20	0	98.3	87.2	114	0			
Ethylbenzene	20.04	0.5	20	0	100	88.6	113	0			
Xylenes, Total	40.66	0.5	40	0	102	83.3	114	0			

Sample ID **BTEX lcsd 100ng** Batch ID: **R16692** Test Code: **SW8021** Units: **µg/L** Analysis Date **9/17/2005 5:22:28 AM** Prep Date

Client ID: Run ID: **PIDFID_050916B** SeqNo: **401078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	15.13	2.5	20	0	75.7	64.5	133	15.79	4.24	28	
Benzene	20.54	0.5	20	0	103	88.5	114	20.64	0.503	27	
Toluene	19.8	0.5	20	0	99.0	87.2	114	19.66	0.696	19	
Ethylbenzene	19.57	0.5	20	0	97.8	88.6	113	20.04	2.38	10	
Xylenes, Total	40.68	0.5	40	0	102	83.3	114	40.66	0.0615	13	

Sample ID **BTEX icv 100ng** Batch ID: **R16698** Test Code: **SW8021** Units: **µg/L** Analysis Date **9/19/2005 8:41:08 PM** Prep Date

Client ID: Run ID: **PIDFID_050919A** SeqNo: **401344**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21.75	2.5	20	0	109	64.5	133	0			
Benzene	19.58	0.5	20	0	97.9	88.5	114	0			
Toluene	19.46	0.5	20	0	97.3	87.2	114	0			
Ethylbenzene	19.87	0.5	20	0	99.4	88.6	113	0			
Xylenes, Total	40.35	0.5	40	0	101	83.3	114	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8746** Batch ID: **8746** Test Code: **SW8270C** Units: **µg/L** Analysis Date **9/15/2005** Prep Date **9/13/2005**
Client ID: Run ID: **ELMO_050915A** SeqNo: **400761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	73.54	10	100	0	73.5	11	123	0			
4-Chloro-3-methylphenol	149.3	20	200	0	74.7	15.4	119	0			
2-Chlorophenol	145.1	10	200	0	72.6	12.2	122	0			
1,4-Dichlorobenzene	63.92	10	100	0	63.9	16.9	100	0			
2,4-Dinitrotoluene	70.8	10	100	0	70.8	13	138	0			
N-Nitrosodi-n-propylamine	70.74	10	100	0	70.7	9.93	122	0			
4-Nitrophenol	80.04	50	200	0	40.0	-20.5	87.4	0			
Pentachlorophenol	134.3	50	200	0	67.2	-0.355	114	0			
Phenol	89.48	10	200	0	44.7	7.53	73.1	0			
Pyrene	74.06	15	100	0	74.1	12.6	140	0			
1,2,4-Trichlorobenzene	63.66	10	100	0	63.7	17.4	98.7	0			

Sample ID **LCSD-8746** Batch ID: **8746** Test Code: **SW8270C** Units: **µg/L** Analysis Date **9/15/2005** Prep Date **9/13/2005**
Client ID: Run ID: **ELMO_050915A** SeqNo: **400762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.62	10	100	0	75.6	11	123	73.54	2.79	30.5	
4-Chloro-3-methylphenol	153.9	20	200	0	77.0	15.4	119	149.3	3.05	28.6	
2-Chlorophenol	150.3	10	200	0	75.2	12.2	122	145.1	3.55	107	
1,4-Dichlorobenzene	66.08	10	100	0	66.1	16.9	100	63.92	3.32	62.1	
2,4-Dinitrotoluene	76.42	10	100	0	76.4	13	138	70.8	7.63	14.7	
N-Nitrosodi-n-propylamine	68.18	10	100	0	68.2	9.93	122	70.74	3.69	30.3	
4-Nitrophenol	90.32	50	200	0	45.2	12.5	87.4	80.04	12.1	36.3	
Pentachlorophenol	149.8	50	200	0	74.9	3.55	114	134.3	10.9	49	
Phenol	89.98	10	200	0	45.0	7.53	73.1	89.48	0.557	52.4	
Pyrene	73.82	15	100	0	73.8	12.6	140	74.06	0.325	16.3	
1,2,4-Trichlorobenzene	64	10	100	0	64.0	17.4	98.7	63.66	0.533	36.4	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8742** Batch ID: **8742** Test Code: **SW7470** Units: **mg/L** Analysis Date **9/13/2005** Prep Date **9/13/2005**
Client ID: Run ID: **MI-LA254_050913B** SeqNo: **399553**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004975	0.0002	0.005	0	99.5	75.2	134	0			

Sample ID **LCSD-8742** Batch ID: **8742** Test Code: **SW7470** Units: **mg/L** Analysis Date **9/13/2005** Prep Date **9/13/2005**
Client ID: Run ID: **MI-LA254_050913B** SeqNo: **399577**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00498	0.0002	0.005	0	99.6	75.2	134	0.004975	0.102	0	

Sample ID **LCS** Batch ID: **R16711** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 3:32:06 PM** Prep Date
Client ID: Run ID: **ICP_050919A** SeqNo: **401492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5185	0.01	0.5	0	104	80	120	0			
Arsenic	0.5378	0.02	0.5	0	108	80	120	0			
Beryllium	0.5245	0.003	0.5	0	105	80	120	0			
Cadmium	0.5256	0.002	0.5	0	105	80	120	0			
Chromium	0.5361	0.006	0.5	0	107	80	120	0			
Copper	0.5297	0.006	0.5	0	106	80	120	0			
Lead	0.5207	0.005	0.5	0	104	80	120	0			
Nickel	0.5092	0.01	0.5	0	102	80	120	0			
Selenium	0.4946	0.02	0.5	0	98.9	80	120	0			
Silver	0.5122	0.005	0.5	0	102	80	120	0			
Thallium	0.5365	0.01	0.5	0	107	80	120	0			
Zinc	0.5184	0.05	0.5	0	104	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD** Batch ID: **R16711** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 3:34:33 PM** Prep Date
Client ID: Run ID: **ICP_050919A** SeqNo: **401493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5293	0.01	0.5	0	106	80	120	0.5185	2.07	20	
Arsenic	0.5345	0.02	0.5	0	107	80	120	0.5378	0.614	20	
Beryllium	0.5239	0.003	0.5	0	105	80	120	0.5245	0.104	20	
Cadmium	0.5313	0.002	0.5	0	106	80	120	0.5256	1.07	20	
Chromium	0.5403	0.006	0.5	0	108	80	120	0.5361	0.773	20	
Copper	0.537	0.006	0.5	0	107	80	120	0.5297	1.37	20	
Lead	0.5208	0.005	0.5	0	104	80	120	0.5207	0.0318	20	
Nickel	0.5125	0.01	0.5	0	103	80	120	0.5092	0.650	20	
Selenium	0.5034	0.02	0.5	0	101	80	120	0.4946	1.76	20	
Silver	0.516	0.005	0.5	0	103	80	120	0.5122	0.732	20	
Thallium	0.5496	0.01	0.5	0	110	80	120	0.5365	2.41	20	
Zinc	0.522	0.05	0.5	0	104	80	120	0.5184	0.686	20	

Sample ID **LCS-8756** Batch ID: **8756** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 1:48:34 PM** Prep Date **9/15/2005**
Client ID: Run ID: **ICP_050919B** SeqNo: **401725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	0.477	0.05	0.5	0	95.4	80	120	0			

Sample ID **LCSD-8756** Batch ID: **8756** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 1:51:03 PM** Prep Date **9/15/2005**
Client ID: Run ID: **ICP_050919B** SeqNo: **401726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	0.474	0.05	0.5	0	94.8	80	120	0.477	0.633	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0509108
Project: AL-2 to EP-1 Week of 9/5/05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8756** Batch ID: **8756** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 10:11:23 AM** Prep Date **9/15/2005**
Client ID: Run ID: **ICP_050919B** SeqNo: **401793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5101	0.01	0.5	0.01014	100	80	120	0			B
Arsenic	0.4947	0.02	0.5	0	98.9	80	120	0			
Beryllium	0.4986	0.003	0.5	0	99.7	80	120	0			
Cadmium	0.4846	0.002	0.5	0	96.9	80	120	0			
Chromium	0.4822	0.006	0.5	0	96.4	80	120	0			
Copper	0.4977	0.006	0.5	0.01422	96.7	80	120	0			B
Lead	0.4805	0.005	0.5	0.003863	95.3	80	120	0			
Nickel	0.4703	0.01	0.5	0	94.1	80	120	0			
Selenium	0.4626	0.05	0.5	0	92.5	80	120	0			
Silver	0.4906	0.005	0.5	0	98.1	80	120	0			
Thallium	0.4981	0.01	0.5	0	99.6	80	120	0			

Sample ID **LCSD-8756** Batch ID: **8756** Test Code: **SW6010A** Units: **mg/L** Analysis Date **9/19/2005 10:14:32 AM** Prep Date **9/15/2005**
Client ID: Run ID: **ICP_050919B** SeqNo: **401794**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.504	0.01	0.5	0.01014	98.8	80	120	0.5101	1.21	20	B
Arsenic	0.4883	0.02	0.5	0	97.7	80	120	0.4947	1.30	20	
Beryllium	0.4965	0.003	0.5	0	99.3	80	120	0.4986	0.407	20	
Cadmium	0.4815	0.002	0.5	0	96.3	80	120	0.4846	0.628	20	
Chromium	0.4786	0.006	0.5	0	95.7	80	120	0.4822	0.742	20	
Copper	0.4952	0.006	0.5	0.01422	96.2	80	120	0.4977	0.510	20	B
Lead	0.4773	0.005	0.5	0.003863	94.7	80	120	0.4805	0.675	20	
Nickel	0.465	0.01	0.5	0	93.0	80	120	0.4703	1.12	20	
Selenium	0.4718	0.05	0.5	0	94.4	80	120	0.4626	1.96	20	
Silver	0.4869	0.005	0.5	0	97.4	80	120	0.4906	0.758	20	
Thallium	0.4983	0.01	0.5	0	99.7	80	120	0.4981	0.0539	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN

Date and Time Received: 9/12/2005

Work Order Number 0509108

Received by AT

Checklist completed by  9/12/05

Signature Date

Matrix

Carrier name Client drop-off

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 _____

_____

_____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza

Project Name: AL-2 to EP-1 Week of Sept. 5th, 2005

Address:

Project #:

Project Manager: Steve Morris

Phone #:

Sampler: Steve Morris

Fax #:

Sample Temperature: /°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
9/9/05	1100	H_2O	AL-2 to EP-1				0509108-1

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
~~9/9/05~~ 9/12/05	0925	Steve Morris	9/12/05 0925
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

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)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 - BTEX + MTBE	PL metals total and dissolved		Air Bubbles or Headspace (Y or N)
											X	X	X		

Remarks: RUSH
Dissolved metal sample filtered in lab
Tallies

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

September 07, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: AL-2 to EP-1 Week of 8-29-05 Order No.: 0508345

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 8/31/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0508345
Collection Date: 8/30/2005 11:00:00 AM
Project: AL-2 to EP-1 Week of 8-29-05
Lab ID: 0508345-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KTM**
Benzene	83	10		µg/L	10	9/6/2005
Toluene	440	10		µg/L	10	9/6/2005
Ethylbenzene	53	10		µg/L	10	9/6/2005
Xylenes, Total	380	10		µg/L	10	9/6/2005
Surr: 4-Bromofluorobenzene	107	86.1-121		%REC	10	9/6/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	6300	4000		µg/L	10	9/5/2005
Acenaphthylene	ND	4000		µg/L	10	9/5/2005
Aniline	ND	4000		µg/L	10	9/5/2005
Anthracene	ND	4000		µg/L	10	9/5/2005
Azobenzene	ND	4000		µg/L	10	9/5/2005
Benz(a)anthracene	ND	6000		µg/L	10	9/5/2005
Benzo(a)pyrene	ND	4000		µg/L	10	9/5/2005
Benzo(b)fluoranthene	ND	4000		µg/L	10	9/5/2005
Benzo(g,h,i)perylene	ND	4000		µg/L	10	9/5/2005
Benzo(k)fluoranthene	ND	4000		µg/L	10	9/5/2005
Benzoic acid	ND	20000		µg/L	10	9/5/2005
Benzyl alcohol	ND	8000		µg/L	10	9/5/2005
Bis(2-chloroethoxy)methane	ND	4000		µg/L	10	9/5/2005
Bis(2-chloroethyl)ether	ND	6000		µg/L	10	9/5/2005
Bis(2-chloroisopropyl)ether	ND	6000		µg/L	10	9/5/2005
Bis(2-ethylhexyl)phthalate	ND	6000		µg/L	10	9/5/2005
4-Bromophenyl phenyl ether	ND	4000		µg/L	10	9/5/2005
Butyl benzyl phthalate	ND	6000		µg/L	10	9/5/2005
Carbazole	ND	4000		µg/L	10	9/5/2005
4-Chloro-3-methylphenol	ND	8000		µg/L	10	9/5/2005
4-Chloroaniline	ND	8000		µg/L	10	9/5/2005
2-Chloronaphthalene	ND	4000		µg/L	10	9/5/2005
2-Chlorophenol	ND	4000		µg/L	10	9/5/2005
4-Chlorophenyl phenyl ether	ND	6000		µg/L	10	9/5/2005
Chrysene	ND	6000		µg/L	10	9/5/2005
Di-n-butyl phthalate	ND	4000		µg/L	10	9/5/2005
Di-n-octyl phthalate	ND	6000		µg/L	10	9/5/2005
Dibenz(a,h)anthracene	ND	4000		µg/L	10	9/5/2005
Dibenzofuran	7200	4000		µg/L	10	9/5/2005
1,2-Dichlorobenzene	ND	4000		µg/L	10	9/5/2005
1,3-Dichlorobenzene	ND	4000		µg/L	10	9/5/2005
1,4-Dichlorobenzene	ND	4000		µg/L	10	9/5/2005
3,3'-Dichlorobenzidine	ND	6000		µg/L	10	9/5/2005
Diethyl phthalate	ND	4000		µg/L	10	9/5/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0508345
Collection Date: 8/30/2005 11:00:00 AM
Project: AL-2 to EP-1 Week of 8-29-05
Lab ID: 0508345-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dimethyl phthalate	ND	4000		µg/L	10	9/5/2005
2,4-Dichlorophenol	ND	4000		µg/L	10	9/5/2005
2,4-Dimethylphenol	ND	4000		µg/L	10	9/5/2005
4,6-Dinitro-2-methylphenol	ND	20000		µg/L	10	9/5/2005
2,4-Dinitrophenol	ND	20000		µg/L	10	9/5/2005
2,4-Dinitrotoluene	ND	4000		µg/L	10	9/5/2005
2,6-Dinitrotoluene	ND	4000		µg/L	10	9/5/2005
Fluoranthene	ND	4000		µg/L	10	9/5/2005
Fluorene	15000	4000		µg/L	10	9/5/2005
Hexachlorobenzene	ND	4000		µg/L	10	9/5/2005
Hexachlorobutadiene	ND	4000		µg/L	10	9/5/2005
Hexachlorocyclopentadiene	ND	4000		µg/L	10	9/5/2005
Hexachloroethane	ND	4000		µg/L	10	9/5/2005
Indeno(1,2,3-cd)pyrene	ND	4000		µg/L	10	9/5/2005
Isophorone	ND	4000		µg/L	10	9/5/2005
2-Methylnaphthalene	57000	4000		µg/L	10	9/5/2005
2-Methylphenol	ND	6000		µg/L	10	9/5/2005
3+4-Methylphenol	ND	4000		µg/L	10	9/5/2005
N-Nitrosodi-n-propylamine	ND	4000		µg/L	10	9/5/2005
N-Nitrosodimethylamine	ND	4000		µg/L	10	9/5/2005
N-Nitrosodiphenylamine	ND	4000		µg/L	10	9/5/2005
Naphthalene	6800	4000		µg/L	10	9/5/2005
2-Nitroaniline	ND	20000		µg/L	10	9/5/2005
3-Nitroaniline	ND	20000		µg/L	10	9/5/2005
4-Nitroaniline	ND	8000		µg/L	10	9/5/2005
Nitrobenzene	ND	4000		µg/L	10	9/5/2005
2-Nitrophenol	ND	6000		µg/L	10	9/5/2005
4-Nitrophenol	ND	20000		µg/L	10	9/5/2005
Pentachlorophenol	ND	20000		µg/L	10	9/5/2005
Phenanthrene	27000	4000		µg/L	10	9/5/2005
Phenol	ND	4000		µg/L	10	9/5/2005
Pyrene	ND	6000		µg/L	10	9/5/2005
Pyridine	ND	12000		µg/L	10	9/5/2005
1,2,4-Trichlorobenzene	ND	4000		µg/L	10	9/5/2005
2,4,5-Trichlorophenol	ND	4000		µg/L	10	9/5/2005
2,4,6-Trichlorophenol	ND	6000		µg/L	10	9/5/2005
Surr: 2,4,6-Tribromophenol	74.2	16.6-150		%REC	10	9/5/2005
Surr: 2-Fluorobiphenyl	88.8	19.6-134		%REC	10	9/5/2005
Surr: 2-Fluorophenol	25.4	9.54-113		%REC	10	9/5/2005
Surr: 4-Terphenyl-d14	72.0	22.7-145		%REC	10	9/5/2005
Surr: Nitrobenzene-d5	96.0	14.6-134		%REC	10	9/5/2005
Surr: Phenol-d6	20.2	10.7-80.3		%REC	10	9/5/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0508345
Collection Date: 8/30/2005 11:00:00 AM
Project: AL-2 to EP-1 Week of 8-29-05
Lab ID: 0508345-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.096	0.0040		mg/L	20	9/7/2005
EPA METHOD 6010C: DISSOLVED METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	9/7/2005 3:38:54 PM
Arsenic	ND	0.020		mg/L	1	9/7/2005 3:38:54 PM
Beryllium	ND	0.0030		mg/L	1	9/7/2005 3:38:54 PM
Cadmium	ND	0.0020		mg/L	1	9/7/2005 3:38:54 PM
Chromium	ND	0.0060		mg/L	1	9/7/2005 3:38:54 PM
Copper	ND	0.0060		mg/L	1	9/7/2005 3:38:54 PM
Lead	ND	0.0050		mg/L	1	9/7/2005 3:38:54 PM
Nickel	0.032	0.010		mg/L	1	9/7/2005 3:38:54 PM
Selenium	ND	0.020		mg/L	1	9/7/2005 3:38:54 PM
Silver	ND	0.0050		mg/L	1	9/7/2005 3:38:54 PM
Thallium	ND	0.010		mg/L	1	9/7/2005 3:38:54 PM
Zinc	ND	0.050		mg/L	1	9/7/2005 3:38:54 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Antimony	ND	0.010		mg/L	1	9/7/2005 3:42:45 PM
Arsenic	0.12	0.020		mg/L	1	9/7/2005 3:42:45 PM
Beryllium	ND	0.0030		mg/L	1	9/7/2005 3:42:45 PM
Cadmium	0.0052	0.0020		mg/L	1	9/7/2005 3:42:45 PM
Chromium	0.15	0.0060		mg/L	1	9/7/2005 3:42:45 PM
Copper	0.96	0.030		mg/L	5	9/7/2005 4:23:35 PM
Lead	0.24	0.0050		mg/L	1	9/7/2005 3:42:45 PM
Nickel	0.31	0.010		mg/L	1	9/7/2005 3:42:45 PM
Selenium	ND	0.050		mg/L	1	9/7/2005 3:42:45 PM
Silver	ND	0.0050		mg/L	1	9/7/2005 3:42:45 PM
Thallium	ND	0.050		mg/L	5	9/7/2005 4:23:35 PM
Zinc	27	2.5		mg/L	50	9/7/2005 4:49:30 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Method Blank

Sample ID: **5mL rb** Batch ID: **R16542** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **9/2/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_050902A** SeqNo: **395636**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Xylenes, Total	ND	1									
Surr: 4-Bromofluorobenzene	10.88	0	10	0	109	86.1	121	0			

Sample ID: **5mL rb-b** Batch ID: **R16559** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **9/6/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_050906A** SeqNo: **395887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Xylenes, Total	ND	1									
Surr: 4-Bromofluorobenzene	10.83	0	10	0	108	86.1	121	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-8645** Batch ID: **8645** Test Code: **SW8270C** Units: **µg/L** Analysis Date: **9/5/2005** Prep Date: **8/31/2005**
Client ID: Run ID: **ELMO_050904A** SeqNo: **395739**

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	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
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									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Method Blank

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
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	10
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

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Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50						
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						
Surr: 2,4,6-Tribromophenol	35.22	0	200	0	17.6	16.6	150	0
Surr: 2-Fluorobiphenyl	67.28	0	100	0	67.3	19.6	134	0
Surr: 2-Fluorophenol	42.88	0	200	0	21.4	9.54	113	0
Surr: 4-Terphenyl-d14	72.48	0	100	0	72.5	22.7	145	0
Surr: Nitrobenzene-d5	69.66	0	100	0	69.7	14.6	134	0
Surr: Phenol-d6	54.02	0	200	0	27.0	10.7	80.3	0

Sample ID: **MB-8699** Batch ID: **8699** Test Code: **SW7470** Units: **mg/L** Analysis Date: **9/7/2005** Prep Date: **9/7/2005**
Client ID: Run ID: **MI-LA254_050907A** SeqNo: **396456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Method Blank

Sample ID: **MB** Batch ID: **R16572** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **9/7/2005 3:05:39 PM** Prep Date:
Client ID: Run ID: **ICP_050907A** SeqNo: **396484**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.02									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-8667** Batch ID: **8667** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **9/7/2005 3:18:12 PM** Prep Date: **9/2/2005**
Client ID: Run ID: **ICP_050907A** SeqNo: **396479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.01									
Arsenic	ND	0.02									
Beryllium	ND	0.003									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Copper	ND	0.006									
Lead	ND	0.005									
Nickel	ND	0.01									
Selenium	ND	0.05									
Silver	ND	0.005									
Thallium	ND	0.01									
Zinc	ND	0.05									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *07-Sep-05*

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **100ng lcs** Batch ID: **R16542** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **9/2/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_050902A** SeqNo: **395645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.98	1	20	0	99.9	80	130	0			
Toluene	20.18	1	20	0	101	77	121	0			

Sample ID: **100ng lcs** Batch ID: **R16559** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **9/6/2005** Prep Date:
Client ID: Run ID: **NEPTUNE_050906A** SeqNo: **395888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.75	1	20	0	98.8	80	130	0			
Toluene	20.72	1	20	0	104	77	121	0			

Sample ID: **LCS-8645** Batch ID: **8645** Test Code: **SW8270C** Units: **µg/L** Analysis Date: **9/5/2005** Prep Date: **8/31/2005**
Client ID: Run ID: **ELMO_050904A** SeqNo: **395740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	73.26	10	100	0	73.3	11	123	0			
4-Chloro-3-methylphenol	143.6	20	200	0	71.8	15.4	119	0			
2-Chlorophenol	134.4	10	200	0	67.2	12.2	122	0			
1,4-Dichlorobenzene	59.08	10	100	0	59.1	16.9	100	0			
2,4-Dinitrotoluene	73.7	10	100	0	73.7	13	138	0			
N-Nitrosodi-n-propylamine	66.8	10	100	0	66.8	9.93	122	0			
4-Nitrophenol	88.14	50	200	0	44.1	-20.5	87.4	0			
Pentachlorophenol	160.4	50	200	0	80.2	-0.355	114	0			
Phenol	76.56	10	200	0	38.3	7.53	73.1	0			
Pyrene	76.84	15	100	0	76.8	12.6	140	0			
1,2,4-Trichlorobenzene	61.3	10	100	0	61.3	17.4	98.7	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-8645** Batch ID: **8645** Test Code: **SW8270C** Units: **µg/L** Analysis Date: **9/5/2005** Prep Date: **8/31/2005**
Client ID: Run ID: **ELMO_050904A** SeqNo: **395741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	75.98	10	100	0	76.0	11	123	73.26	3.65	30.5	
4-Chloro-3-methylphenol	152.6	20	200	0	76.3	15.4	119	143.6	6.08	28.6	
2-Chlorophenol	135.8	10	200	0	67.9	12.2	122	134.4	1.08	107	
1,4-Dichlorobenzene	63	10	100	0	63.0	16.9	100	59.08	6.42	62.1	
2,4-Dinitrotoluene	74.68	10	100	0	74.7	13	138	73.7	1.32	14.7	
N-Nitrosodi-n-propylamine	68.04	10	100	0	68.0	9.93	122	66.8	1.84	30.3	
4-Nitrophenol	87.86	50	200	0	43.9	12.5	87.4	88.14	0.318	36.3	
Pentachlorophenol	157.7	50	200	0	78.8	3.55	114	160.4	1.70	49	
Phenol	78.84	10	200	0	39.4	7.53	73.1	76.56	2.93	52.4	
Pyrene	71.9	15	100	0	71.9	12.6	140	76.84	6.64	16.3	
1,2,4-Trichlorobenzene	64.54	10	100	0	64.5	17.4	98.7	61.3	5.15	36.4	

Sample ID: **LCS-8699** Batch ID: **8699** Test Code: **SW7470** Units: **mg/L** Analysis Date: **9/7/2005** Prep Date: **9/7/2005**
Client ID: Run ID: **MI-LA254_050907A** SeqNo: **396457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005182	0.0002	0.005	0	104	75.2	134	0			

Sample ID: **LCSD-8699** Batch ID: **8699** Test Code: **SW7470** Units: **mg/L** Analysis Date: **9/7/2005** Prep Date: **9/7/2005**
Client ID: Run ID: **MI-LA254_050907A** SeqNo: **396471**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005394	0.0002	0.005	0	108	75.2	134	0.005182	4.01	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD** Batch ID: **R16572** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **9/7/2005 3:27:33 PM** Prep Date:
Client ID: Run ID: **ICP_050907A** SeqNo: **396487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4273	0.01	0.5	0	85.5	80	120	0.4598	7.33	20	
Arsenic	0.4503	0.02	0.5	0	90.1	80	120	0.4892	8.28	20	
Beryllium	0.4503	0.003	0.5	0	90.1	80	120	0.4796	6.31	20	
Cadmium	0.4427	0.002	0.5	0	88.5	80	120	0.4751	7.07	20	
Chromium	0.4381	0.006	0.5	0	87.6	80	120	0.4729	7.63	20	
Copper	0.449	0.006	0.5	0	89.8	80	120	0.4821	7.12	20	
Lead	0.447	0.005	0.5	0	89.4	80	120	0.4778	6.66	20	
Nickel	0.4358	0.01	0.5	0	87.2	80	120	0.4673	6.97	20	
Selenium	0.4072	0.02	0.5	0	81.4	80	120	0.4314	5.78	20	
Silver	0.4468	0.005	0.5	0	89.4	80	120	0.4806	7.27	20	
Thallium	0.4647	0.01	0.5	0	92.9	80	120	0.4925	5.82	20	
Zinc	0.4436	0.05	0.5	0	88.7	80	120	0.4727	6.35	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS** Batch ID: **R16572** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **9/7/2005 3:30:12 PM** Prep Date:

Client ID: Run ID: **ICP_050907A** SeqNo: **396488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.4598	0.01	0.5	0	92.0	80	120	0			
Arsenic	0.4892	0.02	0.5	0	97.8	80	120	0			
Beryllium	0.4796	0.003	0.5	0	95.9	80	120	0			
Cadmium	0.4751	0.002	0.5	0	95.0	80	120	0			
Chromium	0.4729	0.006	0.5	0	94.6	80	120	0			
Copper	0.4821	0.006	0.5	0	96.4	80	120	0			
Lead	0.4778	0.005	0.5	0	95.6	80	120	0			
Nickel	0.4673	0.01	0.5	0	93.5	80	120	0			
Selenium	0.4314	0.02	0.5	0	86.3	80	120	0			
Silver	0.4806	0.005	0.5	0	96.1	80	120	0			
Thallium	0.4925	0.01	0.5	0	98.5	80	120	0			
Zinc	0.4727	0.05	0.5	0	94.5	80	120	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-8667** Batch ID: **8667** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **9/7/2005 3:21:13 PM** Prep Date: **9/2/2005**
Client ID: Run ID: **ICP_050907A** SeqNo: **396480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5224	0.01	0.5	0	104	80	120	0			
Arsenic	0.5295	0.02	0.5	0	106	80	120	0			
Beryllium	0.5269	0.003	0.5	0	105	80	120	0			
Cadmium	0.5108	0.002	0.5	0	102	80	120	0			
Chromium	0.5029	0.006	0.5	0	101	80	120	0			
Copper	0.5189	0.006	0.5	0	104	80	120	0			
Lead	0.5083	0.005	0.5	0	102	80	120	0			
Nickel	0.4979	0.01	0.5	0	99.6	80	120	0			
Selenium	0.5011	0.05	0.5	0	100	80	120	0			
Silver	0.5148	0.005	0.5	0	103	80	120	0			
Thallium	0.5234	0.01	0.5	0	105	80	120	0			
Zinc	0.5017	0.05	0.5	0	100	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508345
Project: AL-2 to EP-1 Week of 8-29-05

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-8667** Batch ID: **8667** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **9/7/2005 3:23:47 PM** Prep Date: **9/2/2005**
Client ID: Run ID: **ICP_050907A** SeqNo: **396481**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5079	0.01	0.5	0	102	80	120	0.5224	2.81	20	
Arsenic	0.5145	0.02	0.5	0	103	80	120	0.5295	2.87	20	
Beryllium	0.5182	0.003	0.5	0	104	80	120	0.5269	1.66	20	
Cadmium	0.5044	0.002	0.5	0	101	80	120	0.5108	1.25	20	
Chromium	0.4965	0.006	0.5	0	99.3	80	120	0.5029	1.28	20	
Copper	0.5115	0.006	0.5	0	102	80	120	0.5189	1.44	20	
Lead	0.5027	0.005	0.5	0	101	80	120	0.5083	1.11	20	
Nickel	0.4874	0.01	0.5	0	97.5	80	120	0.4979	2.13	20	
Selenium	0.4885	0.05	0.5	0	97.7	80	120	0.5011	2.56	20	
Silver	0.5053	0.005	0.5	0	101	80	120	0.5148	1.87	20	
Thallium	0.5211	0.01	0.5	0	104	80	120	0.5234	0.435	20	
Zinc	0.4922	0.05	0.5	0	98.4	80	120	0.5017	1.92	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 8/31/2005

Work Order Number 0508345 | Received by AT

Checklist completed by [signature] Date 8/31/05

Matrix | Carrier name | Client drop-off

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 SM Change RCRA8 Total & Dissolved to PPL Total & Dissolved

& Proj name from A-1 to A-2 /MT 9/1/05

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7
Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: AL-2 to EP-1 Week of 8-29-05
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 3°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	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) PPL AT	~~RCRA 8 Metals~~ Total + Diesel	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 - BTEX				Air Bubbles or Headspace (Y or N)
8/30/05	1100	H_2O	AL-2 to EP-1					0508345-1								X				X	X				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
8/31/05	0855	Steve Morris	[signature] 8/31/05 0855
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

August 31, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Aeration Lagoon 2 Outlet to Evap Pond 1 Order No.: 0508271

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 8/24/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *31-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0508271
Collection Date: 8/23/2005 11:00:00 AM
Project: Aeration Lagoon 2 Outlet to Evap Pond 1
Lab ID: 0508271-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	10		µg/L	10	8/30/2005
Toluene	ND	10		µg/L	10	8/30/2005
Ethylbenzene	ND	10		µg/L	10	8/30/2005
Methyl tert-butyl ether (MTBE)	31	10		µg/L	10	8/30/2005
1,2,4-Trimethylbenzene	57	10		µg/L	10	8/30/2005
1,3,5-Trimethylbenzene	13	10		µg/L	10	8/30/2005
Xylenes, Total	35	10		µg/L	10	8/30/2005
Surr: 1,2-Dichloroethane-d4	93.1	85.3-113		%REC	10	8/30/2005
Surr: 4-Bromofluorobenzene	106	86.1-121		%REC	10	8/30/2005
Surr: Dibromofluoromethane	96.1	80.4-115		%REC	10	8/30/2005
Surr: Toluene-d8	114	84.7-111	S	%REC	10	8/30/2005
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **BL**
Acenaphthene	ND	50		µg/L	1	8/29/2005
Acenaphthylene	ND	50		µg/L	1	8/29/2005
Aniline	ND	50		µg/L	1	8/29/2005
Anthracene	ND	50		µg/L	1	8/29/2005
Azobenzene	ND	50		µg/L	1	8/29/2005
Benz(a)anthracene	ND	75		µg/L	1	8/29/2005
Benzo(a)pyrene	ND	50		µg/L	1	8/29/2005
Benzo(b)fluoranthene	ND	50		µg/L	1	8/29/2005
Benzo(g,h,i)perylene	ND	50		µg/L	1	8/29/2005
Benzo(k)fluoranthene	ND	50		µg/L	1	8/29/2005
Benzoic acid	ND	250		µg/L	1	8/29/2005
Benzyl alcohol	ND	100		µg/L	1	8/29/2005
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	8/29/2005
Bis(2-chloroethyl)ether	ND	75		µg/L	1	8/29/2005
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	8/29/2005
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	8/29/2005
4-Bromophenyl phenyl ether	ND	50		µg/L	1	8/29/2005
Butyl benzyl phthalate	ND	75		µg/L	1	8/29/2005
Carbazole	ND	50		µg/L	1	8/29/2005
4-Chloro-3-methylphenol	ND	100		µg/L	1	8/29/2005
4-Chloroaniline	ND	100		µg/L	1	8/29/2005
2-Chloronaphthalene	ND	50		µg/L	1	8/29/2005
2-Chlorophenol	ND	50		µg/L	1	8/29/2005
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	8/29/2005
Chrysene	ND	75		µg/L	1	8/29/2005
Di-n-butyl phthalate	ND	50		µg/L	1	8/29/2005
Di-n-octyl phthalate	ND	75		µg/L	1	8/29/2005
Dibenz(a,h)anthracene	ND	50		µg/L	1	8/29/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0508271
Collection Date: 8/23/2005 11:00:00 AM
Project: Aeration Lagoon 2 Outlet to Evap Pond 1
Lab ID: 0508271-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Dibenzofuran	ND	50		µg/L	1	8/29/2005
1,2-Dichlorobenzene	ND	50		µg/L	1	8/29/2005
1,3-Dichlorobenzene	ND	50		µg/L	1	8/29/2005
1,4-Dichlorobenzene	ND	50		µg/L	1	8/29/2005
3,3'-Dichlorobenzidine	ND	75		µg/L	1	8/29/2005
Diethyl phthalate	ND	50		µg/L	1	8/29/2005
Dimethyl phthalate	ND	50		µg/L	1	8/29/2005
2,4-Dichlorophenol	ND	50		µg/L	1	8/29/2005
2,4-Dimethylphenol	ND	50		µg/L	1	8/29/2005
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	8/29/2005
2,4-Dinitrophenol	ND	250		µg/L	1	8/29/2005
2,4-Dinitrotoluene	ND	50		µg/L	1	8/29/2005
2,6-Dinitrotoluene	ND	50		µg/L	1	8/29/2005
Fluoranthene	ND	50		µg/L	1	8/29/2005
Fluorene	170	50		µg/L	1	8/29/2005
Hexachlorobenzene	ND	50		µg/L	1	8/29/2005
Hexachlorobutadiene	ND	50		µg/L	1	8/29/2005
Hexachlorocyclopentadiene	ND	50		µg/L	1	8/29/2005
Hexachloroethane	ND	50		µg/L	1	8/29/2005
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	8/29/2005
Isophorone	ND	50		µg/L	1	8/29/2005
2-Methylnaphthalene	ND	50		µg/L	1	8/29/2005
2-Methylphenol	ND	75		µg/L	1	8/29/2005
3+4-Methylphenol	ND	50		µg/L	1	8/29/2005
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	8/29/2005
N-Nitrosodimethylamine	ND	50		µg/L	1	8/29/2005
N-Nitrosodiphenylamine	ND	50		µg/L	1	8/29/2005
Naphthalene	ND	50		µg/L	1	8/29/2005
2-Nitroaniline	ND	250		µg/L	1	8/29/2005
3-Nitroaniline	ND	250		µg/L	1	8/29/2005
4-Nitroaniline	ND	100		µg/L	1	8/29/2005
Nitrobenzene	ND	50		µg/L	1	8/29/2005
2-Nitrophenol	ND	75		µg/L	1	8/29/2005
4-Nitrophenol	ND	250		µg/L	1	8/29/2005
Pentachlorophenol	ND	250		µg/L	1	8/29/2005
Phenanthrene	170	50		µg/L	1	8/29/2005
Phenol	ND	50		µg/L	1	8/29/2005
Pyrene	ND	75		µg/L	1	8/29/2005
Pyridine	ND	150		µg/L	1	8/29/2005
1,2,4-Trichlorobenzene	ND	50		µg/L	1	8/29/2005
2,4,5-Trichlorophenol	ND	50		µg/L	1	8/29/2005
2,4,6-Trichlorophenol	ND	75		µg/L	1	8/29/2005

Qualifiers:
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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *31-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: AL-2 to EP-1
Lab Order: 0508271
Collection Date: 8/23/2005 11:00:00 AM
Project: Aeration Lagoon 2 Outlet to Evap Pond 1
Lab ID: 0508271-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 2,4,6-Tribromophenol	95.6	16.6-150		%REC	1	8/29/2005
Surr: 2-Fluorobiphenyl	75.3	19.6-134		%REC	1	8/29/2005
Surr: 2-Fluorophenol	45.4	9.54-113		%REC	1	8/29/2005
Surr: 4-Terphenyl-d14	75.4	22.7-145		%REC	1	8/29/2005
Surr: Nitrobenzene-d5	68.8	14.6-134		%REC	1	8/29/2005
Surr: Phenol-d6	36.2	10.7-80.3		%REC	1	8/29/2005
EPA METHOD 7470: MERCURY						Analyst: **CMC**
Mercury	0.0013	0.00020		mg/L	1	8/31/2005
EPA METHOD 6010C: DISSOLVED METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	8/31/2005 12:26:19 PM
Barium	0.18	0.020		mg/L	1	8/31/2005 12:26:19 PM
Cadmium	ND	0.0020		mg/L	1	8/31/2005 12:26:19 PM
Chromium	ND	0.0060		mg/L	1	8/31/2005 12:26:19 PM
Lead	ND	0.0050		mg/L	1	8/31/2005 12:26:19 PM
Selenium	ND	0.020		mg/L	1	8/31/2005 12:26:19 PM
Silver	ND	0.0050		mg/L	1	8/31/2005 12:26:19 PM
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Arsenic	ND	0.020		mg/L	1	8/31/2005 11:20:21 AM
Barium	0.36	0.020		mg/L	1	8/31/2005 11:20:21 AM
Cadmium	ND	0.0020		mg/L	1	8/31/2005 11:20:21 AM
Chromium	0.0082	0.0060		mg/L	1	8/31/2005 11:20:21 AM
Lead	0.0075	0.0050		mg/L	1	8/31/2005 11:20:21 AM
Selenium	ND	0.050		mg/L	1	8/31/2005 11:20:21 AM
Silver	ND	0.0050		mg/L	1	8/31/2005 11:20:21 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *31-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb** Batch ID: **R16479** Test Code: **SW8260B** Units: **µg/L** Analysis Date **8/30/2005** Prep Date

Client ID: Run ID: **THOR_050830A** SeqNo: **393534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
Xylenes, Total	ND	1									
Surr: 1,2-Dichloroethane-d4	8.834	0	10	0	88.3	85.3	113	0			
Surr: 4-Bromofluorobenzene	11.07	0	10	0	111	86.1	121	0			
Surr: Dibromofluoromethane	8.58	0	10	0	85.8	80.4	115	0			
Surr: Toluene-d8	10.79	0	10	0	108	84.7	111	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8627** Batch ID: **8627** Test Code: **SW8270C** Units: **µg/L** Analysis Date **8/29/2005** Prep Date **8/26/2005**
Client ID: Run ID: **ELMO_050829A** SeqNo: **393749**

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	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
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									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Method Blank

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
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	10
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

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Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
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							
Surr: 2,4,6-Tribromophenol	160.7	0	200	0	80.4	16.6	150	0	
Surr: 2-Fluorobiphenyl	64.18	0	100	0	64.2	19.6	134	0	
Surr: 2-Fluorophenol	129.9	0	200	0	65.0	9.54	113	0	
Surr: 4-Terphenyl-d14	90.44	0	100	0	90.4	22.7	145	0	
Surr: Nitrobenzene-d5	77.68	0	100	0	77.7	14.6	134	0	
Surr: Phenol-d6	88.46	0	200	0	44.2	10.7	80.3	0	

Sample ID **MB-8650** Batch ID: **8650** Test Code: **SW7470** Units: **mg/L** Analysis Date **8/31/2005** Prep Date **8/31/2005**
Client ID: Run ID: **MI-LA254_050831A** SeqNo: **394015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Method Blank

Sample ID **MB** Batch ID: **R16494** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/31/2005 11:59:16 AM** Prep Date

Client ID: Run ID: **ICP_050831C** SeqNo: **393997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.02866	0.02									
Antimony	ND	0.01									
Arsenic	ND	0.02									
Barium	0.001033	0.02									J
Beryllium	0.0006694	0.003									J
Boron	ND	0.04									
Cadmium	ND	0.002									
Calcium	0.5903	1									J
Chromium	ND	0.006									
Cobalt	ND	0.006									
Copper	ND	0.006									
Iron	0.02793	0.02									
Lead	ND	0.005									
Magnesium	0.1778	1									J
Manganese	0.001599	0.002									J
Molybdenum	0.000748	0.008									J
Nickel	0.001105	0.01									J
Potassium	0.3436	1									J
Selenium	ND	0.02									
Silicon	ND	0.8									
Silver	ND	0.005									
Sodium	0.343	1									J
Strontium	ND	0.006									
Thallium	ND	0.01									
Tin	ND	0.02									
Titanium	0.0007024	0.005									J
Uranium	ND	0.1									
Vanadium	ND	0.05									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Method Blank

Zinc	ND	0.05
Yttrium	98.78	0
Yttrium Radial	99.61	0
Silica	ND	0.8

9/19

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8633** Batch ID: **8633** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/31/2005 11:09:26 AM** Prep Date **8/29/2005**
Client ID: Run ID: **ICP_050831C** SeqNo: **393980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.02									
Antimony	ND	0.01									
Arsenic	ND	0.02									
Barium	ND	0.02									
Beryllium	ND	0.003									
Boron	ND	0.04									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Cobalt	ND	0.006									
Copper	ND	0.006									
Iron	ND	0.05									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	0.001988	0.002									J
Molybdenum	ND	0.008									
Nickel	ND	0.01									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	0.0006273	0.005									J
Sodium	ND	1									
Thallium	ND	0.01									
Tin	ND	0.01									
Titanium	ND	0.005									
Uranium	ND	0.1									
Vanadium	ND	0.05									
Zinc	ND	0.05									
Silica	ND	1.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *31-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0508271-01C DUP** Batch ID: **8650** Test Code: **SW7470** Units: **mg/L** Analysis Date **8/31/2005** Prep Date **8/31/2005**
Client ID: **AL-2 to EP-1** Run ID: **MI-LA254_050831A** SeqNo: **394018**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.001289	0.0002	0	0	0	0	0	0.001294	0.383	20	

Sample ID **0508271-01D DUP** Batch ID: **R16494** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/31/2005 12:30:26 PM** Prep Date
Client ID: **AL-2 to EP-1** Run ID: **ICP_050831C** SeqNo: **394004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02	0	0	0	0	0	0	0	30	
Barium	0.1755	0.02	0	0	0	0	0	0.1758	0.151	30	
Cadmium	ND	0.002	0	0	0	0	0	0	0	30	
Chromium	0.002086	0.006	0	0	0	0	0	0.002768	0	30	J
Lead	ND	0.005	0	0	0	0	0	0	0	30	
Selenium	ND	0.02	0	0	0	0	0	0	0	30	
Silver	ND	0.005	0	0	0	0	0	0	0	30	

11/19

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *31-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID **0508271-01C MS** Batch ID: **8650** Test Code: **SW7470** Units: **mg/L** Analysis Date **8/31/2005** Prep Date **8/31/2005**
Client ID: **AL-2 to EP-1** Run ID: **MI-LA254_050831A** SeqNo: **394019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005086	0.0002	0.005	0.001294	75.8	75.2	134	0			

Sample ID **0508271-01C MSD** Batch ID: **8650** Test Code: **SW7470** Units: **mg/L** Analysis Date **8/31/2005** Prep Date **8/31/2005**
Client ID: **AL-2 to EP-1** Run ID: **MI-LA254_050831A** SeqNo: **394020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005127	0.0002	0.005	0.001294	76.7	75.2	134	0.005086	0.790	20	

12/19

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Date: *31-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **100ng lcs** Batch ID: **R16479** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **8/30/2005** Prep Date:
Client ID: Run ID: **THOR_050830A** SeqNo: **393535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.58	1	20	0	97.9	80	130	0			
Toluene	19.36	1	20	0	96.8	77	121	0			

Sample ID: **100ng lcsd** Batch ID: **R16479** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **8/30/2005** Prep Date:
Client ID: Run ID: **THOR_050830A** SeqNo: **393536**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.85	1	20	0	99.3	80	130	19.58	1.37	15	
Toluene	17.85	1	20	0	89.3	77	121	19.36	8.07	14	

Sample ID: **LCS-8627** Batch ID: **8627** Test Code: **SW8270C** Units: **µg/L** Analysis Date: **8/29/2005** Prep Date: **8/26/2005**
Client ID: Run ID: **ELMO_050829A** SeqNo: **393751**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	68.44	10	100	0	68.4	11	123	0			
4-Chloro-3-methylphenol	135.8	20	200	0	67.9	15.4	119	0			
2-Chlorophenol	133.7	10	200	0	66.9	12.2	122	0			
1,4-Dichlorobenzene	53.68	10	100	0	53.7	16.9	100	0			
2,4-Dinitrotoluene	67.8	10	100	0	67.8	13	138	0			
N-Nitrosodi-n-propylamine	63.98	10	100	0	64.0	9.93	122	0			
4-Nitrophenol	59.06	50	200	0	29.5	-20.5	87.4	0			
Pentachlorophenol	164.2	50	200	0	82.1	-0.355	114	0			
Phenol	79.56	10	200	0	39.8	7.53	73.1	0			
Pyrene	77.02	15	100	0	77.0	12.6	140	0			
1,2,4-Trichlorobenzene	57.42	10	100	0	57.4	17.4	98.7	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-8627** Batch ID: **8627** Test Code: **SW8270C** Units: **µg/L** Analysis Date: **8/29/2005** Prep Date: **8/26/2005**
Client ID: Run ID: **ELMO_050829A** SeqNo: **393753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	67.48	10	100	0	67.5	11	123	68.44	1.41	30.5	
4-Chloro-3-methylphenol	133.1	20	200	0	66.6	15.4	119	135.8	2.01	28.6	
2-Chlorophenol	132.7	10	200	0	66.4	12.2	122	133.7	0.751	107	
1,4-Dichlorobenzene	47.68	10	100	0	47.7	16.9	100	53.68	11.8	62.1	
2,4-Dinitrotoluene	68.52	10	100	0	68.5	13	138	67.8	1.06	14.7	
N-Nitrosodi-n-propylamine	61.64	10	100	0	61.6	9.93	122	63.98	3.73	30.3	
4-Nitrophenol	60.26	50	200	0	30.1	12.5	87.4	59.06	2.01	36.3	
Pentachlorophenol	159.4	50	200	0	79.7	3.55	114	164.2	2.92	49	
Phenol	78.56	10	200	0	39.3	7.53	73.1	79.56	1.26	52.4	
Pyrene	74.16	15	100	0	74.2	12.6	140	77.02	3.78	16.3	
1,2,4-Trichlorobenzene	49.54	10	100	0	49.5	17.4	98.7	57.42	14.7	36.4	

Sample ID: **LCS-8650** Batch ID: **8650** Test Code: **SW7470** Units: **mg/L** Analysis Date: **8/31/2005** Prep Date: **8/31/2005**
Client ID: Run ID: **MI-LA254_050831A** SeqNo: **394016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005142	0.0002	0.005	0	103	75.2	134	0			

Sample ID: **LCSD-8650** Batch ID: **8650** Test Code: **SW7470** Units: **mg/L** Analysis Date: **8/31/2005** Prep Date: **8/31/2005**
Client ID: Run ID: **MI-LA254_050831A** SeqNo: **394021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00498	0.0002	0.005	0	99.6	75.2	134	0.005142	3.19	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS** Batch ID: **R16494** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **8/31/2005 12:02:16 PM** Prep Date:
Client ID: Run ID: **ICP_050831C** SeqNo: **393998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5519	0.01	0.5	0	110	80	120	0			
Arsenic	0.5393	0.02	0.5	0	108	80	120	0			
Barium	0.5312	0.02	0.5	0.001033	106	80	120	0			
Beryllium	0.5206	0.003	0.5	0.0006694	104	80	120	0			
Boron	0.5483	0.04	0.5	0	110	80	120	0			
Cadmium	0.5373	0.002	0.5	0	107	80	120	0			
Calcium	55.1	1	50.5	0.5903	108	80	120	0			
Chromium	0.5369	0.006	0.5	0	107	80	120	0			
Cobalt	0.5875	0.006	0.5	0	117	80	120	0			
Copper	0.5458	0.006	0.5	0	109	80	120	0			
Lead	0.5179	0.005	0.5	0	104	80	120	0			
Magnesium	55.61	1	50.5	0.1778	110	80	120	0			
Manganese	0.4918	0.002	0.5	0.001599	98.0	80	120	0			
Molybdenum	0.5323	0.008	0.5	0.000748	106	80	120	0			
Nickel	0.5076	0.01	0.5	0.001105	101	80	120	0			
Potassium	58.82	1	55	0.3436	106	80	120	0			
Selenium	0.5256	0.02	0.5	0	105	80	120	0			
Silicon	2.531	0.8	2.5	0	101	80	120	0			
Silver	0.5115	0.005	0.5	0	102	80	120	0			
Sodium	60.22	1	50.5	0.343	119	80	120	0			
Thallium	0.5378	0.01	0.5	0	108	80	120	0			
Titanium	0.5161	0.005	0.5	0.0007024	103	80	120	0			
Vanadium	0.5296	0.05	0.5	0	106	80	120	0			
Zinc	0.5256	0.05	0.5	0	105	80	120	0			
Yttrium	92.07	0	100	0	92.1	70	130	0			
Yttrium Radial	98.85	0	100	0	98.9	70	130	0			
Silica	ND	0.8	5.42	0	0	0	0	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD** Batch ID: **R16494** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **8/31/2005 12:08:55 PM** Prep Date:
Client ID: Run ID: **ICP_050831C** SeqNo: **394000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.5328	0.01	0.5	0	107	80	120	0.5519	3.53	20	
Arsenic	0.5251	0.02	0.5	0	105	80	120	0.5393	2.67	20	
Barium	0.5129	0.02	0.5	0.001033	102	80	120	0.5312	3.51	20	
Beryllium	0.5117	0.003	0.5	0.0006694	102	80	120	0.5206	1.72	20	
Boron	0.5438	0.04	0.5	0	109	80	120	0.5483	0.820	20	
Cadmium	0.5194	0.002	0.5	0	104	80	120	0.5373	3.39	20	
Calcium	53.29	1	50.5	0.5903	104	80	120	55.1	3.35	20	
Chromium	0.519	0.006	0.5	0	104	80	120	0.5369	3.40	20	
Cobalt	0.563	0.006	0.5	0	113	80	120	0.5875	4.25	20	
Copper	0.5246	0.006	0.5	0	105	80	120	0.5458	3.96	20	
Lead	0.4988	0.005	0.5	0	99.8	80	120	0.5179	3.74	20	
Magnesium	54.07	1	50.5	0.1778	107	80	120	55.61	2.81	20	
Manganese	0.4741	0.002	0.5	0.001599	94.5	80	120	0.4918	3.67	20	
Molybdenum	0.513	0.008	0.5	0.000748	102	80	120	0.5323	3.69	20	
Nickel	0.4905	0.01	0.5	0.001105	97.9	80	120	0.5076	3.44	20	
Potassium	57.1	1	55	0.3436	103	80	120	58.82	2.97	20	
Selenium	0.4944	0.02	0.5	0	98.9	80	120	0.5256	6.12	20	
Silicon	2.461	0.8	2.5	0	98.4	80	120	2.531	2.79	20	
Silver	0.4925	0.005	0.5	0	98.5	80	120	0.5115	3.77	20	
Sodium	58.29	1	50.5	0.343	115	80	120	60.22	3.27	20	
Thallium	0.517	0.01	0.5	0	103	80	120	0.5378	3.96	20	
Titanium	0.5068	0.005	0.5	0.0007024	101	80	120	0.5161	1.80	20	
Vanadium	0.5105	0.05	0.5	0	102	80	120	0.5296	3.67	20	
Zinc	0.5064	0.05	0.5	0	101	80	120	0.5256	3.73	20	
Yttrium	93.3	0	100	0	93.3	70	130	92.07	1.32	20	
Yttrium Radial	98.78	0	100	0	98.8	70	130	98.85	0.0761	20	
Silica	ND	0.8	5.42	0	0	0	0	0	0	20	

Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-8633** Batch ID: **8633** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **8/31/2005 11:12:29 AM** Prep Date: **8/29/2005**

Client ID: Run ID: **ICP_050831C** SeqNo: **393981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.4826	0.02	0.5	0	96.5	80	120	0			
Antimony	0.5101	0.01	0.5	0	102	80	120	0			
Arsenic	0.4883	0.02	0.5	0	97.7	80	120	0			
Barium	0.4744	0.02	0.5	0	94.9	80	120	0			
Beryllium	0.4934	0.003	0.5	0	98.7	80	120	0			
Boron	0.5043	0.04	0.5	0	101	80	120	0			
Cadmium	0.4772	0.002	0.5	0	95.4	80	120	0			
Calcium	51.31	1	50	0	103	80	120	0			
Chromium	0.4721	0.006	0.5	0	94.4	80	120	0			
Cobalt	0.5164	0.006	0.5	0	103	80	120	0			
Copper	0.4961	0.006	0.5	0	99.2	80	120	0			
Iron	0.4609	0.05	0.5	0	92.2	80	120	0			
Lead	0.4656	0.005	0.5	0	93.1	80	120	0			
Magnesium	51.53	1	50	0	103	80	120	0			
Manganese	0.4481	0.002	0.5	0.001988	89.2	80	120	0			
Molybdenum	0.4815	0.008	0.5	0	96.3	80	120	0			
Nickel	0.4589	0.01	0.5	0	91.8	80	120	0			
Potassium	54.17	1	50	0	108	80	120	0			
Selenium	0.4629	0.05	0.5	0	92.6	80	120	0			
Silver	0.4783	0.005	0.5	0.0006273	95.5	80	120	0			
Sodium	54.98	1	50	0	110	80	120	0			
Thallium	0.4783	0.01	0.5	0	95.7	80	120	0			
Titanium	0.4814	0.005	0.5	0	96.3	80	120	0			
Vanadium	0.4798	0.05	0.5	0	96.0	80	120	0			
Zinc	0.4735	0.05	0.5	0	94.7	80	120	0			
Silica	4.899	1.1	5.42	0	90.4	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508271
Project: Aeration Lagoon 2 Outlet to Evap Pond 1

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-8633** Batch ID: **8633** Test Code: **SW6010A** Units: **mg/L** Analysis Date: **8/31/2005 11:14:54 AM** Prep Date: **8/29/2005**
Client ID: Run ID: **ICP_050831C** SeqNo: **393982**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.4893	0.02	0.5	0	97.9	80	120	0.4826	1.39	20	
Antimony	0.5261	0.01	0.5	0	105	80	120	0.5101	3.07	20	
Arsenic	0.4977	0.02	0.5	0	99.5	80	120	0.4883	1.90	20	
Barium	0.4837	0.02	0.5	0	96.7	80	120	0.4744	1.95	20	
Beryllium	0.4966	0.003	0.5	0	99.3	80	120	0.4934	0.658	20	
Boron	0.5214	0.04	0.5	0	104	80	120	0.5043	3.33	20	
Cadmium	0.4871	0.002	0.5	0	97.4	80	120	0.4772	2.05	20	
Calcium	57.98	1	50	0	116	80	120	51.31	12.2	20	
Chromium	0.4805	0.006	0.5	0	96.1	80	120	0.4721	1.75	20	
Cobalt	0.5246	0.006	0.5	0	105	80	120	0.5164	1.58	20	
Copper	0.5081	0.006	0.5	0	102	80	120	0.4961	2.38	20	
Iron	0.4671	0.05	0.5	0	93.4	80	120	0.4609	1.33	20	
Lead	0.475	0.005	0.5	0	95.0	80	120	0.4656	2.00	20	
Magnesium	58.28	1	50	0	117	80	120	51.53	12.3	20	
Manganese	0.4564	0.002	0.5	0.001988	90.9	80	120	0.4481	1.84	20	
Molybdenum	0.4906	0.008	0.5	0	98.1	80	120	0.4815	1.86	20	
Nickel	0.4666	0.01	0.5	0	93.3	80	120	0.4589	1.64	20	
Selenium	0.4496	0.05	0.5	0	89.9	80	120	0.4629	2.91	20	
Silver	0.4872	0.005	0.5	0.0006273	97.3	80	120	0.4783	1.85	20	
Thallium	0.4944	0.01	0.5	0	98.9	80	120	0.4783	3.32	20	
Titanium	0.4887	0.005	0.5	0	97.7	80	120	0.4814	1.51	20	
Vanadium	0.4876	0.05	0.5	0	97.5	80	120	0.4798	1.63	20	
Zinc	0.4767	0.05	0.5	0	95.3	80	120	0.4735	0.681	20	

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Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 8/24/2005

Work Order Number 0508271 | Received by AT

Checklist completed by Signature _____ Date 8-24-05

Matrix | Carrier name Client drop-off

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? **6°** *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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Aeration Lagoon 2 Outlet to Evap Pond 1
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 6°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
8/23/05	1100	H_2O	AL-2 to EP-1					050827 1 -1

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)	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 Total + Dissolved	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	9021 - BTEX				Air Bubbles or Headspace (Y or N)
							X				X	X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
8/24/05	0900	Steve Morris		
				8/24/05 0900
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks: RUSH

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

August 24, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Evap Pond One Inlet 8-8-2005 Order No.: 0508112

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 8/10/2005 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

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: EP-1-Inlet
Lab Order: 0508112
Collection Date: 8/9/2005 10:30:00 AM
Project: Evap Pond One Inlet 8-8-2005
Lab ID: 0508112-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **CMC**
Fluoride	95	5.0		mg/L	50	8/12/2005
Chloride	1200	5.0		mg/L	50	8/12/2005
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	8/11/2005
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	8/11/2005
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	8/11/2005
Sulfate	820	10		mg/L	20	8/11/2005
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: **CMC**
Specific Conductance	7900	0.010		µmhos/cm	1	8/13/2005
EPA 6010: TOTAL RECOVERABLE METALS						Analyst: **NMO**
Calcium	170	10		mg/L	10	8/15/2005 2:55:03 PM
Magnesium	25	1.0		mg/L	1	8/15/2005 1:21:58 PM
Potassium	670	10		mg/L	10	8/15/2005 2:55:03 PM
Sodium	890	10		mg/L	10	8/15/2005 2:55:03 PM
EPA METHOD 150.1: PH						Analyst: **DK**
pH	9.31	0.010		pH units	1	8/17/2005

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508112
Project: Evap Pond One Inlet 8-8-2005

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R16266** Test Code: **E300** Units: **mg/L** Analysis Date **8/10/2005** Prep Date
Client ID: Run ID: **LC_050810A** SeqNo: **387042**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID **MBLK** Batch ID: **R16266** Test Code: **E300** Units: **mg/L** Analysis Date **8/10/2005** Prep Date
Client ID: Run ID: **LC_050810A** SeqNo: **387086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

2 / 7

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0508112
Project: Evap Pond One Inlet 8-8-2005

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R16281** Test Code: **E300** Units: **mg/L** Analysis Date **8/11/2005** Prep Date
Client ID: Run ID: **LC_050811A** SeqNo: **387530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID **MB-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/15/2005 12:28:52 PM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388298**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	ND	1	0	0	0	0	0	0			
Magnesium	ND	1	0	0	0	0	0	0			
Potassium	ND	1	0	0	0	0	0	0			
Sodium	ND	1	0	0	0	0	0	0			

Sample ID **MB-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/16/2005 8:59:09 AM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	1	0	0	0	0	0	0			

Sample ID **MB-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/16/2005 10:11:42 AM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	ND	1	0	0	0	0	0	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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1080

Hall Environmental Analysis Laboratory

Date: *24-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508112
Project: Evap Pond One Inlet 8-8-2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS** Batch ID: **R16266** Test Code: **E300** Units: **mg/L** Analysis Date **8/10/2005** Prep Date
Client ID: Run ID: **LC_050810A** SeqNo: **387043**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4754	0.1	0.5	0	95.1	90	110	0			
Chloride	4.805	0.1	5	0	96.1	90	110	0			
Nitrogen, Nitrite (As N)	0.9043	0.1	1	0	90.4	90	110	0			
Nitrogen, Nitrate (As N)	2.424	0.1	2.5	0	97.0	90	110	0			
Phosphorus, Orthophosphate (As P)	5.01	0.5	5	0	100	90	110	0			
Sulfate	9.757	0.5	10	0	97.6	90	110	0			

Sample ID **LCS** Batch ID: **R16266** Test Code: **E300** Units: **mg/L** Analysis Date **8/10/2005** Prep Date
Client ID: Run ID: **LC_050810A** SeqNo: **387087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.495	0.1	0.5	0	99.0	90	110	0			
Chloride	4.883	0.1	5	0	97.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9222	0.1	1	0	92.2	90	110	0			
Nitrogen, Nitrate (As N)	2.47	0.1	2.5	0	98.8	90	110	0			
Phosphorus, Orthophosphate (As P)	5.075	0.5	5	0	101	90	110	0			
Sulfate	9.928	0.5	10	0	99.3	90	110	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0508112
Project: Evap Pond One Inlet 8-8-2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS** Batch ID: **R16281** Test Code: **E300** Units: **mg/L** Analysis Date **8/11/2005** Prep Date
Client ID: Run ID: **LC_050811A** SeqNo: **387531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.5179	0.1	0.5	0	104	90	110	0			
Chloride	4.933	0.1	5	0	98.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9318	0.1	1	0	93.2	90	110	0			
Nitrogen, Nitrate (As N)	2.468	0.1	2.5	0	98.7	90	110	0			
Phosphorus, Orthophosphate (As P)	5.083	0.5	5	0	102	90	110	0			
Sulfate	10.07	0.5	10	0	101	90	110	0			

Sample ID **LCS-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/15/2005 12:32:07 PM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388299**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	49.96	1	50	0	99.9	80	120	0			
Magnesium	48.32	1	50	0	96.6	80	120	0			
Potassium	50.07	1	50	0	100	80	120	0			
Sodium	50.32	1	50	0	101	80	120	0			

Sample ID **LCSD-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/15/2005 12:35:41 PM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388300**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	50.74	1	50	0	101	80	120	49.96	1.55	20	
Magnesium	48.87	1	50	0	97.7	80	120	48.32	1.14	20	
Potassium	50.68	1	50	0	101	80	120	50.07	1.21	20	
Sodium	50.68	1	50	0	101	80	120	50.32	0.718	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0508112
Project: Evap Pond One Inlet 8-8-2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/16/2005 9:00:58 AM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	51.04	1	50	0	102	80	120	0			

Sample ID **LCSD-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/16/2005 9:03:45 AM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	51.5	1	50	0	103	80	120	51.04	0.901	20	

Sample ID **LCS-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/16/2005 10:13:56 AM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	50.52	1	50	0	101	80	120	0			

Sample ID **LCSD-8517** Batch ID: **8517** Test Code: **SW6010A** Units: **mg/L** Analysis Date **8/16/2005 10:16:19 AM** Prep Date **8/11/2005**
Client ID: Run ID: **ICP_050815A** SeqNo: **388660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	50.78	1	50	0	102	80	120	50.52	0.509	20	

6/7

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN Date and Time Received: 8/10/2005

Work Order Number 0508112 Received by AT

Checklist completed by _____ 8/10/05
Signature Date

Matrix Carrier name Client drop-off

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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Evap Pond One Inlet 8-8-2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 30

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
8/8/05	1030	H_2O	EP-1-Inlet					0508112-1

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Gen Chem				Air Bubbles or Headspace (Y or N)
												X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
8/10/05	0840	Steve Morris	[illegible] 8/10/05
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: Gen Chem = Cations, Anions, pH, & Conductivity
Caution = ODOR

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

August 12, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Evap Pond 1 & Lagoon 2 8/2005 Order No.: 0508109

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 2 samples on 8/10/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory Date: *12-Aug-05*

CLIENT:	Giant Refining Co
Project:	Evap Pond 1 & Lagoon 2 8/2005
Lab Order:	0508109

CASE NARRATIVE

Analytical Comments for METHOD 8021BTEX_W, SAMPLE 0508109-02a: Sample analyzed at dilution because of foamy matrix.

Hall Environmental Analysis Laboratory

Date: *12-Aug-05*

CLIENT: Giant Refining Co
Project: Evap Pond 1 & Lagoon 2 8/2005
Lab Order: 0508109

Lab ID: 0508109-01
Collection Date: 8/9/2005 1:00:00 PM
Client Sample ID: Evap Pond 1
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	60	50		µg/L	20	8/12/2005 12:58:49 AM
Benzene	1000	10		µg/L	20	8/12/2005 12:58:49 AM
Toluene	76	10		µg/L	20	8/12/2005 12:58:49 AM
Ethylbenzene	ND	10		µg/L	20	8/12/2005 12:58:49 AM
Xylenes, Total	44	10		µg/L	20	8/12/2005 12:58:49 AM
Surr: 4-Bromofluorobenzene	103	82.2-119		%REC	20	8/12/2005 12:58:49 AM

Lab ID: 0508109-02
Collection Date: 8/9/2005 1:15:00 PM
Client Sample ID: Lagoon 2
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	88	13		µg/L	5	8/12/2005 1:29:54 AM
Benzene	3.6	2.5		µg/L	5	8/12/2005 1:29:54 AM
Toluene	8.7	2.5		µg/L	5	8/12/2005 1:29:54 AM
Ethylbenzene	ND	2.5		µg/L	5	8/12/2005 1:29:54 AM
Xylenes, Total	23	2.5		µg/L	5	8/12/2005 1:29:54 AM
Surr: 4-Bromofluorobenzene	103	82.2-119		%REC	5	8/12/2005 1:29:54 AM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *12-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508109
Project: Evap Pond 1 & Lagoon 2 8/2005

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank Batch ID: R16274 Test Code: SW8021 Units: µg/L Analysis Date 8/11/2005 8:37:53 AM Prep Date

Client ID: Run ID: PIDFID_050811A SeqNo: 387374

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.11	0	20	0	90.5	82.2	119	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *12-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0508109
Project: Evap Pond 1 & Lagoon 2 8/2005

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **BTEX lcs 100ng** Batch ID: **R16274** Test Code: **SW8021** Units: µg/L Analysis Date **8/12/2005 2:31:50 AM** Prep Date

Client ID: Run ID: **PIDFID_050811A** SeqNo: **387381**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19.26	2.5	40	0	48.2	64.5	133	0			S
Benzene	18.54	0.5	20	0	92.7	88.5	114	0			
Toluene	18.49	0.5	20	0	92.5	87.2	114	0			
Ethylbenzene	18.43	0.5	20	0	92.2	88.6	113	0			
Xylenes, Total	36.75	0.5	60	0	61.2	83.3	114	0			S

Sample ID **BTEX lcsd 100ng** Batch ID: **R16274** Test Code: **SW8021** Units: µg/L Analysis Date **8/12/2005 3:02:54 AM** Prep Date

Client ID: Run ID: **PIDFID_050811A** SeqNo: **387390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22.99	2.5	40	0	57.5	64.5	133	19.26	17.6	28	S
Benzene	18.04	0.5	20	0	90.2	88.5	114	18.54	2.73	27	
Toluene	17.94	0.5	20	0	89.7	87.2	114	18.49	3.06	19	
Ethylbenzene	18.12	0.5	20	0	90.6	88.6	113	18.43	1.72	10	
Xylenes, Total	36.6	0.5	60	0	61.0	83.3	114	36.75	0.390	13	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 8/10/2005

Work Order Number 0508109 | Received by AT

Checklist completed by _____ 8/10/05
Signature | Date

Matrix | Carrier name Client drop-off

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

QA / QC Package:
Std ☐ Level 4 ☐
Other:

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

Client: Giant Refining Company - Ciniza
Address: Rute 3 Box 7 Gallup, NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Evap. Pond 1 and Lagoon 2 Aug 2005
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 3°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
8/9/05	1300	H_2O	Evap Pond 1					508109-1
"	1315	"	Lagoon 2					-2

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX + MTBE				Air Bubbles or Headspace (Y or N)
												X				
												X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
8/10/05	0840		
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
			8/10/05 0855

Remarks: Caution odor
per steve - Rush samples 8/11/05 @

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

August 09, 2005

Ed Riege
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: TK102 Report & WD of API Separator Soil Order No.: 0507278

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 2 samples on 7/29/2005 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

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

CLIENT: Giant Refining Co
Project: TK102 Report & WD of API Separator Soil
Lab Order: 0507278

CASE NARRATIVE

The API seperator soil sample was received past the EPA 14 day holding time for BTEX analysis.

Hall Environmental Analysis Laboratory

Date: *09-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: TK 102 Sludge
Lab Order: 0507278
Collection Date: 7/28/2005 11:00:00 AM
Project: TK 102 Report & WD of API Separator Soil
Lab ID: 0507278-01
Matrix: SLUDGE

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **KTM**
Benzene	190	5.0		mg/Kg	100	8/1/2005
Toluene	610	10		mg/Kg	200	8/2/2005
Ethylbenzene	110	5.0		mg/Kg	100	8/1/2005
Methyl tert-butyl ether (MTBE)	ND	5.0		mg/Kg	100	8/1/2005
1,2,4-Trimethylbenzene	160	5.0		mg/Kg	100	8/1/2005
1,3,5-Trimethylbenzene	52	5.0		mg/Kg	100	8/1/2005
1,2-Dichloroethane (EDC)	ND	5.0		mg/Kg	100	8/1/2005
1,2-Dibromoethane (EDB)	ND	5.0		mg/Kg	100	8/1/2005
Naphthalene	59	10		mg/Kg	100	8/1/2005
1-Methylnaphthalene	97	20		mg/Kg	100	8/1/2005
2-Methylnaphthalene	150	20		mg/Kg	100	8/1/2005
Acetone	ND	50		mg/Kg	100	8/1/2005
Bromobenzene	ND	5.0		mg/Kg	100	8/1/2005
Bromochloromethane	ND	5.0		mg/Kg	100	8/1/2005
Bromodichloromethane	ND	5.0		mg/Kg	100	8/1/2005
Bromoform	ND	5.0		mg/Kg	100	8/1/2005
Bromomethane	ND	10		mg/Kg	100	8/1/2005
2-Butanone	ND	50		mg/Kg	100	8/1/2005
Carbon disulfide	ND	50		mg/Kg	100	8/1/2005
Carbon tetrachloride	ND	10		mg/Kg	100	8/1/2005
Chlorobenzene	ND	5.0		mg/Kg	100	8/1/2005
Chloroethane	ND	10		mg/Kg	100	8/1/2005
Chloroform	ND	5.0		mg/Kg	100	8/1/2005
Chloromethane	ND	5.0		mg/Kg	100	8/1/2005
2-Chlorotoluene	ND	5.0		mg/Kg	100	8/1/2005
4-Chlorotoluene	ND	5.0		mg/Kg	100	8/1/2005
cis-1,2-DCE	ND	5.0		mg/Kg	100	8/1/2005
cis-1,3-Dichloropropene	ND	5.0		mg/Kg	100	8/1/2005
1,2-Dibromo-3-chloropropane	ND	10		mg/Kg	100	8/1/2005
Dibromochloromethane	ND	5.0		mg/Kg	100	8/1/2005
Dibromomethane	ND	10		mg/Kg	100	8/1/2005
1,2-Dichlorobenzene	ND	5.0		mg/Kg	100	8/1/2005
1,3-Dichlorobenzene	ND	5.0		mg/Kg	100	8/1/2005
1,4-Dichlorobenzene	ND	5.0		mg/Kg	100	8/1/2005
Dichlorodifluoromethane	ND	5.0		mg/Kg	100	8/1/2005
1,1-Dichloroethane	ND	5.0		mg/Kg	100	8/1/2005
1,1-Dichloroethene	ND	5.0		mg/Kg	100	8/1/2005
1,2-Dichloropropane	ND	5.0		mg/Kg	100	8/1/2005
1,3-Dichloropropane	ND	5.0		mg/Kg	100	8/1/2005
2,2-Dichloropropane	ND	5.0		mg/Kg	100	8/1/2005
1,1-Dichloropropene	ND	5.0		mg/Kg	100	8/1/2005

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *09-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: TK 102 Sludge
Lab Order: 0507278
Collection Date: 7/28/2005 11:00:00 AM
Project: TK 102 Report & WD of API Separator Soil
Lab ID: 0507278-01
Matrix: SLUDGE

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	5.0		mg/Kg	100	8/1/2005
2-Hexanone	ND	50		mg/Kg	100	8/1/2005
Isopropylbenzene	21	5.0		mg/Kg	100	8/1/2005
4-Isopropyltoluene	9.6	5.0		mg/Kg	100	8/1/2005
4-Methyl-2-pentanone	ND	50		mg/Kg	100	8/1/2005
Methylene chloride	ND	15		mg/Kg	100	8/1/2005
n-Butylbenzene	ND	5.0		mg/Kg	100	8/1/2005
n-Propylbenzene	37	5.0		mg/Kg	100	8/1/2005
sec-Butylbenzene	9.4	5.0		mg/Kg	100	8/1/2005
Styrene	ND	5.0		mg/Kg	100	8/1/2005
tert-Butylbenzene	ND	5.0		mg/Kg	100	8/1/2005
1,1,1,2-Tetrachloroethane	ND	5.0		mg/Kg	100	8/1/2005
1,1,2,2-Tetrachloroethane	ND	5.0		mg/Kg	100	8/1/2005
Tetrachloroethene (PCE)	ND	5.0		mg/Kg	100	8/1/2005
trans-1,2-DCE	ND	5.0		mg/Kg	100	8/1/2005
trans-1,3-Dichloropropene	ND	5.0		mg/Kg	100	8/1/2005
1,2,3-Trichlorobenzene	ND	5.0		mg/Kg	100	8/1/2005
1,2,4-Trichlorobenzene	ND	5.0		mg/Kg	100	8/1/2005
1,1,1-Trichloroethane	ND	5.0		mg/Kg	100	8/1/2005
1,1,2-Trichloroethane	ND	5.0		mg/Kg	100	8/1/2005
Trichloroethene (TCE)	ND	5.0		mg/Kg	100	8/1/2005
Trichlorofluoromethane	ND	5.0		mg/Kg	100	8/1/2005
1,2,3-Trichloropropane	ND	10		mg/Kg	100	8/1/2005
Vinyl chloride	ND	5.0		mg/Kg	100	8/1/2005
Xylenes, Total	590	5.0		mg/Kg	100	8/1/2005
Surr: 1,2-Dichloroethane-d4	94.7	74.4-113		%REC	100	8/1/2005
Surr: 4-Bromofluorobenzene	90.4	86.2-120		%REC	100	8/1/2005
Surr: Dibromofluoromethane	94.9	77.7-120		%REC	100	8/1/2005
Surr: Toluene-d8	91.1	80.1-113		%REC	100	8/1/2005
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	1.2	0.33		mg/Kg	10	8/1/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	12	2.5		mg/Kg	1	8/3/2005 10:49:55 AM
Barium	320	1.0		mg/Kg	10	8/3/2005 11:56:10 AM
Cadmium	0.26	0.20		mg/Kg	2	8/3/2005 11:53:46 AM
Chromium	450	3.0		mg/Kg	10	8/3/2005 11:56:10 AM
Lead	82	0.50		mg/Kg	2	8/3/2005 11:53:46 AM
Selenium	ND	25		mg/Kg	10	8/3/2005 11:56:10 AM
Silver	ND	0.25		mg/Kg	1	8/3/2005 10:49:55 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *09-Aug-05*

CLIENT: Giant Refining Co
Client Sample ID: API Separator Soil
Lab Order: 0507278
Collection Date: 7/12/2005 2:00:00 PM
Project: TK 102 Report & WD of API Separator Soil
Lab ID: 0507278-02
Matrix: SOIIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.50		mg/Kg	20	8/3/2005 2:58:29 AM
Toluene	ND	0.50		mg/Kg	20	8/3/2005 2:58:29 AM
Ethylbenzene	ND	0.50		mg/Kg	20	8/3/2005 2:58:29 AM
Xylenes, Total	2.2	0.50		mg/Kg	20	8/3/2005 2:58:29 AM
Surr: 4-Bromofluorobenzene	101	87.5-115		%REC	20	8/3/2005 2:58:29 AM
EPA METHOD 7471: MERCURY						Analyst: **CMC**
Mercury	0.23	0.033		mg/Kg	1	8/1/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	ND	25		mg/Kg	10	8/3/2005 12:12:02 PM
Barium	450	1.0		mg/Kg	10	8/3/2005 12:12:02 PM
Cadmium	ND	0.10		mg/Kg	1	8/3/2005 10:53:05 AM
Chromium	4.5	0.30		mg/Kg	1	8/3/2005 10:53:05 AM
Lead	2.3	0.25		mg/Kg	1	8/3/2005 10:53:05 AM
Selenium	ND	2.5		mg/Kg	1	8/3/2005 10:53:05 AM
Silver	ND	0.25		mg/Kg	1	8/3/2005 10:53:05 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *09-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0507278
Project: TK 102 Report & WD of API Separator Soil

QC SUMMARY REPORT
Method Blank

Sample ID **mb-8436** Batch ID: **8436** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/2/2005 7:10:34 PM** Prep Date **7/29/2005**
Client ID: Run ID: **PIDFID_050802A** SeqNo: **385184**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.025									
Toluene	ND	0.025									
Ethylbenzene	ND	0.025									
Xylenes, Total	ND	0.025									
Surr: 4-Bromofluorobenzene	0.9508	0	1	0	95.1	87.5	115	0			

Sample ID **MB-8442** Batch ID: **8442** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/1/2005** Prep Date **8/1/2005**
Client ID: Run ID: **MI-LA254_050801A** SeqNo: **384587**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID **MB-8438** Batch ID: **8438** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/3/2005 9:59:35 AM** Prep Date **8/2/2005**
Client ID: Run ID: **ICP_050803A** SeqNo: **385332**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	ND	0.1									
Cadmium	ND	0.1									
Chromium	0.06017	0.3									J
Lead	ND	0.25									
Selenium	ND	2.5									
Silver	ND	0.25									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Date: *09-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0507278
Project: TK 102 Report & WD of API Separator Soil

QC SUMMARY REPORT
Method Blank

Sample ID **mb-8436** Batch ID: **8436** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **8/1/2005** Prep Date **7/29/2005**
Client ID: Run ID: **NEPTUNE_050801A** SeqNo: **384679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.05									
Toluene	ND	0.05									
Ethylbenzene	ND	0.05									
Methyl tert-butyl ether (MTBE)	ND	0.05									
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	ND	0.05									
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	0.5									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	ND	0.1									
2-Butanone	ND	0.5									
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0507278
Project: TK 102 Report & WD of API Separator Soil

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	0.05
1,2-Dibromo-3-chloropropane	ND	0.1
Dibromochloromethane	ND	0.05
Dibromomethane	ND	0.1
1,2-Dichlorobenzene	ND	0.05
1,3-Dichlorobenzene	ND	0.05
1,4-Dichlorobenzene	ND	0.05
Dichlorodifluoromethane	ND	0.05
1,1-Dichloroethane	ND	0.05
1,1-Dichloroethene	ND	0.05
1,2-Dichloropropane	ND	0.05
1,3-Dichloropropane	ND	0.05
2,2-Dichloropropane	ND	0.05
1,1-Dichloropropene	ND	0.05
Hexachlorobutadiene	ND	0.05
2-Hexanone	ND	0.5
Isopropylbenzene	ND	0.05
4-Isopropyltoluene	ND	0.05
4-Methyl-2-pentanone	ND	0.5
Methylene chloride	ND	0.15
n-Butylbenzene	ND	0.05
n-Propylbenzene	ND	0.05
sec-Butylbenzene	ND	0.05
Styrene	ND	0.05
tert-Butylbenzene	ND	0.05
1,1,1,2-Tetrachloroethane	ND	0.05
1,1,2,2-Tetrachloroethane	ND	0.05
Tetrachloroethene (PCE)	ND	0.05
trans-1,2-DCE	ND	0.05
trans-1,3-Dichloropropene	ND	0.05
1,2,3-Trichlorobenzene	ND	0.05
1,2,4-Trichlorobenzene	ND	0.05
1,1,1-Trichloroethane	ND	0.05

7/12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0507278
Project: TK 102 Report & WD of API Separator Soil

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	0.05						
Trichloroethene (TCE)	ND	0.05						
Trichlorofluoromethane	ND	0.05						
1,2,3-Trichloropropane	ND	0.1						
Vinyl chloride	ND	0.05						
Xylenes, Total	ND	0.05						
Surr: 1,2-Dichloroethane-d4	0.4786	0	0.5	0	95.7	74.4	113	0
Surr: 4-Bromofluorobenzene	0.4897	0	0.5	0	97.9	86.2	120	0
Surr: Dibromofluoromethane	0.5132	0	0.5	0	103	77.7	120	0
Surr: Toluene-d8	0.4697	0	0.5	0	93.9	80.1	113	0

8 / 12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *09-Aug-05*

CLIENT: Giant Refining Co
Work Order: 0507278
Project: TK 102 Report & WD of API Separator Soil

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **lcs-8436** Batch ID: **8436** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/2/2005 7:42:14 PM** Prep Date **7/29/2005**
Client ID: Run ID: **PIDFID_050802A** SeqNo: **385185**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4507	0.025	0.42	0	107	85.6	116	0			
Toluene	2.041	0.025	1.9	0	107	82.4	120	0			
Ethylbenzene	0.41	0.025	0.41	0	100	86.4	111	0			
Xylenes, Total	1.999	0.025	1.9	0	105	78.4	125	0			

Sample ID **BTEX lcs 100ng** Batch ID: **8436** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **8/3/2005 7:30:13 PM** Prep Date
Client ID: Run ID: **PIDFID_050803A** SeqNo: **385475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.9342	0.025	1	0	93.4	85.6	116	0			
Toluene	0.9229	0.025	1	0	92.3	82.4	120	0			
Ethylbenzene	0.9161	0.025	1	0	91.6	86.4	111	0			
Xylenes, Total	1.845	0.025	2	0	92.2	78.4	125	0			

Sample ID **LCS-8436** Batch ID: **8436** Test Code: **SW8260B** Units: **mg/Kg** Analysis Date **8/1/2005** Prep Date **7/29/2005**
Client ID: Run ID: **NEPTUNE_050801A** SeqNo: **384681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.043	0.05	1	0	104	79	133	0			
Toluene	1.118	0.05	1	0	112	74.3	124	0			
Chlorobenzene	1.005	0.05	1	0	100	81.3	126	0			
1,1-Dichloroethene	0.902	0.05	1	0	90.2	71.3	144	0			
Trichloroethene (TCE)	0.9628	0.05	1	0	96.3	70.2	124	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0507278
Project: TK 102 Report & WD of API Separator Soil

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8442** Batch ID: **8442** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/1/2005** Prep Date **8/1/2005**
Client ID: Run ID: **MI-LA254_050801A** SeqNo: **384588**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1601	0.033	0.1667	0	96.1	75	125	0			

Sample ID **LCSD-8442** Batch ID: **8442** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **8/1/2005** Prep Date **8/1/2005**
Client ID: Run ID: **MI-LA254_050801A** SeqNo: **384608**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1635	0.033	0.1667	0	98.1	75	125	0.1601	2.11	20	

Sample ID **LCS-8438** Batch ID: **8438** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/3/2005 10:02:38 AM** Prep Date **8/2/2005**
Client ID: Run ID: **ICP_050803A** SeqNo: **385333**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.92	2.5	25	0	91.7	80	120	0			
Barium	22.15	0.1	25	0	88.6	80	120	0			
Cadmium	22.44	0.1	25	0	89.7	80	120	0			
Chromium	21.77	0.3	25	0.06017	86.9	80	120	0			
Lead	21.82	0.25	25	0	87.3	80	120	0			
Selenium	21.2	2.5	25	0	84.8	80	120	0			
Silver	23.73	0.25	25	0	94.9	80	120	0			

10 / 12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0507278
Project: TK 102 Report & WD of API Separator Soil

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8438** Batch ID: **8438** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **8/3/2005 10:05:51 AM** Prep Date **8/2/2005**
Client ID: Run ID: **ICP_050803A** SeqNo: **385334**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.62	2.5	25	0	98.5	80	120	22.92	7.17	20	
Barium	23.51	0.1	25	0	94.0	80	120	22.15	5.98	20	
Cadmium	23.87	0.1	25	0	95.5	80	120	22.44	6.18	20	
Chromium	23.14	0.3	25	0.06017	92.3	80	120	21.77	6.07	20	
Lead	22.91	0.25	25	0	91.7	80	120	21.82	4.89	20	
Selenium	23.07	2.5	25	0	92.3	80	120	21.2	8.45	20	
Silver	25.29	0.25	25	0	101	80	120	23.73	6.35	20	

11/12

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 7/29/2005

Work Order Number 0507278 | Received by AT

Checklist completed by [signature] 7/29/05
Signature Date

Matrix | Carrier name Client drop-off

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 ☑		
er - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? **12°** *4° C ± 2 Acceptable*
If given sufficient time to cool.

COMMENTS: API Separator Soil sample out of hold time 7/12/05 [initials]

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

rrective Action _____

CHAIN-OF-CUSTODY RECORD

Accreditation Applie
NELAC ☐ USACE ☐
Other:

Client: GIANT REFINERY COMPANY - CINIZA
Address: ROUTE 3 BOX 7 GALLUP, NM 87301
Phone #: 505-722-7833
Fax #: 505-722-0210

Project Name: TK 102 REPORT + WASTE DETERMINATION OF API SEPARATOR SOIL
Project #:
Project Manager: ED RIEGE
Sampler: Johnny Sanchez
Sample Temperature: 12°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative H_gCl_2	Preservative HNO_3	HEAL No.
~~7-28-05~~	~~11 AM~~	~~BLACK SLUDGE~~	~~TK102 SLUDGE~~	~~2 JARS~~			
7-28-05	11 AM	BLACK SLUDGE	TK102 SLUDGE	2 JARS			0507278-1
7-12-05	2 PM	SOIL	API SEPARATOR SOIL	2 JARS			-2

Date	Time	Relinquished By: (Signature)	Remarks:
7-29-05	0840		7/29/05 0840
Date:	Time:	Relinquished By: (Signature)	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

ANALYSIS REQUEST

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_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)	8021 BTEX	ALSO SEE ATTACHED LIST		Air Bubbles or Headspace (Y or N)
							~~X~~						~~X~~			
							X						X	X		
							X						X			

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

July 28, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Waste Det. Plat. Guard Bed Catalyst Order No.: 0506295

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 6/30/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *28-Jul-05*

CLIENT: Giant Refining Co
Client Sample ID: Plat Guard Bed
Lab Order: 0506295
Collection Date: 6/28/2005 2:00:00 PM
Project: Waste Det. Plat. Guard Bed Catalyst
Lab ID: 0506295-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	32	2.5		mg/Kg	100	7/5/2005 11:12:10 PM
Toluene	500	2.5		mg/Kg	100	7/5/2005 11:12:10 PM
Ethylbenzene	120	2.5		mg/Kg	100	7/5/2005 11:12:10 PM
Xylenes, Total	860	2.5		mg/Kg	100	7/5/2005 11:12:10 PM
Surr: 4-Bromofluorobenzene	110	87.4-116		%REC	100	7/5/2005 11:12:10 PM
EPA METHOD 7471: MERCURY						Analyst: **MAP**
Mercury	0.66	0.33		mg/Kg	10	7/8/2005
EPA METHOD 6010C: SOIL METALS						Analyst: **NMO**
Arsenic	120	25		mg/Kg	10	7/7/2005 12:22:58 PM
Barium	38	1.0		mg/Kg	10	7/7/2005 12:22:58 PM
Cadmium	ND	130		mg/Kg	50	7/14/2005 10:08:36 AM
Chromium	73	3.0		mg/Kg	10	7/7/2005 12:22:58 PM
Lead	ND	130		mg/Kg	50	7/14/2005 10:08:36 AM
Selenium	ND	25		mg/Kg	10	7/7/2005 12:22:58 PM
Silver	ND	2.5		mg/Kg	10	7/7/2005 12:22:58 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *28-Jul-05*

CLIENT: Giant Refining Co
Work Order: 0506295
Project: Waste Det. Plat. Guard Bed Catalyst

QC SUMMARY REPORT
Method Blank

Sample ID **MB-8256**	Batch ID: **8256**	Test Code: **SW8021**	Units: **mg/Kg**	Analysis Date **7/5/2005 6:54:33 PM**	Prep Date **6/30/2005**
Client ID:		Run ID: **PIDFID_050705A**		SeqNo: **377166**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.025									
Toluene	ND	0.025									
Ethylbenzene	ND	0.025									
Xylenes, Total	ND	0.025									
Surr: 4-Bromofluorobenzene	0.9323	0	1	0	93.2	87.4	116	0			

Sample ID **MB-8307**	Batch ID: **8307**	Test Code: **SW7471**	Units: **mg/Kg**	Analysis Date **7/8/2005**	Prep Date **7/8/2005**
Client ID:		Run ID: **MI-LA254_050708A**		SeqNo: **378149**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.033									

Sample ID **MB-8277**	Batch ID: **8277**	Test Code: **SW6010A**	Units: **mg/Kg**	Analysis Date **7/6/2005 4:55:35 PM**	Prep Date **7/5/2005**
Client ID:		Run ID: **ICP_050706B**		SeqNo: **377410**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	ND	0.1									
Cadmium	ND	0.1									
Chromium	ND	0.3									
Selenium	ND	2.5									
Silver	ND	0.25									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Giant Refining Co
Work Order: 0506295
Project: Waste Det. Plat. Guard Bed Catalyst

QC SUMMARY REPORT
Method Blank

Sample ID MB-8277	Batch ID: 8277	Test Code: SW6010A	Units: mg/Kg	Analysis Date 7/6/2005 4:55:35 PM	Prep Date 7/5/2005
Client ID:		Run ID: ICP_050706B		SeqNo: 377474	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID MB-8277	Batch ID: 8277	Test Code: SW6010A	Units: mg/Kg	Analysis Date 7/7/2005 9:55:01 AM	Prep Date 7/5/2005
Client ID:		Run ID: ICP_050707B		SeqNo: 377727	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	2.5									
Barium	ND	0.1									
Cadmium	ND	0.1									
Chromium	ND	0.3									
Selenium	ND	2.5									
Silver	ND	0.25									

Sample ID MB-8277	Batch ID: 8277	Test Code: SW6010A	Units: mg/Kg	Analysis Date 7/7/2005 9:55:01 AM	Prep Date 7/5/2005
Client ID:		Run ID: ICP_050713A		SeqNo: 379303	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

3 / 8

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *28-Jul-05*

CLIENT: Giant Refining Co
Work Order: 0506295
Project: Waste Det. Plat. Guard Bed Catalyst

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-8256** Batch ID: **8256** Test Code: **SW8021** Units: **mg/Kg** Analysis Date **7/5/2005 7:27:13 PM** Prep Date **6/30/2005**
Client ID: Run ID: **PIDFID_050705A** SeqNo: **377167**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.4211	0.025	0.42	0	100	83.4	113	0			
Toluene	1.963	0.025	1.9	0	103	86.3	118	0			
Ethylbenzene	0.3865	0.025	0.41	0	94.3	81.7	113	0			
Xylenes, Total	1.81	0.025	1.9	0	95.3	86.9	112	0			

Sample ID **LCS-8307** Batch ID: **8307** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **7/8/2005** Prep Date **7/8/2005**
Client ID: Run ID: **MI-LA254_050708A** SeqNo: **378150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	108	75	125	0			

Sample ID **LCSD-8307** Batch ID: **8307** Test Code: **SW7471** Units: **mg/Kg** Analysis Date **7/8/2005** Prep Date **7/8/2005**
Client ID: Run ID: **MI-LA254_050708A** SeqNo: **378654**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1419	0.033	0.1667	0	85.1	75	125	0.18	23.7	20	R

Sample ID **LCS-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/6/2005 4:58:47 PM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050706B** SeqNo: **377411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.71	2.5	25	0	98.8	80	120	0			
Barium	23.01	0.1	25	0	92.0	80	120	0			
Cadmium	23.69	0.1	25	0	94.8	80	120	0			
Chromium	23.7	0.3	25	0	94.8	80	120	0			
Selenium	22.83	2.5	25	0	91.3	80	120	0			
Silver	23.91	0.25	25	0	95.6	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506295
Project: Waste Det. Plat. Guard Bed Catalyst

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/6/2005 5:01:55 PM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050706B** SeqNo: **377412**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.86	2.5	25	0	99.4	80	120	24.71	0.591	20	
Barium	23	0.1	25	0	92.0	80	120	23.01	0.0693	20	
Cadmium	23.48	0.1	25	0	93.9	80	120	23.69	0.888	20	
Chromium	23.42	0.3	25	0	93.7	80	120	23.7	1.21	20	
Selenium	22.72	2.5	25	0	90.9	80	120	22.83	0.486	20	
Silver	23.96	0.25	25	0	95.9	80	120	23.91	0.242	20	

Sample ID **LCS-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/6/2005 4:58:47 PM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050706B** SeqNo: **377475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	22.91	0.25	25	0	91.6	80	120	0			

Sample ID **LCSD-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/6/2005 5:01:55 PM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050706B** SeqNo: **377476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	22.65	0.25	25	0	90.6	80	120	22.91	1.13	20	

5 / 8

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506295
Project: Waste Det. Plat. Guard Bed Catalyst

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/7/2005 9:58:12 AM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050707B** SeqNo: **377728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	27.23	2.5	25	0	109	80	120	0			
Barium	25.4	0.1	25	0	102	80	120	0			
Cadmium	26.01	0.1	25	0	104	80	120	0			
Chromium	26.24	0.3	25	0	105	80	120	0			
Selenium	26.1	2.5	25	0	104	80	120	0			
Silver	26.06	0.25	25	0	104	80	120	0			

Sample ID **LCSD-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/7/2005 10:01:22 AM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050707B** SeqNo: **377729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	27.59	2.5	25	0	110	80	120	27.23	1.34	20	
Barium	25.48	0.1	25	0	102	80	120	25.4	0.310	20	
Cadmium	25.99	0.1	25	0	104	80	120	26.01	0.0631	20	
Chromium	26.13	0.3	25	0	105	80	120	26.24	0.400	20	
Selenium	25.06	2.5	25	0	100	80	120	26.1	4.07	20	
Silver	26.06	0.25	25	0	104	80	120	26.06	0.0243	20	

Sample ID **LCS-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/7/2005 9:58:12 AM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050713A** SeqNo: **379304**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.05	0.25	25	0	100	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0506295
Project: Waste Det. Plat. Guard Bed Catalyst

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID **LCSD-8277** Batch ID: **8277** Test Code: **SW6010A** Units: **mg/Kg** Analysis Date **7/7/2005 10:01:22 AM** Prep Date **7/5/2005**
Client ID: Run ID: **ICP_050713A** SeqNo: **379305**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.16	0.25	25	0	101	80	120	25.05	0.442	20	

7 / 8

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

C. .it Name GIANTREFIN — Date and Time Received: 6/30/2005

Work Order Number 0506295 — Received by AT

Checklist completed by _____ 6/30/05
Signature — Date

Matrix — Carrier name FedEx

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 ☐		
:r - 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 _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

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

Client: Giant Refining Company - Ciniza
Address: Route 3 Box 7 Gallup NM 87301
Phone #: 505 722 3833
Fax #: 505 722 0210

Project Name: Waste Determination: Plat. Guard Bed Catalyst
Project #:
Project Manager: Steve Morris
Sampler: Steve Morris
Sample Temperature: 5°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
6/28/05	1400	NON Aqueous	Plat Guard Bed	2-4oz.			0506295-1

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)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX				Air Bubbles or Headspace (Y or N)
							X					X				

Date	Time	Relinquished By: (Signature)	Received By: (Signature)	
6/29/05	0800	Steve Morris		6/30/05 1029
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

February 23, 2005

Steve Morris
Giant Refining Co
Rt. 3 Box 7
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: Oil/Water Separator

Order No.: 0502177

Dear Steve Morris:

Hall Environmental Analysis Laboratory received 1 sample on 2/18/2005 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

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *23-Feb-05*

CLIENT:	Giant Refining Co	**Client Sample ID:**	Oil/Water Sep. 2nd Cont.
Lab Order:	0502177	**Collection Date:**	2/15/2005 2:15:00 PM
Project:	Oil/Water Separator		
Lab ID:	0502177-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	1.1	0.50		µg/L	1	2/22/2005 9:19:26 AM
Toluene	0.90	0.50		µg/L	1	2/22/2005 9:19:26 AM
Ethylbenzene	0.62	0.50		µg/L	1	2/22/2005 9:19:26 AM
Xylenes, Total	5.7	0.50		µg/L	1	2/22/2005 9:19:26 AM
Surr: 4-Bromofluorobenzene	103	83.3-121		%REC	1	2/22/2005 9:19:26 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *23-Feb-05*

CLIENT: Giant Refining Co
Work Order: 0502177
Project: Oil/Water Separator

QC SUMMARY REPORT
Method Blank

Sample ID **Reagent Blank 5m** Batch ID: **R14637** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/21/2005 9:04:53 AM** Prep Date

Client ID: Run ID: **PIDFID_050221A** SeqNo: **340815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.5	0	20	0	97.5	83.3	121	0			

Sample ID **Reagent Blank 5m** Batch ID: **R14648** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/22/2005 7:49:45 AM** Prep Date

Client ID: Run ID: **PIDFID_050222A** SeqNo: **341024**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.33	0	20	0	102	83.3	121	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0502177
Project: Oil/Water Separator

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID **0502177-01a ms** Batch ID: **R14648** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/22/2005 10:49:43 AM** Prep Date

Client ID: **Oil/Water Sep. 2n** Run ID: **PIDFID_050222A** SeqNo: **341033**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.56	0.5	20	1.104	97.3	88.7	114	0			
Toluene	20.94	0.5	20	0.8978	100	89.3	112	0			
Ethylbenzene	20.19	0.5	20	0.6208	97.8	88.6	113	0			
Xylenes, Total	64	0.5	60	5.676	97.2	89.4	112	0			
Surr: 4-Bromofluorobenzene	23.29	0	24	0	97.1	83.3	121	0			

Sample ID **0502177-01a msd** Batch ID: **R14648** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/22/2005 11:19:47 AM** Prep Date

Client ID: **Oil/Water Sep. 2n** Run ID: **PIDFID_050222A** SeqNo: **341034**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.54	0.5	20	1.104	97.2	88.7	114	20.56	0.0944	27	
Toluene	20.69	0.5	20	0.8978	99.0	89.3	112	20.94	1.17	19	
Ethylbenzene	20.37	0.5	20	0.6208	98.8	88.6	113	20.19	0.896	10	
Xylenes, Total	65.13	0.5	60	5.676	99.1	89.4	112	64	1.75	13	
Surr: 4-Bromofluorobenzene	23.59	0	24	0	98.3	83.3	121	23.29	1.25	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Giant Refining Co
Work Order: 0502177
Project: Oil/Water Separator

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **BTEX std 100ng** Batch ID: **R14637** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/21/2005 11:21:58 AM** Prep Date

Client ID: Run ID: **PIDFID_050221A** SeqNo: **340816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.91	0.5	20	0	99.6	88.7	114	0			
Toluene	20.02	0.5	20	0	100	89.3	112	0			
Ethylbenzene	19.91	0.5	20	0	99.5	88.6	113	0			
Xylenes, Total	60.56	0.5	60	0	101	89.4	112	0			

Sample ID **BTEX std 100ng** Batch ID: **R14648** Test Code: **SW8021** Units: **µg/L** Analysis Date **2/22/2005 7:22:24 PM** Prep Date

Client ID: Run ID: **PIDFID_050222A** SeqNo: **341035**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.17	0.5	20	0	101	88.7	114	0			
Toluene	20.5	0.5	20	0	103	89.3	112	0			
Ethylbenzene	20.05	0.5	20	0	100	88.6	113	0			
Xylenes, Total	60.68	0.5	60	0	101	89.4	112	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name GIANTREFIN | Date and Time Received: 2/18/2005

Work Order Number 0502177 | Received by AT

Checklist completed by _____ (Signature) 2/18/05 (Date)

Matrix | Carrier name Client drop-off

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? 6° *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

Accreditation Applied:
NELAC ☐ USACE ☐
Other: _____

Client: GIANT REFINING COMPANY - CINIZA
Address: ROUTE 3, BOX 7 GALLUP, NM 87301
Phone #: 505-722-3833
Fax #: 505-722-0210

Project Name: OIL/WATER SEPARATOR
Project #:
Project Manager: STEVE MORRIS
Sampler: JOHNNY SANCHEZ + DARREN JOE
Sample Temperature: 6°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative H_gCl_2	Preservative HNO_3	Preservative HCL	HEAL No.
2-15-05	1415	H_2O (OIL/WATER SEP. 2ND. CONT.)		3 VOAs			✓	050277-1

Date	Time	Relinquished By: (Signature)	Remarks:
2/15/05	0915		2/18/05 0915
Date:	Time:	Relinquished By: (Signature)	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

ANALYSIS REQUEST

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_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)				Air Bubbles or Headspace (Y or N)
												X	8021 BTEX			

Remarks:

OCD Permit Condition 21:

c. Waste and Wastewater Disposal Summary and Pond Evaporation Balance

CINIZA REFINERY

2005 Waste Water Balance/Evaporation Pond Rates

	GALLONS
Discharged to Ponds (measured at V notch	65,763,072
Rainfall to Ponds	53,381,071
Total to Ponds	119,144,143
Pond Evaporation (150 gpm)	78,840,000
Snow Machines Evaporation(80gpm)	3,369,600
Water Sold to WW Construction	0
Total Balance in Ponds	36,934,543

SNOW MACHINES

#1 North Z-84-P25 #2 South Z-84-B24

4754 Hrs. 4839 Hrs. 1230pm 8-11-05

Evaporation rate for each is 40gpm

		Hours	Total hours	Hours	Total Hours
March	2003	0		0	
October	2003	2928	2928	2928	2928

2928hrs + 2928hrs = 5856 hrs 5856 hrs x 60min/hr = 351360 min/yr

351360min/yr x 40gpm = 14054400 gal/yr (from 2003 worksheet)

March	2004	2928		2928	
October	2004	1124	4052	1209	4137

1124hrs + 1209hrs = 2333 hrs 2333hrs x 60min/hr= 139980 min/yr

139980min/yr x 40gpm 5599200 gals/yr

4/15/2005	2005	4052		4137	
8/11/2005	2005	702	4754	702	4839

117days x .25 working time = 29.25days
29.25days x 24hrs/day = 702hrs
702hrs X 60min = 42120 minutes for each machine
42120min/yr X 40gpm = 1684800 gals/yr for each machine
1684800 X 2 machines = 3369600 gals/yr for both machines

2005 WASTE WATER SUMMARY

	TRAVEL CENTER TO PONDS			TOTAL FLOW TO PONDS			RAIN GAUGE INCHES	FREEBOARD AT PONDS											
								2	3	4	5	6	8	7	11	12a	12b	9	
DATE	TEMP	60 DEGREE V NOTCH "INCHES"	FLOW GPM	TEMP	90 DEGREE V NOTCH "INCHES"	FLOW GPM		feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	Comments
1/5/05	34	2	7.16	30	5	123	0.5	1.25	2	2.5	BM	2	BM	BM	2.17	2.25	1	BM	
1/6/05	34	2	7.16	30	5	123	0	1.25	2	2.5	BM	2	BM	BM	2.17	2	1	BM	
1/10/05	38	2	7.16	34	5	123	0.1	1.25	2	2.5	BM	2	BM	3	2.17	2	1	BM	
1/11/05	36	2	7.16	32	5	123	0	1.25	2	2.5	BM	2	BM	3	2.17	2	1	BM	
1/12/05	36	2	7.16	32	5	123	0	1.25	2	2.5	BM	2	BM	3	2.17	2	1	BM	
1/13/05	36	2	7.16	32	5	123	0	1.25	2	2.5	BM	2	BM	3	2.17	2	1	BM	
1/17/05	36	2	7.16	34	5	123	0	1.25	1.75	1.83	2.33	1	BM	BM	2.17	2	1	BM	
1/18/05	36	2	7.16	34	5	123	0	1.25	1.75	1.83	2.33	1	BM	BM	2.17	2	1	BM	
1/19/05	34	2	7.16	30	5	123	0	1.25	1.75	1.83	2.33	1	BM	BM	2.17	2.17	1	BM	
1/20/05	36	2	7.16	34	5	123	0	1.25	1.75	1.83	2.33	1	BM	BM	2.17	2.17	1	BM	
1/25/05	38	2	7.16	36	5	123	Trace	1.25	1.75	1.83	2.33	1	BM	BM	2.17	2	1	BM	
1/26/05	38	2	7.16	36	5	123	0	1.25	1.75	1.83	2.42	1	BM	BM	2.17	2	1	BM	
1/27/05	38	2	7.16	36	5	123	0	1.25	1.75	1.83	2.42	1	BM	BM	2.17	2	1	BM	
1/31/05	32	2	7.16	30	5	123	0.3	1.25	1.5	1.67	2.5	1	2	BM	2	2.17	1.17	BM	
2/1/05	32	2	7.16	28	5	123	0	1.25	1.5	1.67	2.5	1	2	BM	2	2.17	1.17	BM	
2/2/05	32	2	7.16	30	5	123		1.25	1.5	1.67	2.5	1	2	BM	2	2.17	1.17	BM	
2/3/05								1.25	1.5	1.67	1.5	1	2	BM	2	2.17	1.17	BM	
2/7/05	36	2	7.16	34	5	123	0.2	1.25	1.5	1.83	2.5	1	2	3	2	2.17	1.17	BM	
2/8/05	36	2	7.16	34	5	123		1.25	1.67	1.83	2.5	1	2	3	2	2.17	1.17	BM	
2/9/05	36	2	7.16	34	5	123		1.25	1.5	1.67	2.33	1	2	3	2	2.33	1.17	BM	
2/10/05	38	2	7.16	34	5	123		1.25	1.5	1.67	2.33	1	1.83	3	2	2.5	1.33		
2/11/05	36	2	7.16	34	5	123	0.1	1.25	1.5	1.67	2.25	1	1.83	3	2	2.5	1.33		
2/15/05	38	2	7.16	36	5	123	0.5	1.25	1.5	1.67	2.25	0.5	1.5	3	2.5	2.75	1.25	BM	
2/16/05	38	2	7.16	36	5	123	0.1	1.25	1.5	1.67	2.25	0.5	1.6	3	2.5	2.75	1.25	BM	
2/17/05	38	2	7.16	36	5	123		1.25	1.5	1.67	2.25	0.5	1.5	3	2.5	2.75	1.25	BM	
2/18/05	38	2	7.16	36	5	123		1.25	1.5	1.67	2.25	0.5	1.5	3	2.5	2.75	1.25	BM	
2/22/05	38	2	7.16	34	5	123	0.9	1.25	1.5	1.67	2	0.33	1.5	3	2.5	2.75	1.25	BM	
2/23/05	36	2	7.16	32	5	123	0.3	1.25	1.5	1.67	2	0.33	1.5	3	2.5	2.75	1.25	BM	
1/24/05	38	2	7.16	36	5	123		1.25	1.83	2	2.5	1.33	BM	BM	2.25	2.25	1	BM	
2/24/05	36	2	7.16	32	5	123	0.1	1.25	1.5	1.67	2	0.33	1.5	3	2.5	2.75	1.25	BM	
2/28/05	38	1	1.27	34	5	123	0.2	1.25	1.5	1.67	2.25	AM	1.17	3	2.5	2.75	1.25	BM	
3/1/05	38	2	7.16	34	5	123		1.25	1.5	1.67	2	0.33	1.5	3	2.5	2.75	1.25	BM	
3/7/05	38	2	7.16	34	5	123	0.7	1.25	1.5	1.67	2.25	0.17	1.33	2.75	2.5	2.67	1.25	BM	
3/8/05	38	1 1/2	3.49	36	5	123		1.25	1.5	1.67	2.25	0.17	1.33	2.75	2.5	2.67	1.25	BM	
3/9/05	40	2	7.16	36	5	123		1.25	1.5	1.67	2.17	0.17	1.17	2.67	2.5	2.67	1.25	BM	

2005 WASTE WATER SUMMARY

	TRAVEL CENTER TO PONDS			TOTAL FLOW TO PONDS			RAIN GAUGE INCHES	FREEBOARD AT PONDS											
								2	3	4	5	6	8	7	11	12a	12b	9	
DATE	TEMP	60 DEGREE V NOTCH "INCHES"	FLOW GPM	TEMP	90 DEGREE V NOTCH "INCHES"	FLOW GPM		feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	Comments
3/10/05	40	2	7.16	38	5	123		1.25	1.5	1.67	2	2	1.17	2.67	2.5	2.67	1.25	BM	
3/14/05	37	2	7.16	36	5	123		1.25	1.33	1.5	2	OM	1	2.5	2.33	2.5	1.17	BM	
3/15/05	38	1	1.27	36	5	123	1	1.25	1.33	1.5	2	OM	1	2.5	2.33	2.5	1.17	BM	
3/16/05	36	2	7.16	34	5	123		1.25	1.3	1.5	2	OM	1	2.5	2.33	2.5	1.17	BM	
3/17/05	36	2	7.16	34	5	123		1.25	1.33	1.5	2	OM	1	2.5	2.33	2.5	1.17	BM	
3/21/05	36	2	7.16	34	5	123	0.1	1.25	1.33	1.33	2.25	OM	0.75	2.5	2.33	2.5	1.25	BM	
3/22/05	34	2	7.16	32	5	123		1.25	1.33	1.33	2.25	OM	0.75	2.5	2.33	2.5	1.25	BM	
3/23/05	36	2 1/2	12.5	34	5	123		1.25	1.33	1.33	2.25	OM	0.75	2.5	2.33	2.5	1.17	BM	
3/24/05	40	2	7.16	36	5	123		1.25	1.33	1.33	2.08	OM	0.75	2.5	2.33	2.5	1.17	BM	
3/28/05	38	2	7.16	34	5	123		1.25	1.33	1.33	2	OM	0.67	2.5	2.33	2.5	1.17	1.33	
3/29/05	38	2	7.16	34	5	123	0.1	1.25	1.33	1.33	2	OM	0.67	2.5	2.33	2.5	1.17	BM	
3/30/05	38	2	7.16	36	5	123	0.1	1.25	1.33	1.33	2	OM	0.67	2.5	2.33	2.5	1.25	BM	
3/31/05	38	2	7.16	36	5	123		1.25	1.33	1.33	2.17	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/4/05	39	1 1/2	3.49	36	5	123		1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/5/05	38	2	7.16	36	5	123		1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/6/05	38	2	7.16	36	5	123		1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/7/05	37	2 1/2	12.5	34	5	123		1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/11/05	36	2	7.16	34	4	70.2	0.1	1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/12/05	35	2	7.16	32	4	70.2		1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/13/05	38	2	7.16	36	4	70.2		1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/14/05	37	1	1.27	36	4	70.2		1.25	1.42	1.5	2.25	OM	0.67	2.5	2.33	2.5	1.25	BM	
4/18/05	40	2	7.16	38	5	123		1.25	1.42	1.5	2.25	OM	0.83	2.5	2.33	2.5	1.25	BM	
4/19/05	41	2	7.16	38	5	123		1.25	1.42	1.5	2.25	OM	0.83	2.5	2.33	2.5	1.25	BM	
4/20/05	43	2	7.16	40	4	70.2		1.25	1.42	1.5	2.25	OM	0.83	2.5	2.33	2.5	1.25	BM	
4/21/05	44	2	7.16	40	4	70.2		1.25	1.42	1.5	2.25	OM	0.83	2.5	2.33	2.5	1.17	BM	
4/25/05	39	1 1/2	3.49	36	4	70.2	0.8	1.25	1.25	1.42	2.33	OM	0.83	2.5	2.33	2.5	1.17	BM	
4/26/05	38	2	7.16	36	4	70.2	0.1	1.25	1.25	1.42	2.33	OM	0.83	2.5	2.33	2.5	1.17	BM	
4/27/05	41	2	7.16	38	4	70.2		1.25	1.33	1.5	2.08	OM	0.83	2.5	2.33	2.5	1.17	BM	
4/28/05	40	2	7.16	38	4	70.2		1.25	1.33	1.5	2.08	OM	0.83	2.5	2.33	2.5	1.17	BM	
5/2/05	38	2	7.16	31	4	70.2	0.1	1.33	1.42	1.5	2.08	OM	0.83	2.5	2.33	2.5	1.17	BM	
5/3/05	38	2	7.16	36	4	70.2	0.2	1.33	1.42	1.5	2.08	OM	0.83	2.5	2.33	2.5	1.17	BM	
5/4/05	40	2	7.16	38	4	70.2		1.33	1.42	1.5	2.08	OM	0.83	2.5	2.33	2.5	1.17	BM	
5/5/05	42	2	7.16	38	4	70.2		1.33	1.5	1.67	2.08	OM	0.92	2.5	2.33	2.5	1.17	BM	
5/9/05	40	2	7.16	38	4	70.2		1.33	1.5	1.67	2	OM	1.17	3	3	2.67	1.42	BM	
5/10/05	40	2	7.16	38	4	70.2		1.33	1.5	1.67	2	OM	1.17	3	3	2.67	1.42	BM	

2005 WASTE WATER SUMMARY

	TRAVEL CENTER TO PONDS			TOTAL FLOW TO PONDS			RAIN GAUGE INCHES	FREEBOARD AT PONDS											
								2	3	4	5	6	8	7	11	12a	12b	9	
DATE	TEMP	60 DEGREE V NOTCH "INCHES"	FLOW GPM	TEMP	90 DEGREE V NOTCH "INCHES"	FLOW GPM		feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	Comments
5/11/05	41	2	7.16	38	4	70.2		1.33	1.5	1.67	2	OM	1.17	3	3	2.67	1.42	BM	
5/12/05	43	1 1/2	3.49	40	4	70.2		1.33	1.5	1.67	2	OM	1.17	3	3	2.67	1.42	BM	
5/16/05	45	2	7.16	42	4	70.2		1.42	1.67	1.83	2	OM	1	3	3	2.5	1.33	BM	
5/17/05	46	2	7.16	44	5	123		1.42	1.67	1.83	2	OM	1	3	3	2.5	1.33	BM	
5/18/05	47	2	7.16	44	5	123		1.42	1.67	1.83	2	OM	1.25	3	3	2.5	1.33	BM	
5/19/05	46	2	7.16	44	5	123		1.42	1.67	1.83	2	OM	1.25	3	3	2.5	1.33	BM	
5/23/05	53	2	7.16	50	5	123		1.5	1.67	1.75	2.08	OM	1.5	BM	BM	BM	1.5	BM	
5/24/05	52	2	7.16	50	5	123		1.5	1.67	1.75	2.08	OM	1.5	BM	BM	BM	1.5	BM	
5/25/05	52	2	7.16	50	5	123		1.5	1.67	1.75	2.08	OM	1.5	BM	BM	BM	1.5	BM	
5/26/05	55	2	7.16	52	5	123		1.5	1.67	1.75	2.08	OM	1.5	BM	BM	BM	1.5	BM	
5/31/05	56	2	7.16	55	4.5	94.2		1.5	1.58	1.83	2.25	OM	1.83	BM	BM	BM	1.25	BM	
6/1/05	57	2	7.16	54	5	123		1.5	1.58	1.83	2.25	OM	1.83	BM	BM	BM	1.25	BM	
6/2/05	58	2	7.16	55	5	123		1.5	1.58	1.83	2.25	OM	1.83	BM	BM	BM	1.25	BM	
6/6/05	58	2	7.16	56	5	123		1.5	1.58	1.67	2.33	OM	BM	BM	BM	BM	1.33	BM	
6/7/05	57	2	7.16	54	5	123		1.5	1.58	1.67	2.33	OM	BM	BM	BM	BM	1.33	BM	
6/8/05	57	2	7.16	56	5	123		1.5	1.58	1.67	2.33	OM	BM	BM	BM	BM	1.33	BM	
6/9/05	58	2	7.16	55	5	123		1.5	1.58	1.83	2.33	OM	BM	BM	BM	BM	1.33	BM	
6/13/05	63	2	7.16	60	5	123	0.3	1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.17	BM	
6/14/05	62	2	7.16	60	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.17	BM	
6/15/05	60	2	7.16	58	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.25	BM	
6/16/05	62	2	7.16	59	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.25	BM	
6/20/05	61	1 1/2	3.49	58	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.17	BM	
6/21/05	60	2	7.16	58	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.17	BM	
6/22/05	62	2	7.16	60	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.17	BM	
6/23/05	62	2	7.16	61	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.17	BM	
6/27/05	56	2	7.16	54	4	70.2		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.25	BM	
6/28/05	60	2	7.16	58	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.25	BM	
6/29/05	63	2	7.16	60	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.25	BM	
6/30/05	62	2	7.16	60	5	123		1.5	BM	BM	BM	OM	BM	BM	BM	BM	1.25	BM	
7/11/05	52	2	7.16	50	5	123		1.5	1.75	2	2.5	OM	BM	BM	BM	BM	1.25	BM	
7/12/05	5	2	7.16	56	5	123		1.5	1.75	2	2.5	OM	BM	BM	BM	BM	1.25	BM	
7/13/05	59	2	7.16	56	5	123		1.5	1.75	2	2.5	OM	BM	BM	BM	BM	1.25	BM	
7/14/05	58	2	7.16	56	5	123		1.5	1.67	1.75	2.42	OM	BM	BM	BM	BM	1.25	BM	
7/18/05	61	1	1.27	58	5	123		1.5	1.5	1.67	2.25	0.25	BM	BM	BM	BM	1.5	BM	
7/19/05	62	2	7.16	60	5	123		1.5	1.5	1.67	2.25	0.25	BM	BM	BM	BM	1.5	BM	

2005 WASTE WATER SUMMARY

	TRAVEL CENTER TO PONDS			TOTAL FLOW TO PONDS			RAIN GAUGE INCHES	FREEBOARD AT PONDS											
								2	3	4	5	6	8	7	11	12a	12b	9	
DATE	TEMP	60 DEGREE V NOTCH "INCHES"	FLOW GPM	TEMP	90 DEGREE V NOTCH "INCHES"	FLOW GPM		feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	Comments
7/20/05	62	2	7.16	60	5	123		1.5	1.58	1.67	2.25	0.25	BM	BM	BM	BM	1.42	BM	
7/21/05	61	2	7.16	58	5	123		1.5	1.58	1.67	2.17	0.25	BM	BM	BM	BM	1.33	BM	
7/25/05	66	2	7.16	64	6	193	0.3	1.5	1.75	1.83	2	0.25	BM	BM	BM	BM	1.25	BM	
7/26/05	63	2	7.16	60	6	193	0.3	1.5	1.75	1.83	2	0.25	BM	BM	BM	BM	1.25	BM	
7/27/05	62	2	7.16	60	6	193		1.5	1.75	1.83	2	0.25	BM	BM	BM	BM	1.25	BM	
7/28/05	61	2	7.16	58	6	193	0.4	1.5	1.75	1.83	2	0.25	BM	BM	BM	BM	1.25	BM	
8/1/05	54	2	7.16	52	6	193	trace	1.5	1.67	1.75	2	0.25	BM	BM	BM	BM	1.25	BM	
8/2/05	56	2	7.16	54	6	193		1.5	1.67	1.75	2	0.25	BM	BM	BM	BM	1.25	BM	
8/3/05	56	2	7.16	54	6	193		1.5	1.67	1.75	2	0.25	BM	BM	BM	BM	1.33	BM	
8/4/05	55	2	7.16	52	6	193	0.12	1.5	1.75	1.83	2.08	0.25	BM	BM	BM	BM	1.25	BM	
8/8/05	54	1 1/2	3.49	52	6	193	0.7	1.5	1.75	1.83	2.08	0.25	BM	BM	BM	BM	1.17	BM	
8/9/05	53	2	7.16	50	5	123		1.5	1.83	1.92	2.08	0.25	BM	BM	BM	BM	1.25	BM	
8/10/05	63	2	7.16	61	5	123	trace	1.5	1.83	1.92	2.08	0.25	BM	BM	BM	BM	1.25	BM	
8/11/05	60	2	7.16	54	7 1/2	338	1	1.5	1.58	1.67	2.58	TM	TM	TM	TM	TM	TM	TM	
8/12/05	56	3	19.7	54	8	397	1.6	1.5	1.67	1.75	2	0.25							
8/15/05	62	2	7.16	60	7	284	1	1.5	1.5	1.5	1.67	OM	BM	BM	BM	2.5	1.25	BM	
8/16/05	54	2	7.16	52	8	397	1.5												
8/17/05	52	2	7.16	50	7	284	0.1	1.5	1.5	1.5	1.5	OM	BM	BM	BM	2.5	1.25	BM	
8/18/05	55	2	7.16	52	6	193		1.5	1.67	1.75	1.75	OM	BM	BM	BM	BM	1.25	BM	
8/22/05	55	2	7.16	53	4	70.2		1.67	BM	1.92	2.5	OM	BM	BM	BM	BM	1.25	BM	
8/23/05	55	2	7.16	52	4	70.2	trace	1.67	BM	1.92	2.5	OM	BM	BM	BM	BM	1.25	BM	
8/24/2005	54	2	7.16	50	5	123	0.3	1.67	BM	1.92	2.5	OM	BM	BM	BM	BM	1.25	BM	
8/25/2005	53	2	7.16	50	4 1/2	94.2		1.67	BM	1.92	2.5	OM	BM	BM	BM	BM	1.25	BM	
8/29/2005	54	2	7.16	52	5	123		1.67	BM	1.92	2	OM	BM	BM	BM	BM	1.25	BM	
8/30/2005	51	2	7.16	48	4	70.2		1.5	BM	1.92	2	OM	BM	BM	BM	BM	1.25	BM	
8/31/2005	52	2	7.16	50	4	70.2		1.5	BM	2	2	OM	BM	BM	BM	BM	1.25	BM	
9/1/2005	54	2	7.16	52	4 1/2	94.2		1.5	BM	2	1.67	OM	BM	BM	BM	BM	1.25	BM	
9/6/2005	53	2	7.16	52	4	70.2	0.5	1.5	BM	2	1.67	OM	BM	BM	BM	BM	1.25	BM	
9/7/2005	52	2	7.16	50	4 1/2	94.2		1.5	BM	2	1.58	OM	BM	BM	BM	BM	1.25	BM	
9/8/2005	55	2	7.16	54	5 1/2	156	trace	1.5	BM	2	1.5	OM	BM	BM	BM	BM	1.33	BM	
9/9/2005	52	2	7.16	50	5 1/2	156	0.2	1.5	BM	2	1.5	OM	BM	BM	BM	BM	1.25	BM	
9/12/2005	53	2	7.16	50	4 1/2	94.2	0.1	1.5	1.75	1.83	1.33	OM	BM	BM	BM	BM	1.33	BM	
9/13/2005	51	2	7.16	48	4 1/2	94.2		1.5	1.75	1.83	1.33	OM	BM	BM	BM	BM	1.33	BM	
9/14/2005	50	2	7.16	48	5 1/2	156		1.5	BM	1.92	2	OM	BM	BM	BM	BM	1.33	BM	
9/15/2005	48	2	7.16	46	5	123		1.5	BM	BM	2	OM	BM	BM	BM	BM	1.33	BM	

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2005 WASTE WATER SUMMARY

	TRAVEL CENTER TO PONDS			TOTAL FLOW TO PONDS			RAIN GAUGE INCHES	FREEBOARD AT PONDS											
								2	3	4	5	6	8	7	11	12a	12b	9	
DATE	TEMP	60 DEGREE V NOTCH "INCHES"	FLOW GPM	TEMP	90 DEGREE V NOTCH "INCHES"	FLOW GPM		feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	Comments
9/19/2005	51	1 1/2	3.49	48	5	123		1.5	BM	BM	2.5	OM	BM	BM	BM	BM	1.33	BM	
9/20/2005	53	2	7.16	50	5	123		1.5	BM	1.92	2.25	OM	BM	BM	BM	BM	1.33	BM	
9/21/2005	52	2	7.16	50	5	123		1.5	BM	1.92	2.33	OM	BM	BM	BM	BM	1.33	BM	
9/22/2005	50	2	7.16	48	5	123		1.5	BM	1.92	2.33	OM	BM	BM	BM	BM	1.33	BM	
9/26/2005	50	2	7.16	48	5	123		1.5	BM	1.92	2.33	OM	BM	BM	BM	BM	1.33	BM	
9/27/2005	53	2	7.16	50	5	123		1.5	BM	1.92	2.33	OM	BM	BM	BM	BM	1.33	BM	
9/29/2005	50	2	7.16	46	5	123	0.1	1.5	1.83	1.92	2.25	OM	BM	BM	BM	BM	1.25	BM	
10/3/2005	52	2	7.16	48	5	123		1.5	1.75	1.83	2.33	OM	BM	BM	BM	BM	1.33	BM	
10/4/2005	49	2	7.16	46	4	70.2		1.5	1.75	1.83	2.33	OM	BM	BM	BM	BM	1.33	BM	
10/5/2005	48	2	7.16	46	5	123		1.5	1.58	1.67	2.25	OM	BM	BM	BM	BM	1.33	BM	
10/6/2005	50	2	7.16	48	5	123		1.5	1.58	1.67	2.25	OM	BM	BM	BM	BM	1.33	BM	
10/10/2005	46	2	7.16	44	6	193	0.35	1.5	1.5	1.67	2.25	OM	BM	BM	BM	BM	1.33	BM	
10/11/2005	49	2	7.16	48	5	123	0.1	1.5	1.5	1.58	2.25	OM	BM	BM	BM	BM	1.33	BM	
10/12/2005	48	2	7.16	46	5	123		1.5	1.5	1.58	2.25	OM	BM	BM	BM	BM	1.33	BM	
10/13/2005	49	2	7.16	46	5	123		1.5	1.58	1.58	2.25	OM	BM	BM	BM	BM	1.33	BM	
10/17/2005	46	2	7.16	44	5	123	0.1	1.5	1.67	1.83	2.25	OM	BM	BM	BM	BM	1	BM	
10/18/2005	47	2	7.16	44	5	123		1.5	1.67	1.83	2.25	OM	BM	BM	BM	BM	1	BM	
10/19/2005	45	2	7.16	42	5	123	0.3	1.5	1.58	1.75	2.25	OM	BM	BM	BM	BM	1	BM	
10/20/2005	40	1 1/2	3.49	38	5	123		1.5	1.58	1.75	2.25	OM	BM	BM	BM	BM	1.17	BM	
10/24/2005	47	2	7.16	44	5	123		1.5	1.75	1.83	2.25	OM	BM	BM	BM	BM	1.25	BM	
10/25/2005	46	2	7.16	44	5	123		1.5	1.75	1.83	2.25	OM	BM	BM	BM	BM	1.25	BM	
10/26/2005	45	2	7.16	44	5	123		1.5	1.75	1.83	2.25	OM	BM	BM	BM	BM	1.25	BM	
10/27/2005	46	2	7.16	44	5	123		1.5	1.75	1.83	2.25	OM	BM	BM	BM	BM	1.25	BM	
10/31/2005	43	2	7.16	40	5	123		1.5	1.75	1.83	2.33	OM	BM	BM	BM	BM	1.25	BM	
11/1/2005	46	2	7.16	43	5	123		1.5	BM	BM	2.33	OM	BM	BM	BM	BM	1.17	BM	
11/2/2005	46	2	7.16	44	5	123		1.5	BM	BM	2.33	OM	BM	BM	BM	BM	1.17	BM	
11/3/2005	44	2	7.16	42	5	123		1.5	BM	BM	2.33	OM	BM	BM	BM	BM	1.17	BM	
11/7/2005	42	2	7.16	40	5	123		1.5	BM	BM	2.33	OM	BM	BM	BM	BM	1.08	BM	
11/8/2005	43	2	7.16	40	5	123		1.5	BM	BM	2.33	OM	BM	BM	3	BM	1.08	BM	
11/9/2005	44	2	7.16	42	5	123		1.5	BM	BM	2.42	OM	BM	BM	3	BM	1.08	BM	
11/10/2005	45	2	7.16	44	5	123		1.5	BM	BM	2.5	OM	BM	BM	3	BM	1.08	BM	
11/14/2005	42	2	7.16	40	5	123		1.5	BM	BM	2.5	OM	BM	BM	3	2.75	1.08	BM	
11/15/2005	41	2	7.16	40	5	123		1.5	BM	BM	2.5	OM	BM	BM	3	2.75	1.08	BM	
11/16/2005	39	2	7.16	38	5	123		1.5	BM	BM	2.58	OM	BM	BM	3	2.75	1.08	BM	
11/17/2005	38	2	7.16	36	5	123		1.5	BM	BM	2.58	OM	BM	BM	3	BM	1.08		

2005 WASTE WATER SUMMARY

	TRAVEL CENTER TO PONDS			TOTAL FLOW TO PONDS			RAIN GAUGE INCHES	FREEBOARD AT PONDS											
								2	3	4	5	6	8	7	11	12a	12b	9	
DATE	TEMP	60 DEGREE V NOTCH "INCHES"	FLOW GPM	TEMP	90 DEGREE V NOTCH "INCHES"	FLOW GPM		feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	Comments
11/21/2005	36	2	7.16	34	5	123		1.5	BM	BM	2.58	OM	BM	BM	2.83	2.75	1.08	BM	
11/22/2005	35	1 1/2	3.49	32	5	123		1.5	BM	BM	2.67	OM	BM	BM	2.83	2.75	1.08	BM	
11/23/2005				32	5	123		1.5	BM	BM	2.67	OM	BM	BM	2.83	2.75	1.08	BM	
11/28/2005	32	2	7.16	30	5	123	0.05	1.5	BM	BM	BM	OM	BM	BM	2.67	2.5	1	BM	
11/29/2005	33	2	7.16	30	5	123		1.92	BM	BM	BM	OM	BM	BM	2.67	2.5	1	BM	
11/30/2005	33	2	7.16	30	5	123		1.5	BM	BM	BM	OM	BM	BM	2.67	2.5	1	BM	
12/5/2005	32	2	7.16	30	5	123		1.5	BM	BM	BM	OM	BM	BM	2.33	2.33	1	BM	
12/6/2005	32	1	1.27	30	5	123		1.5	BM	BM	BM	OM	BM	BM	2.33	2.33	1	BM	
12/7/2005	32	2	7.16	30	5	123		1.5	BM	BM	BM	OM	BM	BM	2.33	2.33	1	BM	
12/8/2005	33	2	7.16	30	5	123		1.5	BM	BM	BM	OM	BM	BM	2.33	2.33	1	BM	
12/9/2005	28	2	7.16	26	5	123		1.5	BM	BM	BM	OM	BM	BM	2.33	2.17	1	BM	
12/12/2005	31	2	7.16	28	5	123		1.5	BM	BM	BM	0.25	BM	BM	2.33	2.17	1	BM	
12/13/2005	30	2	7.16	28	5	123	0.2	1.5	BM	BM	BM	0.25	BM	BM	2.33	2.17	1	BM	
12/14/2005	30	2	7.17	27	5	123		1.5	BM	BM	BM	0.25	BM	BM	2.33	2.17	1	BM	
12/15/2005	28	2	7.16	26	5	123		1.5	BM	BM	BM	0.25	BM	BM	2.25	2.17	1	BM	
12/19/2005	31	2	7.16	28	5	123		1.5	1.75	1.83	2.5	0.25	BM	BM	2.17	2.17	1	BM	
12/20/2005	31	2	7.16	30	5	123		1.5	1.75	1.83	2.5	0.25	BM	BM	2.17	2.17	1	BM	
12/21/2005	32	2	7.16	30	5	123		1.5	1.75	1.83	2.5	0.25	BM	BM	2.17	2.17	1	BM	
12/22/2005	33	2	7.16	32	5	123		1.5	1.75	1.83	2.5	0.25	BM	BM	BM	2.17	1	BM	
	AVG	AVG	AVG	AVG	AVG	AVG	TOTAL	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	
	45.01	1.96	6.96	42.74	4.98	125.12	16.22	1.41	1.59	1.75	2.20	0.70	1.18	2.72	2.42	BM	1.21	1.33	

* BM denotes Below Marker (Marker ~ 3 Feet)

2005 Total flow to ponds:
125.12gpm x 60min/hr x 8760 hr/yr = 65,763,072 gallons/year

Rainfall = 27154 gal/inch/acre, then 16.22 inches/year X 121.2 acres X 27154 gal/inches/acre = 53,381,071 gal/year

Pond Evaporation = 150gal/min, then 150 gal/min X 60 min/hr X 24 hr/day X 365 day/year = 78,840,000 gal/year

2005 WASTE WATER SUMMARY

	TRAVEL CENTER TO PONDS			TOTAL FLOW TO PONDS			RAIN GAUGE INCHES	FREEBOARD AT PONDS										
								2	3	4	5	6	8	7	11	12a	12b	9
DATE	TEMP	60 DEGREE V NOTCH "INCHES"	FLOW GPM	TEMP	90 DEGREE V NOTCH "INCHES"	FLOW GPM		feet	feet	feet	feet	feet	feet	feet	feet	feet	feet	feet

SNOW MACHINES
#1 North Z-84-P25 #2 South Z-84-B24
4754 Hrs. 4839 Hrs. 1230pm 8-11-05
Evaporation rate for each is 40gpm

		Hours	Total hours	Hours	Total Hours	
4/15/2005	2005	4052		4137		
8/11/2005	2005	702	4754	702	4839	117days x .25 working time = 29.25days 29.25days x 24hrs/day = 702hrs 702hrs X 60min = 42120 minutes for each machine 42120min/yr X 40gpm = 1684800 gals/yr for each machine 1684800 X 2 machines = 3369600 gals/yr for both machines

2005 POND WATER SALES
WW CONSTRUCTION
0 Dollars x 4000gals/dollar = 0gals

OCD Permit Condition 21:

d. Sump and Underground Lines Tested

UNDERGROUND PROCESS AND WASTEWATER LINES

ALKY Update 9/28/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
A1, N.2552'-0" W.451'-6"	A-V23, A-V24 & CO	1957	A-01-105	9/22/2005	Pass	7	60	David Davis	
	A-E41 & 44, W.461.50' (By ATV-189) & CO	1957	A-01-105	9/22/2005	Pass	7	60	David Davis	
	4 Laterals w 10 Drains	1957	A-01-105	9/22/2005	Out of Service			David Davis	Indicates Plug or Covered Up
A1 To A2	CO, CO, AG-P11 W.438.83', A-P9A W.429.83', A-P9B	1957	A-01-105	9/22/2005	Pass	7	60	David Davis	
A2, N.2552'-0" W416'-4"	A-E57A/B	1957	A-01-105	9/22/2005	Out of Service	7	60	David Davis	
	A-57A/B & 2 Other Drains	1957	A-01-105	9/22/2005	Out of Service			David Davis	Indicates Plug or Covered Up
A2 To A3	S-P14A/B	2005	A-01-105	9/28/2005	Pass	8	70	David Davis	
	CO	2005	A-01-105	9/28/2005	Pass	8	70	David Davis	
	CO	2005	A-01-105	9/28/2005	Pass	8	70	David Davis	
	A-P6A/B	1957	A-01-105	9/28/2005	Pass	8	70	David Davis	
A3, N.2552'-0" W.379'-3"	GA-V70, W.393.50'	1957	A-01-105	9/22/2005	Out of Service			David Davis	Indicates Plug or Covered Up
	A-V2 & A-V40, W.371'-9"	1957	A-01-105	9/28/2005	Pass	8	70	David Davis	
	GA-V7 W.393.50	1957	A-01-105	9/22/2005	Out of Service			David Davis	Indicates Plug or Covered Up
A3 To A4	CO	2005	A-01-105	9/28/2005	Pass	8	70	David Davis	
	BY CONTACTOR SEAL OIL	2005	A-01-105	9/28/2005	Pass	8	70	David Davis	
	CO	2005	A-01-105	9/28/2005	Pass	8	70	David Davis	
A4, N.2552'-0" W. 348'-0"	3 LATERALS WITH 4 DRAINS	1957	A-01-105	9/28/2005	Out of Service			David Davis	Indicates Plug or Covered Up
A4 To A5	CO	1957	A-01-105	8/19/2005	Pass	7	150	David Davis	
	A-P5A &A-P5A	1957	A-01-105	8/19/2005	Pass	7	150	David Davis	
	CO	1957	A-01-105	8/19/2005	Pass	7	150	David Davis	
A5, N.2599'-9" W.348'-0"	3 LATERALS WITH 3 DRAINS	1957	A-01-105	8/19/2005	Out of Service			David Davis	Indicates Plug or Covered Up
A5 To A6	CO	1957	A-01-105	8/19/2005	Pass	7	150	David Davis	
	A-P19A, CO, A-P19B, REGEN A-V5, 3RD PUMP, DRAIN AND CO	2005	A-01-105	8/19/2005	Pass	7	150	David Davis	

UNDERGROUND PROCESS AND WASTEWATER LINES

ALKY Update 9/28/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
	By A-E4	2005	A-01-105	8/19/2005	Pass	7	150	David Davis	
	CO	1957	A-01-105	8/19/2005	Pass	7	150	David Davis	
A-6, N.2639'-0" W.348'-0"	DRAIN BY REGEN A-V5	1957	A-01-105	8/19/2005	Out of Service			David Davis	Indicates Plug or Covered Up
Sewer Box A6 Flows N. then NW. then W. To ASO Pit	CO	2005	A-01-105	8/19/2005	Pass	7	150	David Davis	
From Neutralizing Pit Drains Toward NW To Catch Basin CBZ-25 by Treating Unit	End of Alky Unit, see Crude Unit	1957	EZ-80-09-510EP	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit
From Catch Basin CBZ-25 to Catch Basin CBZ-24	End of Alky Unit, see Crude Unit	1960	EZ-80-09-510EP	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit	End of Alky Unit, see Crude Unit
Also From Catch Basin C-11(Crude Unit) To Catch Basin CBZ-24	Info Only, See Crude Unit	1957	EC-09-125 & EZ-80-510EP	Info Only, See Crude Unit	Info Only, See Crude Unit	Info Only, See Crude Unit	Info Only, See Crude Unit	Info Only, See Crude Unit	Info Only, See Crude Unit

CO INDICATES CLEANOUT. ALKY SEWER REPAIR JUNE 27, 2005

UNDERGROUND PROCESS AND WASTEWATER LINES

FLUID CATLALYTIC CRACKING UNIT UNDERGROUND PIPING PLAN

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
F1	F-E1 To F1	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
	F-V7 To F1	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
	F-V5 To F1	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
F2	F1 Flows W.To F2	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
	F-P4 To F-P5B To F-P5A To F-P3A To F-P3B To F-P2A To F2	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
	F-P10A To F-P10B To F-P1B To F-P1A To F-P2B To F2	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
	F-V6 To F2	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
F3	F2 Flows W. To F3	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
	Drain Coordinate N.2557'-0", W.596'-0" To F3	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
	Drain Coordinate N.2566'-0", W.603'-0" To F3	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos	
F4	G4 to F4	1957	EF-09-102 SH.1 & EG-09-102EP	01/11/02	Pass	7	25	B. Loos	
	G-P1B To G-P1A To F-P8 To F-P9B To F-P9A To F-P6 To F-P7B To F4	1957	EF-09-102 SH.1	01/11/02	Pass	7	25	B. Loos	
	F-P7A To F4	1957	EF-09-102 SH.1	01/11/02	Pass	7	25	B. Loos	
	F-V8 To F4	1957	EF-09-102 SH.1	01/11/02	Pass	7	25	B. Loos	
FCC Box N2461.57' W546.5'	F-B1 & Drain N2447.07' W542.0' To F-V20 To Sewer Box N2461.57' W546.5'	1969	EF-09-102 SH.2	07/31/02	Pass	4	25	B. Loos	
	F-B1-F To Sewer Box N2461.57' W546.5'	1969	EF-09-102 SH.2	07/31/02	Pass	4	25	B. Loos	

UNDERGROUND PROCESS AND WASTEWATER LINES

CRUDE UNIT Update to 7/20/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature/ Test Performed	Investigation Results
C-1	P-2 (From Plat Unit) to C-1	1957	EC-09-125 & EP-09-102	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
C-2	C-1 to C-2	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-V2 to C-2	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-P4 to C-P5B to C-2	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-P10B to C-P5A to C-2	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
C-3	C-2 to C-3	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-P10A to C-P9A to C-P9B to C-3	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-P8 to C-3	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
C-4	to C-4	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-E8 to C-4	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-24A to C-24B to C-P7 to C-4	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
C-5	C-4 to C-5	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-P1B to C-P3 to C-5	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	N.26+11'-6" W.6+56'-9" (C-PV109) to C-5	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
C-6	C-P23A To C-P23B To C-6	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-V10 To C-6	1957	EC-09-125	N/A	N/A	N/A	N/A	N/A	Capped
	A To C-P21 To C-P16A To C-P15 To C-P14B To C-P14A To C-6	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-V13 Drain to Pipe Between C-6 & C-7	1967	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-P13A To C-P13B To C-6	1957	EC-09-125	07/19/05	Pass	3	60	L.Jeff & A. Becenti	
C-7	C-6 to C-7	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	
	C-E11 To C-7	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti	

UNDERGROUND PROCESS AND WASTEWATER LINES

CRUDE UNIT Update to 7/20/05

C-8	FCC Sewer Box N2461.57' W546.5' To C-8	1969	EC-09-125 & EF-09-102 SH.2	07/31/02	Pass	4	25	B. Loos		
	F-E10 To C-8	1957	EC-09-125	07/31/02	Pass	4	25	B. Loos		
	F-11B To F-11A To C-8	1957	EC-09-125	07/31/02	Pass	4	25	B. Loos		
	F-C1 N2515'11" W590' 0" To C-8	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos		
	F-C1 N2496" 8" W594' 3" To C-8	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos		
	F-P12B To FIELD MITER To C-8	1957	EC-09-125	07/13/02				B. Loos	Red Line ????	
	FE-9 To N24+93-0" W6+56' 11" To C-8	1957	EC-09-125	07/31/02	Pass	4	25	B. Loos		
	` to C-8	1957	EC-09-125	07/31/02	Pass	4	25	B. Loos		
C-9	C-7 to C-9	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti		
	C-8 to C-9	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti		
	F-3 to C-9	1957	EF-09-102 SH.1	07/31/02	Pass	4	25	B. Loos		
	F-V14 To C-9	1957	EC-09-125	07/31/02	Pass	4	25	B. Loos		
	C-V6 To C-9	1957	EC-09-125	07/31/02	Pass	4	25	B. Loos		
	C-P11A To C-P11B To C-9	1957	EC-09-125	07/31/02	C-P11 Cup Fail			B. Loos	WO46749 Cup Repaired 10/23/02	#1
C-10	C-10	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti		
	F4 W. to C-10	1957	EC-09-125 & EF-09-102							#2
	C-9 N. to C-10	1957	EC-09-125							#3
	C-5 E. to C-10	1957	EC-09-125	10/31/02	Pass	4	30	B. Loos		
	C-P1A to C-P2 to C-10	1957	EC-09-125	10/31/02	Cup Fail	4	0	B. Loos	WO481143 Cup Repaired 11/18/02	#4
C-11	C-10 N. to C-11	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti		
	N.26+14'-2" W.6+45'-0" to C-11	1957	EC-09-125							#5
	N.26+45'-8" W.6+44'-3.5" to C11	1957	EC-09-125	07/20/05	Pass	4	30	L.Jeff & A. Becenti		
From Neutralizing Pit Drains Toward NW To Catch Basin CBZ-25 by Treating Unit		1957	EZ-80-09-510EP						End of Alky Unit from ASOPit to CBZ-25	#6
C-11 flows N. to CBZ-24			EC-09-125 & EZ-80-09-510EP							#7
AT DHT, CBZ-24 2687N 632W	C-11 N to CBZ-24	1957	EZ-80-09-510EP						DHT Unit	#7
	CBZ-25 W to CBZ-24	1957	EZ-80-09-510EP						DHT Unit	#8
AT DHT, CBZ-23 2729.63N 632W	CBZ-24 N to CBZ-23	1957	EZ-80-09-510EP						DHT Unit	#9
	Q-1 (Treaters) W to CBZ-23	1957	EQ-09-101 SH.1 EZ-80-09-510EP						Treaters to CBZ-23 at DHT Unit	#10

UNDERGROUND PROCESS AND WASTEWATER LINES

CRUDE UNIT Update to 7/20/05

	Drain Hub (Treaters) 2785.42N 524.00W to CBZ-23	1957	EZ-80-09-510EP	Treaters to CBZ-23 at DHT Unit	#11
AT SRU CBZ-22 2900N 632W	CBZ-23 N to CBZ-22	1957	EZ-80-09-510EP	DHT to SRU	#12
	Drain 2872.50N 574.17W to CBZ-22 Just S. of CWT	1957	EZ-80-09-510EP	DHT to SRU	#13
CBZ--21 2980N 632W	CBZ-22 flows N to CBZ-21	1957	EZ-80-09-510EP EZ-80-09-509EP		#14
	Cooling Tower Drain 2900N 582.92W to EZ-80-09-509EP	1957	EZ-80-09-510EP EZ-80-09-509EP		#15
CBZ-20 3073N 632W	CBZ-21 flows N under road to start of tank farm to CBZ-20	1957	EZ-80-509-EP		#16

UNDERGROUND PROCESS AND WASTEWATER LINES

DHT UNIT Update to 7/13/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
CBZ-23 N.2729'-8" W632-.0"	Start Drain D-V7 heading W. to T . T connects from C.O. heads N. to T. T connects from Drain N2690'-2" W701'-8" to T at N2744'-0". Drain near N2735'-0" W718'-0" connects to T at N2744'-0". Drain N2740'-2" W718'-0" connects to T at N2744'-0". T connects from end C.O.heads E. connects from drain near D-V1 continues E. to T from W691'-0" and continues E. to T from drain W687'-9" and continues E. to T from drains N2727"-6" and drain N2736'-6". T continues E. on N2744'-0", then heads S. to N2729"-8" and W. to CBZ-23 N2729'-8" W 632'-0"	Jul-93	D-3146-670	07/13/05	Pass	4	70	Chris Miller	

UNDERGROUND PROCESS AND WASTEWATER LINES

DHT UNIT Update to 7/13/05

NOTE TO SHEET; DHT DRAINS ARE ALSO KNOWN AS FOLLOWING FROM DHT/SRU WEEKLY DRAIN SEAL INSPECTION SHEETS: UPDATE 2006

DRAIN #	LOCATION
1	DHT NEAR CONCRETE PAD
2	DHT NEAR CONCRETE PAD
3	DHT NEAR KERO FEED SURGE DRUM D-V1
4	DHT NEAR D-V19 (STEAM)
5	DHT NEAR D-V33 STABILIZER
6	DHT NEAR KERO MU H2 COMPRESSOR D-C4
7	DHT NEAR COLD HIGH PRESSURE SEPARATOR D-V3
8	DHT NEAR HOT, LOW PRESSURE SEPARATOR
9	DHT NEAR C/V FIC-430 H2 TO D-E23
10	DHT CHPS TRIM COOLER KO DRUM D-V4
19	DHT NEAR CONCRETE PAD
20	DHT SEWER JUNCTION BOX
21	DHT NEAR KERO MU H2 COMPRESSOR D-C4
23	DHT NEAR D-E11A
24	DHT NEAR D-E11B
25	DHT NEAR D-P6A
26	DHT NEAR D-P6B

UNDERGROUND PROCESS AND WASTEWATER LINES

SRU UNIT Update 7/14/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
Sump at N.2836.0 Near W.625'-0"	Start Drain SR-P1A @ N2836.0 W.728.0. to 1st "T"@ W713.0. Start from 14" Area Drain @ N.2815.0 to 1st "T" @ W.713.0. From 1st "T" @ W.713.0 to 1st "Y' @ W.704'-3". Start Drain @ N.2770'-3" W.717'-3" to "Y" @ N.2773'-9". Start Drain near SR-C1 to "Y" @ N.2773'-9". From "Y' @ N.2773'-9" to other "Y". From 2" pipe drain on S. side of SRU Bldg. to other "Y". From other "Y" to "Y" @ N.2780'-9". From Drain N.2779'-3" W.709'-0" to "Y' @ N.2780'-9". From "Y" @ N.2780'-9" to "Y" @ N.2836-0" W.704'-3" From "Y" @ N2836'-0" W.704'-3" flows W. to "T" @ N.2836'-0" W.668'-0"	Aug-93	PRO-QUIP D-3146-671	07/14/05	Pass.	2	60	Chris Miller	
	From "T" @ N.2836'-0" W.668'-0"		PRO-QUIP D-3146-527	07/14/05	Pass.	2	60	Chris Miller	
	From Drains Inside SRU Bldg.		PRO-QUIP D-3146-527	07/14/05	Pass.	2	60	Chris Miller	
	Start Drain N.2781'-3' W.660'-0" to 1st "Y". From Clean Out (CO) to 1st "Y". From 1st "Y" flows N. to 2nd "Y". From Drain N.2791'-0" to 2nd "Y". From 2nd "Y" flows N. to 3rd "Y". From Drain N.2806'-0" to 3rd "Y". From 3rd "Y" N. to 4th "Y". Start from Drain N.2786'-3" W.684'-0" to a "Y", also a CO to same "Y". Drain N.2800'-0" W.680'-0" to other "Y" and flows NW to join 4th "Y". 4th "Y" flows N. out under SRU Bldg. to join "T" @ N.2836-0" W.668'-0" (DWG.D-3146-671)	Aug-93	PRO-QUIP D-3146-527	07/14/05	Pass.	2	60	Chris Miller	
Sump at N.2836.0 Near W.625'-0"	"T" @ N.2836-0" W.668'-0" flows W. to last "Y". Drain N.2808-0' W.650'-1" flows N. to last "Y". From last "Y" flows W. to sump N2836'-0"	Aug-93	PRO-QUIP D-3146-671		Pass.	2	60	Chris Miller	

UNDERGROUND PROCESS AND WASTEWATER LINES

SRU UNIT Update 7/14/05

NOTE TO SHEET; SRU DRAINS ARE ALSO KNOWN AS FOLLOWING FROM DHT/SRU WEEKLY DRAIN SEAL INSPECTION SHEETS: 2006

DRAIN #	LOCATION
11	NEAR SR-C1
12	NEAR SR-T4
13	NEAR SR-V7, SR-V8, & SR-V9
14	NEAR SR-T5
15	IN SRU BLDG NEAR SR-T7
16	IN SRU BLDG NEAR SR-T8
17	IN SRU BLDG NEAR SR-A1
18	IN SRU BLDG NEAR SR-P111A
22	IN SRU STORAGE ROOM
27	SRU NEAR D-V9B
28	SRU NEAR D-V9A
29	SRU NEAR D-V28
30	SRU NEAR D-P10C DIST CHG PUMP
31	SRU NEAR D-P10B DIST CHG PUMP
32	SRU NEAR D-P10A DIST CHG PUMP
33	SRU NEAR HOT PRESSURE SEPARATOR D-V26
34	SRU NEAR TRICKLE BED RS D-V25

UNDERGROUND PROCESS AND WASTEWATER LINES

SATS UNIT Update 7/15/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
Catch Basin by S-C1	Drain near S-V9 flows S then W to Catch Basin by S-C1 to C11	1995	95103-CC-105, Z-35-104 , EC-09-125, ES-09-113, ES-09-114 & ES-09-112	07/15/05	Pass	2	60	Chris Miller	
Catch Basin just SW of S-V2	Drain by S-P2B, drain by S-E4, drain by S-E5, 2 drains by S-V3, & drain by S-V2	1995?	No Drawing, Based on Visual Sight	07/15/05	Pass	2	60	Chris Miller	
Catch Basin just W of Catch Basin just SW of S-V2	Drains on either side of SV-13, 3 drains by S-V4, & other drain	1995?	No Drawing, Based on Visual Sight	07/15/05	Pass	2	60	Chris Miller	
Catch Basin & drain by S-11B	2 drains by S-E10 , other drain, & drain by Z-85-P1	1995?	No Drawing, Based on Visual Sight	07/15/05	Pass	2	60	Chris Miller	

UNDERGROUND PROCESS AND WASTEWATER LINES

PLATFORMER UNIT AND NHT UNIT

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results	Notes
P-1	P-E8 to P-1	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-V8/P-E9 to P1	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-P6 to P-P5A to P-1	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-P5B to P-1	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
P-2	P-2 (From Plat Unit) flows to C-1(Crude Unit)	1957	EC-09-125 & EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-V9 to P-2	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-V6 to P-2	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-C1B to P-2	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-C1A to P-2	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-3 to P-2	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
P-3	P-V18 to P-3	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-P2 to P-3	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
	P-4 to P-3	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		
P-4	P-V23 to P-4	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		NHT
	P-V24 to P-4	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		NHT
	DC-P15 to P-P10 to P-4	1957	EP-09-102	10/31/02	Pass	3	30	B.Loos		NHT
P-7 N2509'-9" W1074'-0"	Z-89-V3 @ N2509'-9' to P-7	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT End Drain
P-8 N2550'-3" W1048'-6"	P-7 to P-8	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	Z89-V1 to P-8	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
P-6 N2550'-3" W990'-0"	P-8 to P-6	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	H-F1/H-F2 to Line HE-2 to P-6	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	HE-2 to P-6	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	H-P2 to P-6	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	H-V2 to H-P2 to P-6	1957	EP-09-102	01/23/03	Fail/cup by P-V3	0	0	B.Loos	Repaired 2/6/03 & Tested/Passed	NHT
P-5 N2598'-6" W980'-0"	P-6 To P-5	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	H-P3B to H-P3A to P-5	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	H-V4 to P-5	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT
	H-V1 to P-5	1957	EP-09-102	01/23/03	Pass	3	25	B.Loos		NHT

UNDERGROUND PROCESS AND WASTEWATER LINES									
PLATFORMER UNIT AND NHT UNIT									
P-5 Flows N. @ W980"-0" thru Manhole 31 232.33 (ISOM Manhole) to EZ80-09-509-EP Map		1957	EP-09-102 , EZ80-09-509-EP &EZ80-09-Sewer2						NHT (Connects to ISOM Manhole)

UNDERGROUND PROCESS AND WASTEWATER LINES

Treaters

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results	
Q-1 N2729.63' W582.0'	Q-3 to Q-1	1957	EQ-09-101 SH.1	4/2/2003	Pass	2.33+	30	B Loos		
	Q-T2 to Q-1	1957	EQ-09-101 SH.1	4/2/2003	Pass	2.33+	30	B Loos		
	Q-V6 to Q-1	1957	EQ-09-101 SH.1	4/2/2003	Pass	2.33+	30	B Loos		
	Q-V5 to Q-1	1957	EQ-09-101 SH.1	4/2/2003	Pass	2.33+	30	B Loos		
	Q-V4 to Q-1	1957	EQ-09-101 SH.1	4/2/2003	Pass	2.33+	30	B Loos		
	Q-V1 to Q-1	1957	EQ-09-101 SH.1	4/2/2003	Pass	2.33+	30	B Loos		
	Q-2 to Q-1	1957	EQ-09-101 SH.1	4/2/2003	Pass	2.33+	30	B Loos		
Q-1 West to CBZ-23	Q-1 (Treaters) W to CBZ-23	1957	EQ-09-101 SH.1 EZ-80-09-510EP						Treaters to CBZ-23 at DHT Unit	#10 On Crude List
Q-2 N2714.75' W585.33'	Q-T1 to Q-2	1957	EQ-09-101 SH.1	4/2/2003	Pass	1+	30	Philbert Brown		
	Inhibitor Pump House to Q-2	1957	EQ-09-101 SH.1	4/2/2003	Pass	1+	30	Philbert Brown		
	N2709'-3" W585.33' to Q-2	1957	EQ-09-101 SH.1	4/2/2003	Pass	1+	30	Philbert Brown		
	Q-V3A/Q-V3B to Q-2	1957	EQ-09-101 SH.1	4/2/2003	Pass	1+	30	Philbert Brown		
	Q-V2 to Q-2	1957	EQ-09-101 SH.1	4/2/2003	Pass	1+	30	Philbert Brown		
Q-3 N2760.67' W576.00'	Q-V13 to Q-V12 to Q-3	1957	EQ-09-101 SH.1	4/3/2003	Pass	2.5+	30	Philbert Brown		
	Q-V11 to Q-3	1957	EQ-09-101 SH.1	4/3/2003	Pass	2.5+	30	Philbert Brown		
	Q-V17 to Q-V16 to Q-V9 to Q-V7 to Q-V14 to Q-3	1957	EQ-09-101 SH.2	4/3/2003	Pass	2.5+	30	Philbert Brown		
	Q-T6/Q-P10 to Q-3	1957	EQ-09-101 SH.2	4/3/2003	Pass	2.5+	30	Philbert Brown		
	Q-V15 to Q-3	1957	EQ-09-101 SH.2	4/3/2003	Pass	2.5+	30	Philbert Brown		

UNDERGROUND PROCESS AND WASTEWATER LINES

Gas Concentration Unit Underground Piping Plan

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
G-1	G-P4A To G-P4B To G-1	1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
	G-V5 To G-1	1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
	G-V4 To G-1	1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
	G-P3 To G-1	1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
G-1 Flows W. To G-2		1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
G-2	G-V3 To G-2	1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
	G-E6 To G-2	1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
G-2 Flows W. To G-3		1957	EG-09-102-EP	1/9/2002	Pass	4	70	B.Loos	
G-3	G-V2 To G-3	1957	EG-09-102-EP	1/10/2002	Pass	7	45	B.Loos	
	G-V8B To G-V8A To G-3	1957	EG-09-102-EP	1/10/2002	Pass	7	45	B.Loos	
	G-P2B to G-P2A To G-3		EG-09-102-EP	1/10/2002	Pass	7	45	B.Loos	
G-3 Flows W. To G-4			EG-09-102-EP	1/10/2002	Pass	7	45	B.Loos	
G-4	G-C1A To G-4	1957	EG-09-102-EP	1/11/2002	Pass	7	25	B.Loos	
	G-V1 To G-4	1957	EG-09-102-EP	1/11/2002	Pass	7	25	B.Loos	
G-4 Flows W. To F-4		1957	EG-09-102-EP & EF-09-102 SH.1	1/11/2002	Pass	7	25	B.Loos	

UNDERGROUND PROCESS AND WASTEWATER LINES

TANK FARM Update 7/18/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature / Performed Test	Investigation Results
CBZ-20 3073N 632W	CBZ-21 flows N under road to start of tank farm to CBZ-20	1957	EZ-80-509-EP						
CBZ-19 3073N 935W	CBZ-20 flows W to CBZ-19	1957	EZ-80-509-EP, 95103-CC-104, & Z-01-100						
	Tk 453 drain flows S connects to Y from Tk 452 continues to Y from Tk 451 to CBZ-19	1957	EZ-80-509-EP, 95103-CC-104, & Z-01-100						
CBZ-18 3073N 1118W	CBZ-19 flows W to CBZ-18 (See EZ-80-09-514EP)	1957	EZ-80-509-EP, EZ-80-09-514EP, 95103-CC-104, & Z-01-100						
	Tk 227 drain flows S to join Tk 228 drain SW to CBZ-18	1957	EZ-80-509-EP, EZ-80-09-514EP, & Z-01-100						
	Tk 342 flows S to join Tk 343 drain S to CBZ-18	1957	EZ-80-509-EP, & Z-01-100						
CBZ-17 3073N 1260W	Tk 107 flows S to join Tk 108 drain onto S to CBZ-17	1957	EZ-80-09-514EP, & Z-01-100						
	CBZ-28 flows NW to CBZ-17	1957	EZ-80-09-514EP						
CBZ-28 2993.5N 1182.5W	Sump B-6 (Biolerhouse) flows N to CBZ-28		EZ-80-09-513EP, EZ-80-09-514EP & EZ-81-09-102EP						
CBZ-16 3073N 1350W	CBZ-17 flows W to CBZ-16	1957	EZ-80-09-514EP, & Z-01-100						
	Tk 321 drain flows S to join Tk 232 drain onto CBZ-16	1957	EZ-80-09-514EP, & Z-01-100						
CBZ-15 3073N 1440W	CBZ-16 flows W to CBZ-15	1957	EZ-80-09-514EP, & Z-01-100						
	Tk 235 drain flows S to join Tk 106 onto CBZ-15	1957	EZ-80-09-514EP, & Z-01-100						
CBZ-14 3073N 1493W	CBZ-15 flows W to CBZ-14	1957	EZ-80-09-514EP, & Z-01-100						
	CBZ-30 flows N to CBZ-14	1957	EZ-80-09-513EP & EZ-80-09-514EP						

UNDERGROUND PROCESS AND WASTEWATER LINES

TANK FARM Update 7/18/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature / Performed Test	Investigation Results
CBZ-1 3480N 380W	Start Tk 568 drain flows N and W to CBZ-1	1957	EZ-80-509-EP, 95103-CC-104, & Z-01-100						
	Tk 570 drain flows N to Y from Tk 569 & onto CBZ-1	1957	EZ-80-509-EP, 95103-CC-104, & Z-01-100	3/22/2005	Pass		90	Ugene Kenneth	
CBZ-2 3480N 782W	CBZ-1 flows W to CBZ-2	1957	EZ-80-509-EP, 95103-CC-104, & Z-01-100						
	Tk 572 drain flows N to join Y from Tk 571drain to CBZ-2	1957	EZ-80-509-EP, 95103-CC-104, & Z-01-100						
CBZ-3 3480N 931.5W	Tk 112 drain flows N to join Y from Tk 111 to CBZ-3	1957	EZ-80-509-EP, 95103-CC-104, & Z-01-100						
	Tk 226 drain flows S to CBZ-3	1957	EZ-80-508EP, EZ-80-509-EP, 95103-CC-104, & Z-01-100						
Underground? "T" 3480N 1026W	CBZ-3 flows W to "T"	1957	EZ-80-09-509EP & Z-01-100						
	Tk 116 drain flows N to join Y from Tk 115 drain to "T"	1957	EZ-80-09-509EP & Z-01-100						
CBZ-4 3480N 1233W	CBZ-3 through "T" to CBZ-4	1957	EZ-80-09-509EP, EZ-80-09-514EP, & Z-01-100						
	Tk 567 drain flows N to CBZ-4	???	EZ-80-09-514EP, & Z-01-100						
	Tk 225 drain flows S to CBZ-4	1957	EZ-80-09-514EP, EZ-80-09-515EP, & Z-01-100						
CBZ-5 3480N 1325W	CBZ-4 flows W to CBZ-5	1957	EZ-80-09-514EP, & Z-01-100						
	Tk 338 flows N to CBZ-5	1957	EZ-80-09-514EP, & Z-01-100						
	Tk 339 flows S to CBZ-5	1957	EZ-80-09-514EP, EZ-80-09-515EP, & Z-01-100						
CBZ-6 3480N 1493W	CBZ-5 flows W to CBZ-6	1957	EZ-80-09-514EP, & Z-01-100						
	Drain fr conc floor for booster & charge pumps flows S to CBZ-6	1957	EZ-80-09-514EP, & Z-01-100						
	CBZ-14 flows N to CBZ-6	1957	EZ-80-09-514EP, & Z-01-100						

UNDERGROUND PROCESS AND WASTEWATER LINES

TANK FARM Update 7/18/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature / Performed Test	Investigation Results
CBZ-26 3480N 1750W	CBZ-6 flows W to CBZ-26	1957	EZ-80-09-514EP, & Z-01-100						
	Tk 101 drain flows N to CBZ-26	1957	EZ-80-09-514EP, & Z-01-100						
	Tk 102 drain flows N to join Tk 101 drain onto CBZ-26	Prior 1995	EZ-80-514EP, 95103-CC-104, & Z-01-100						
	CBZ-13 flows S to CBZ-26	1957	EZ-80-09-514EP, EZ-80-09-515EP, & Z-01-100						
CBZ-27 3480N 1850W	CBZ-26 flows W to CBZ-27	1957	EZ-80-09-514EP, & Z-01-100						
API Separator	CBZ-27 flows N NW to API Separator	1957	EZ-80-09-514EP & EZ-80-08-515EP						Now flows to New API Pit (2004)
CBZ-7 3745N 370W	Catch Basin at RRR pumped up to CBZ-7		95103-CC-104						
	Tk 582 drain flows N to CBZ-7	1957	EZ-80-09-508EP & Z-01-100						
CBZ-8 3745N 675W	CBZ-7 flows W to CBZ-8	1957	EZ-80-09-508EP & Z-01-100						
	Tk 581 drain flows NW to CBZ-8	1957	EZ-80-09-508EP & Z-01-100						
	Tk 575 drain flows N to join Tk 577 drain to NE to CBZ-8	1957	EZ-80-09-508EP & Z-01-100						
CBZ-9 3985N 675W	CBZ-31 uses pump to pump to CBZ-9	1957	EZ-80-09-508EP & Z-01-100						
CBZ-31 3939N 460W	Drain N3850 W460 flow N to join "Y" from Tk 574 drain to CBZ-31	1957	EZ-80-09-508EP & Z-01-100						
	CBZ-32 flows W to CBZ-31	1957	EZ-80-09-508EP & Z-01-100						
CBZ-32 3939N 425W	Tk 576 drain flows NW to CBZ-32	1957	EZ-80-09-508EP & Z-01-100						
CBZ-10 3985N 780W	CBZ-9 flows W to CBZ-10	1957	EZ-80-09-508EP & Z-01-100						
	Tk 579 drain flows W to CBZ-10	1957	EZ-80-09-508EP & Z-01-100						

UNDERGROUND PROCESS AND WASTEWATER LINES

TANK FARM Update 7/18/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature / Performed Test	Investigation Results
CBZ-11 3985N 1136W	CBZ-10 flows W to CBZ-11	1957	EZ-80-09-508EP, EZ-80-09-515EP & Z-01-100						
CBZ-12 3985N 1492W	CBZ-11 flows W to CBZ-12	1957	EZ-80-09-515EP & Z-01-100						
	Tk 345,Tk344 & Tk 337 drains to CBZ-12???	AFTER 1957	NO Drawing						
CBZ-13 3985N 1750W	CBZ-12 flows W to CBZ-13	1957	EZ-80-09-515EP & Z-01-100						
CBZ-30 2931.17N 1485.50W	Mkt 4 drain N to Mkt 1drain to Mkt 2drain to Mkt 3 drain E & NE to CBZ-30	1957	EZ-80-09-513EP						
	CBZ-29 N to CBZ-30	1957	EZ-80-09-513EP						
CBZ-29 2737.82N 1485.50W	Drains fr old Fuel Oil Loading N2618.82 W1619.75 & N2649.94 W1595.0 flow NW to CBZ-29	1957	EZ-80-09-513EP						
	2781.17N drain pipe to CBZ-29	1957	EZ-80-09-513EP						I & E Shop now
	2756.17N drain pipe to CBZ-29	1957	EZ-80-09-513EP						I & E Shop now
	2731.17N drain pipe to CBZ-29	1957	EZ-80-09-513EP						I & E Shop now
	Truck Loading, 3 Area Drains flow to sump, then sump flows to CBZ-29	1957	EZ-80-09-513EP & EZ-09-250EP						
	4" Oily & Acid Drain from Lab Sinks & Floor to tie in between Truck Loading Sump and CBZ-29	1957	EZ-80-09-513EP, EZ-09-250EP & EZ-09-174						

UNDERGROUND PROCESS AND WASTEWATER LINES

TANK FARM Update 7/18/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature / Performed Test	Investigation Results
C.B. No. 5 ~3590N 112.35W	RRR Drains L S (Loading Spot) #13 to LS #12 to LS #11 to LS #10 to CB #5	1957	EZ-80-09-504EP EZ-80-09-505EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
C.B. No. 4	LS #9, LS #8, LS #7, & LS #6 "T" into C. B. No.5 to C. B. No.4	1957	EZ-80-09-505EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
C.B. No. 3	C.B. No.4 to C.B. No. 3	1957	EZ-80-09-505EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
C.B. No. 2 3870N 112.35W	LS#5, LS#4, & LS#3 "T" in C.B. No.3 to C.B. No.2	1957	EZ-80-09-505EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
C.B. No. 1	LS #2 & LS #1 "T" to C.B. No.2 to C.B. No. 1	1957	EZ-80-09-505EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
C.B. No.1 to Sewerage Basin		1957	EZ-80-09-506EP	Made area where MH No. 8 was to a large concrete containment, sewage basin taken out of service					
MH No.9 3394N 162W	MH No. 10 3394N 210.32W connects to MH No.9	1957	EZ-80-09-504EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
MH No.6 3606N 162W	MH No 9 to MH No.6	1957	EZ-80-09-505EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
MH No.7 3739.58N 137.00W	MH No.6 to MH No. 7	1957	EZ-80-09-505EP	7/18/2005	Pass	4	120	L. Jeff & A. Becenti	RRR
MH No.8 4089.58N 137.00W	MH No.7 N to MH No.8	1957	EZ-80-09-505EP	Made area where MH No. 8 was to a large concrete containment, sewage basin taken out of service					
MH No.8 to Sewerage Basin		1957	EZ -80-09-505EP EZ-80-09-506EP	Made area where MH No. 8 was to a large concrete containment, sewage basin taken out of service					

UNDERGROUND PROCESS AND WASTEWATER LINES

ISOM UNIT Update 7/11/05

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results	NOTES
P-5 Flows N. @ W980"-0" thru Manhole 31 232.33 (ISOM Manhole) to EZ80-09-509-EP Map		1957	EP-09-102 , EZ80-09-509-EP &EZ80-09-Sewer2	Info maps only used to reference point W980 from NHT						NHT (Connects to ISOM Manhole)
I believe these Drains connect to East to West 4"lateral to (Isom Manhole) 31 232.33	I-V9	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-V13	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-P6	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-P1A	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-P1B	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	!-V11	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-P5B	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-P2B	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-P2A	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-V8	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		
	I-H27	1998	Z-35-104 & EZ-80-09-SEWER2	7/11/2005	Pass	3	120	Chris Miller		

UNDERGROUND PROCESS AND WASTEWATER LINES

Boiler Plant

ID Number (Sewer Box or Catch Basin	Lateral Drains and/or Headers	Date Installed	Drawing Reference	Test Date	Pass/Fail/ Repair Information	Test Water Column (Feet)	Test Duration (Minutes)	Signature	Investigation Results
CBZ-28 2993.5N 1182.5W (Continued from Tank Farm)	Sump B-6 (BoilerHouse)flows N to CBZ-28	1957	EZ-80-09-513EP, EZ-80-09-514EP & EZ-81-09-102EP						
Sump B-6 N2852.5 W1180.5	Z-91-T-1 (Raw Water Tk) drain to B-6	1957	EZ-81-09-102EP						
	3 drains from Z86-P1 & Z86-P2 area connect to "Y" from B-4 to B-6	1957	EZ-81-09-102EP						
	Sump B-4 to Sump B-6	1957	EZ-81-09-102EP						
Sump B-4 N28+16'-9" W1180.5	Z-81-T1 (Boiler Feed Water Tk.) to B-4	1957	EZ-81-09-102EP						
	Sump Just SW of Z-81-T! to B-4	1957	EZ-81-09-102EP						
	Drain By V-3 to B-4	1957	EZ-81-09-102EP						
	B-3 flows W to B-4	1957	EZ-81-09-102EP						
	B-5 flows N to B-4	1957	EZ-81-09-102EP						
Sump B-5 N27+56' W1180.5	Drains Z-81-P1 & Z-81-P2 to B-5	1957	EZ-81-09-102EP						
	Drain A to B-5	1957	EZ-81-09-102EP						
	Drain Z-81 - T-2 to B-5	1957	EZ-81-09-102EP						
	P-6 & P-5 (Fuel Oil) drain to B-5	1957	EZ-81-09-102EP						
	A-C2 (Auxiliary Air Compressor) drain to B-5	1957	EZ-81-09-102EP						
	Drain just N of A-C2 to B-5	1957	EZ-81-09-102EP						
	6 Drains inclusive Z-91-P4 to B-5	1957	EZ-81-09-102EP						
Sump -B-3 N 28+16'-9" W11+46'-6"	B-2 flows N to B-3	1957	EZ-81-09-102EP						
Sump B-2 ~N27+76'-9" W11+46"-6"	Drain fr inside boiler house flows SE to B-2	1957	EZ-81-09-102EP						
	B-102 drain to B-2	1957	EZ-81-09-102EP						
	Drain fr inside boiler house flows NE to B-2	1957	EZ-81-09-102EP						
	B-1 flows N to B-2	1957	EZ-81-09-102EP						
Sump B-1 N27+36'-5" W11+46'-6"	Drain fr inside boiler house flows E to B-1	1957	EZ-81-09-102EP						
	Drain fr AD-1 inside boiler house flows NE to B-1	1957	EZ-81-09-102EP						
	Drain fr B-101 flows NW to B-1	1957	EZ-81-09-102EP						
	Drain N27+10 W 10+99 flows W then NW to B-1	1957	EZ-81-09-102EP						
	Drain 1146.50W flows N. to B-1 NOTE: BEGINNING/END POINT	1957	EZ-81-09-102EP						

OCD Permit Condition 21:

e. Summary of All Leaks, Spills, and Releases and Corrective Actions

OCD Permit Condition 21:

e. Summary of All Leaks, Spills, and Releases and Corrective Actions

1/6/05 – The gauge stick to the diesel salt dryer vessel at the railroad pump area broke off. Fifty gallons of diesel spilled, and 90% landed within the railroad rack concrete containment. The remaining 10% landed on nearby soil and was washed down to the process sewer with the diesel on containment.

4/9/05 – The slop transfer pump plugged during a routine transfer to T-105. This caused T-105 to run over 42 gallons of slop oil and water to the ground surface. The oil was vacuumed up and the impacted soil was removed.

7/20/05 – An electrical step-down unit failed causing the auto fill circuit to experience a malfunction which allowed the diesel marketing tank #1 to over fill 630 gallons of diesel. The tank farm operators shut down the pump and blocked in the valve to tank #1 The spill was contained in the tank bermed area. The diesel was vacuumed up and the impacted soil was removed and taken to the onsite OCD landfarm.

8/3/05 – The API separator pump valve broke causing approximately 756 gallons of wastewater containing 6 barrels of oil to discharge 1700 feet into the upper stormwater basin. The API valve was repaired and the impacted soil (17 cubic yards) was excavated, stockpiled on plastic and sampled. Analysis indicated that this soil was not a hazardous waste and Giant requested a "contained in" determination from NMED which was granted. The soil was disposed at the Red Rocks landfill.

8/7/05 – The API separator sump pump was not working properly (20-30 percent capacity) which resulted in a discharge of 1,152,000 gallons into the aeration lagoons and ponds. The oily material was vacuumed out of the lagoons and ponds and stored in two 55,000 barrel tanks before being recycled as slop oil. Corrective action also involved cleanup of the oily material (300 cubic yards) from the banks of aeration lagoons 1 and 2 and ponds 1 and 2. This material was stockpiled on plastic and sampled. Analysis indicated that this soil was not a hazardous waste and Giant requested a "contained in" determination from NMED which was granted. This material was disposed of off-site at the Waste Management Painted Desert landfill in Arizona.

8/15/05 – The weir box at the API separator overflowed discharging 50-100 gallons of wastewater onto the ground. The discharge was caused by a combination of heavy rains and debris blocking the process lines. The second API bay (which was down for maintenance) was put into service to stop the overflow. Within minutes of discovery a front end loader constructed a temporary berm near the API separator. All flows were contained with the constructed berm area or within the upper storm water basin. The impacted soil (13 cubic yards) was excavated, stockpiled on plastic and sampled. Analysis indicated that this soil was not a hazardous waste and Giant requested a "contained in" determination from NMED which was granted. The soil was disposed at the Red Rocks landfill.

9/14/05 – The truck rack sewer line containing water and hydrocarbon slop overflowed 20 gallons at its lowest point near Marketing tank #4. The process sewer line was found plugged and maintenance was working on unplugging the line on 9/13/05. The overflow was contained within the marketing tank area and the 20 gallons of slop was vacuumed up. Impacted soil was removed and sent offsite for disposal as hazardous waste.

9/15/05 – During monthly inspection of API secondary containment water was found which exceeded NMWQS. The secondary containment was vacuumed and all the water was removed. Giant repaired the API primary containment and does not believe the leak left the secondary containment.

10/17/05 – Approximately 2,184 gallons of transmix (gasoline/diesel) ran over the top of Tank-232. The release was contained within the secondary containment and 1,747 gallons were recovered and recycled. Impacted soil was cleaned up and disposed of.

OCD Permit Condition 21:

f. Summary of Discovery of New Groundwater Contamination

Giant does not believe there were any discoveries of new groundwater contamination in 2005 as there is no new contamination present in any monitoring wells that was not already present in previous year's (2004) sampling events.

OCD Permit Condition 21:

g. Summary and Copies of All EPA-NMED RCRA Activity

The following items are included in this section:

2005 Land Treatment Unit Inspection Summary
2005 Biennial Hazardous Waste Generator Report
2005 Annual Hazardous Waste Fee Report
NMED Storm Water Inspection Report and Giant Reply Letter

2005 Land Treatment Unit Inspections Log

Date of Inspection	Inspector's Name	Findings
1-0-05	Kent McKinney	OK/Good
1/12/2005	Darren Joe	OK/Good
1/13/2005	Kent McKinney	OK/Good
1/19/2005	Darren Joe	OK/Good
1/20/2005	Kent McKinney	OK/Good
1/26/2005	Darren Joe	OK/Good
1/27/2005	Kent McKinney	OK/Good
2/2/2005	Darren Joe	OK/Good
2/11/2005	Darren Joe	OK/Good
2/11/2005	Kent McKinney	OK/Good
2/16/2005	Darren Joe	OK/Good
2/17/2005	Kent McKinney	OK/Good
2/23/2005	Darren Joe	OK/Good
2/24/2005	Kent McKinney	OK/Good
3/2/2005	Darren Joe	OK/Good
3/9/2005	Darren Joe	OK/Good
3/10/2005	Kent McKinney	OK/Good
3/16/2005	Darren Joe	OK/Good
3/17/2005	Kent McKinney	OK/Good
3/23/2005	Darren Joe	OK/Good
3/24/2005	Kent McKinney	OK/Good
3/30/2005	Darren Joe	OK/Good
3/31/2005	Kent McKinney	OK/Good
4/6/2005	Darren Joe	OK/Good
4/7/2006	Kent McKinney	OK/Good
4/13/2005	Darren Joe	OK/Good
4/14/2005	Kent McKinney	OK/Good
4/20/2005	Darren Joe	OK/Good
4/21/2005	Kent McKinney	OK/Good
4/27/2005	Darren Joe	OK/Good
4/28/2005	Kent McKinney	OK/Good
5/1/2005	Darren Joe	OK/Good
5/5/2005	Kent McKinney	OK/Good
5/4/2005	Johnny Sanchez	OK/Good
5/12/2005	Kent McKinney	OK/Good
5/18/2005	Johnny Sanchez	OK/Good
5/19/2005	Kent McKinney	OK/Good
5/26/2005	Kent McKinney	OK/Good
5/27/2005	Johnny Sanchez	OK/Good
5/31/2005	Johnny Sanchez	OK/Good
6/2/2005	Kent McKinney	OK/Good
6/9/2005	Kent McKinney	OK/Good
6/10/2005	Johnny Sanchez	OK/Good
6/15/2005	Johnny Sanchez	OK/Good
6/16/2005	Kent McKinney	OK/Good
6/22/2005	Steve Morris	OK/Good
6/23/2005	Kent McKinney	OK/Good
6/28/2005	Johnny Sanchez	OK/Good

6/30/2005	Kent McKinney	OK/Good
7/6/2005	Johnny Sanchez	OK/Good
7/13/2005	Johnny Sanchez	OK/Good
7/14/2005	Kent McKinney	OK/Good
7/19/2005	Johnny Sanchez	OK/Good
7/21/2005	Kent McKinney	OK/Good
7/26/2005	Johnny Sanchez	OK/Good
7/28/2005	Kent McKinney	OK/Good
8/3/2005	Johnny Sanchez	OK/Good
8/4/2005	Kent McKinney	OK/Good
8/10/2005	Johnny Sanchez	OK/Good
8/12/2005	Kent McKinney	OK/Good
8/17/2005	Johnny Sanchez	OK/Good
8/18/2005	Kent McKinney	OK/Good
8/23/2005	Johnny Sanchez	OK/Good
8/25/2005	Kent McKinney	OK/Good
8/29/2005	Johnny Sanchez	OK/Good
9/1/2005	Kent McKinney	OK/Good
9/7/2005	Johnny Sanchez	OK/Good
9/8/2005	Kent McKinney	OK/Good
9/15/2005	Johnny Sanchez/K. M.	OK/Good
9/22/2005	Kent McKinney	OK/Good
9/30/2005	Johnny Sanchez	OK/Good
10/5/2005	Johnny Sanchez	OK/Good
10/12/2005	Johnny Sanchez	OK/Good
10/19/2005	Steve Morris	OK/Good
10/20/2005	Kent McKinney	OK/Good
10/26/2005	Johnny Sanchez	OK/Good
10/27/2005	Kent McKinney	OK/Good
11/2/2005	Johnny Sanchez	OK/Good
11/3/2005	Kent McKinney	OK/Good
11/9/2005	Johnny Sanchez	OK/Good
11/10/2005	Kent McKinney	OK/Good
11/15/2005	Johnny Sanchez	OK/Good
11/17/2005	Kent McKinney	OK/Good
11/22/2005	Johnny Sanchez	OK/Good
11/29/2005	Johnny Sanchez	OK/Good
12/7/2005	Johnny Sanchez	OK/Good
12/9/2005	Kent McKinney	OK/Good
12/14/2005	Johnny Sanchez	OK/Good
12/15/2005	Kent McKinney	OK/Good
12/20/2005	Johnny Sanchez	OK/Good
12/22/2005	Kent McKinney	OK/Good
12/28/2005	Johnny Sanchez	OK/Good

Giant Refining Company
Route 3, Box 7
Gallup, NM 87301

February 28, 2006

Mr. James Valdez
Management Analyst
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

RE: 2005 Biennial Generators Report
Giant Industries, Inc, Ciniza Refinery
EPA ID No. NMD000333211

Dear Mr. Valdez:

Ciniza Refinery has prepared the 2005 Biennial Generators Report. We have enclosed a paper copy and an electronic copy on disc. Please feel free to contact me at (505) 722-3227 if you have any questions.

Sincerely,

Jim Lieb
Environmental Engineer
Giant Industries - Ciniza Refinery

Cc: w/attachments
Ed Rios, General Manager
Ed Riege, Environmental Superintendent
David Kirby, Giant Industries Arizona, Inc.

MAIL THE COMPLETED FORM TO:
The Appropriate EPA Regional or State Office

United States Environmental Protection Agency

RCRA SUBTITLE C SITE IDENTIFICATION FORM

. Reason for Submittal and Status of Information Supplied (see instructions on page 9)

MARK ALL BOX(ES) THAT APPLY

A. Reason for Submittal:

- ☐ To provide initial notification (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities).
- ☒ To provide subsequent notification (to update site identification information).
- ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application.
- ☐ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____).
- ☒ As a component of the Hazardous Waste Report.

2. Site EPA ID Number (see instructions on page 10)

EPA ID Number: NMD000333211

3. Site Name (see instructions on page 10)

Name: GIANT REFINING CO. - CINIZA REFINERY

4. Site Location Information (see instructions on page 10)

Street Address: I-40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW MEXICO

City, Town, or Village: JAMESTOWN **State:** NM

County Name: MCKINLEY **Zip Code:** 87347-

5. Site Land Type (see instructions on page 10)

Site Land Type: ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

6. North American Industry Classification System (NAICS) Code(s) for the Site (see instructions on page 10)

A. 324110 **B.**

C. **D.**

7. Site Mailing Address (see instructions on page 11)

Street or P.O. Box: I-40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW MEXICO

City, Town, or Village: JAMESTOWN **State:** NM

Country: **Zip Code:** 87347-

8. Site Contact Person (see instructions on page 11)

First Name: ED **MI:** **Last Name:** RIEGE

Phone Number: (505)722-3217 **Extension:** **Email:** eriege@giant.com

9. Legal Owner and Operator of the Site (see instructions on pages 11 and 12)

A. Name of Site's Operator:
GIANT REFINING CO. - CINIZA REFINERY

Date Became Operator (mm/dd/yyyy):
01/01/1982

Operator Type: ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

B. Name of Site's Legal Owner:
GIANT INDUSTRIES ARIZONA, INC.

Date Became Owner (mm/dd/yyyy):
01/01/1982

Owner Type: ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

9. Legal Owner (Continued) Address

Street or P.O. Box: 23733 N. SCOTTSDALE ROAD

City, Town, or Village: SCOTTSDALE

State: AZ Zip Code: 85255- Country:

10. Type of Regulated Waste Activity

Mark 'X' in the appropriate boxes. Mark "Yes" or "No" for each choice. (See instructions on pages 13 to 16)

A. Hazardous Waste Activities

Complete all parts for Items 1 through 6.

Y [X] N [ ] **1. Generator of Hazardous Waste**

If "Yes" choose only one of the following - a,b, or c.

[X] a. LQG: Greater than 1,000 kg/mo (2,200 lbs.) of non-acute hazardous waste; or

[ ] b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs.) of non-acute hazardous waste; or

[ ] c. CESQG: Less than 100 kg/mo of non-acute hazardous waste

In addition, indicate other generator activities (check all that apply)

Y [ ] N [X] d. United States Importer of Hazardous Waste

Y [ ] N [X] e. Mixed Waste (hazardous and radioactive) Generator

For Items 2 through 6, check all that apply:

Y [ ] N [X] **2. Transporter of Hazardous Waste**

Y [ ] N [X] **3. Treater, Storer, or Disposer of Hazardous Waste (at your site) Note:** A hazardous waste permit is required for this activity

Y [ ] N [X] **4. Recycler of Hazardous Waste (at your site)**

Note: A hazardous waste permit may be required for this activity.

5. Exempt Boiler and/or Industrial Furnace

Y [ ] N [X] a. Small Quantity On-site Burner Exemption

Y [ ] N [X] b. Smelting, Melting, Refining Furnace Exemption

Y [ ] N [X] **6. Underground Injection Control**

B. Universal Waste Activities

1. Large Quantity Handler of Universal Waste (accumulate 5,000 KG or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. (check all boxes that apply)

	Generated	Accumulated
a. Batteries	[ ]	[ ]
b. Pesticides	[ ]	[ ]
c. Thermostats	[ ]	[ ]
d. Lamps	[ ]	[ ]
e. Other _____	[ ]	[ ]
f. Other _____	[ ]	[ ]
g. Other _____	[ ]	[ ]

Y [ ] N [X] **2. Destination Facility for Universal Waste**

Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities - Mark all boxes that apply

Y [ ] N [X] **1. Used Oil Transporter**

If "Yes", mark each that applies.

[ ] a. Transporter

[ ] b: Transfer Facility

Y [ ] N [X] **2. Used Oil Processor and/or Re-refiner -**

If "Yes", mark each that applies.

[ ] a. Processor

[ ] b. Re-refiner

Y [ ] N [X] **3. Off-Specification Used Oil Burner**

Y [ ] N [X] **4. Used Oil Fuel Marketer**

If "Yes", mark each that applies.

[ ] a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner

[ ] b. Marketer Who First Claims the Used Oil Meets the Specifications

11. Description of Hazardous Wastes (see instructions on page 17)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

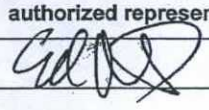
D001	D002	D007	D009	D018	F003	F005
F037	K050	K169	K171			

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (see instructions on page 17)

eriege@giant.com

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are signifigant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. **(see instructions on page 17)**

Signature of owner, operator, or an authorized representative	Name and Official Title (type or print)	D. Date Signed (mm-dd-yyyy)
	ED RIOS	02/28/2006
	GENERAL MANAGER	

SITE NAME
GIANT REFINING CO. - CINIZA REFINERY
EXIT 39 - 17 MILES EAST OF GALLUP, NEW MEXICO
JAMESTOWN NM 87347

EPA ID NO: **NMD000333211**

FORM OI

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

OFF-SITE IDENTIFICATION

Form	A. EPA ID No. of off-site installation or transporter	B. Name of off-site installation or transporter
1	NMD002208627	RINCHEM COMPANY, INC

C. Handler Type
N Generator
Y Transporter
Y TSDR

D. Address of off-site installation
Street 6133 EDITH BLVD. NE
City ALBUQUERQE
State NM Zip 8710-7

Form	A. EPA ID No. of off-site installation or transporter	B. Name of off-site installation or transporter
2	OKD987097151	TRICAT INC

C. Handler Type
n Generator
N Transporter
Y TSDR

D. Address of off-site installation
Street
City MCALESTER
State OK Zip -

Form	A. EPA ID No. of off-site installation or transporter	B. Name of off-site installation or transporter
	TXD106829963	EURECAT US INCORPORATED

C. Handler Type
N Generator
N Transporter
Y TSDR

D. Address of off-site installation
Street 13100 BAY PARK ROAD
City PASADENA
State TX Zip 77505-

Form	A. EPA ID No. of off-site installation or transporter	B. Name of off-site installation or transporter
6	OKD981588791	TRIAD TRANSPORT

C. Handler Type
N Generator
Y Transporter
N TSDR

D. Address of off-site installation
Street
City
State Zip -

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	IGNITABLE AND TOXIC SPENT HYDROTREATING CATALYST CONTAINING BENZENE

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D018 K171	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G08 Management Method code for Source code G25	W319	82,446.00	1 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	TXD106829963	H039	26,400.00
2	OKD987097151	H039	51,180.00
3	NMD002208627	H141	4,866.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
I-40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
AMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	IGNITABLE /TOXIC SEDIMENT CONTAINING TOLUENE FROM HYDROTREATING TRAP

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
F005	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM	
G08	W319	2,671.00	1	
Management Method code for Source code G25			Density	0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	2,671.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
I-40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
AMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	IGNITABLE/TOXIC SLUDGE/SCALE CONTAINING TOLUENE FROM A TEMPORY FRAC TANK

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
F005	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G14 Management Method code for Source code G25	W307	576.00	1 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?	Yes

Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	576.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	IGNITABLE/TOXIC PETROLEUM TANK SCALE CONTAINING BENZENE AND MERCURY

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D009 F003 F005	

D. Source Code / Management Method code for Source code G25	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G14	W307	1,299.00	1 / 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	1,299.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	FLAMMABLE ADDITIVE FROM LAB CONTAINING XYLENE AND TOLUENE

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D001 F003 F005	

D. Source Code / Management Method code for Source code G25	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G22	W219	88.00	1 / 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?	Yes

Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	88.00

Comments ADDITIVE THAT HAS SOLIDIFIED

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	FLAMMABLE ANTISTATIC ADDITIVE FROM LAB CONTAINING TOLUENE AND ISOPROPYL ALCOHOL

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D001	

D. Source Code / Management Method code for Source code G25	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G19	W001	324.00	1 / 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	324.00

Comments G19- DISCARDING OUT OF DATE ADDITIVE, UNUSED CHEMICAL

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	CORROSIVE ACIDS FROM LAB, LABPACK CONTAINING SULFURIC, PHOSPHORIC, NITRIC, HYDROCHLORIC, PERCHLORIC, AND ACETIC ACIDS; CUPROUS CHLORIDE

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D001 D002	

D. Source Code / Management Method code for Source code G25	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G19	W001	117.00	1 / 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	117.00

Comments DISCARDING OUT-OF-DATE UNUSED CHEMICALS FROM LAB

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
' 40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
.AMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	OUT OF DATE ANILINE FROM LAB WHICH IS LISTED

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
U012	

D. Source Code / Management Method code for Source code G25	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G11	W001	43.00	1 / 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	43.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
10, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	FLAMMABLE PETROLEUM ADDITIVE CONTAINING XYLENE FROM SPILL CLEANUP AT TRUCK LOADING RACK

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D001 D018	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G32 Management Method code for Source code G25	W609	45.00	1 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?	Yes

Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	45.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	GLYCOL CHARACTERISTIC FOR BENZENE FROM TRUCK RACK VAPOR RECOVERY UNIT

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D004	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM	Density
G21	W219	3,160.00	1	0.00 lb./gal.

Management Method code for Source code G25

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	3,160.00

Comments

SITE NAME
GIANT REFINING CO. - CINIZA REFINERY
I-40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347
EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	REFINING SLUDGE FROM HEAT EXCHANGER BUNDLE CLEANING, LISTED WASTE

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
K050	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G13	W603	165.00	1 / 0.00 lb./gal.

Management Method code for Source code G25

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	165.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	SOIL CONTAMINATED WITH GASOLINE ADDITIVE CONTAINING XYLENE AT RR LOADING RACK

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
F003	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G32 Management Method code for Source code G25	W409	346.00	1 Density 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	346.00

Comments

1150

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	FLAMMABLE DIESEL AND KEROSENE CONTAINING RED DYE FROM TANK FARM

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D001	

D. Source Code / Management Method code for Source code G25	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G08	W219	3,873.00	1 / 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?	Yes

Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	3,873.00

Comments

SITE NAME

GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347

EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	SLUDGE FROM OIL/WATER SEPARATOR AT OIL REFINERY

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
F037	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G13 Management Method code for Source code G25	W603	20,628.00	1 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	20,628.00

Comments

SITE NAME
GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347
EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	SEDIMENT FROM CRUDE OIL TANK CONTAINING CHROMIUM AND SOIL

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
K169 D007	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM	
G14	W603	9,224.00	1	Density 0.00 lb./gal.

Management Method code for Source code G25

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	9,224.00

Comments

SITE NAME
GIANT REFINING CO. - CINIZA REFINERY
40, EXIT 39 - 17 MILES EAST OF GALLUP, NEW
JAMESTOWN, NM 87347
EPA ID NO: **NMD000333211**

FORM GM

U.S. ENVIRONMENTAL PROTECTION AGENCY
2005 Hazardous Waste Report

WASTE GENERATION AND MANAGEMENT

Sec. 1	A. Waste Description	IGNITABLE CLEAN OUT OF SEDIMENT AND SCALE CONTAINING CHROMIUM AND BENZENE FROM NHT VESSEL

B. EPA Hazardous Waste Code	C. State Hazardous Waste Code
D007 D018	

D. Source Code	E. Form Code	F. Quantity Generated in 2005	G. UOM / Density
G14 Management Method code for Source code G25	W307	5,481.00	1 Density 0.00 lb./gal.

Sec. 2	Was any of this waste managed on-site?	No

ON-SITE PROCESS SYSTEM 1		ON-SITE PROCESS SYSTEM 2	
On-site process system type	Quantity treated, disposed, or recycled on-site in 2005	On-site process system type	Quantity treated, disposed, or recycled on-site in 2005

Sec. 3	A. Was any of this waste shipped off site in 2005 for treatment, disposal, or recycling?		Yes
Site #	B. EPA ID No. of facility to which waste was shipped	C. Off-site Management Method code shipped to	D. Total quantity shipped in 2005
1	NMD002208627	H141	5,481.00

Comments

State of New Mexico Environment Department
Hazardous Waste Bureau
.nnual Hazardous Waste Fees

Report #: NMD000333211-2401-CY2005

Facility Mailing Address:
GIANT REFINING CO. - CINIZA REFINERY
ROUTE 3, BOX 7
GALLUP, NM 87301

Facility Location Address:
INTERSTATE 40, EXIT 39 - 17 MILES EAST OF
JAMESTOWN, NM 87347

Please provide current Owner information below.
Owner Name: Giant Industries Arizona, Inc.
Address: 23722 N. Scottsdale Rd
Scottsdale, AZ 85255

Reported Generator Status: LQG

This is the NMED annual notice for hazardous waste generation and business fees applicable to all facilities classified as Small Quantity Generators (SQG), Large Quantity Generator (LQG), The fee regulations are promulgated pursuant to the provisions of New Mexico Hazardous Waste Act, Chapter 74, Article 4, NMSA (as amended). **Fees are due AUGUST 1, 2006 for waste generated during calendar year 2005.**

If you have any questions or concerns, please contact Charlotte Duran at (505) 428-2508 or James Valdez at (505) 428-2503.

Calendar Year	2005	
Total amount generated	134,205	(lbs)/tons (circle one)
Total amount recycled	77,580	(lbs)/tons (circle one)
Amount generated from spill cleanup	346	(lbs)/tons (circle one)
Current Generator Status	CESQG SQG (LQG)	(circle one)
FEE SUMMARY: (from Annual Hazardous Waste Fee Report)		
Generation Fee Amount	$ 566.25	
Business Fee Amount	$ 2500.00	
Late Fee Amount	$	
CAP Fee Paid	$	
TOTAL AMOUNT DUE	$ 3066.25	

Special Instructions:

- Please include your report # on your remittance check.
- See Section III of Fee Report for Generator Definitions.
- Complete and return this invoice with your Annual Hazardous Waste Fee report even if you do not owe fees.
- Retrieve your Hazardous Waste Fee Report at http://www.nmenv.state.nm.us/hwb/notifiers.html
- If you are unable to retrieve this report, please contact Charlotte Duran at (505) 428-2508or James Valdez at (505) 428-2503 for a hard copy.
- Submit your remittance and report to:

NMED/HWB
New Mexico Environment Dept/HWB
Attn: Charlotte Duran
2905 Rodeo Park Drive East Bldg 1
Santa Fe, NM 87505

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS WASTE BUREAU

2005 ANNUAL HAZARDOUS WASTE FEE REPORT

Note: Complete and return this report with your invoice and payment

SECTION I: FACILITY INFORMATION AND IDENTIFICATION

Facility Name: Giant Refining Company - Ciniza Refinery

EPA Identification Number: NMD000333211 **Phone:** 505-722-0217

Facility Address: Interstate 40, Exit 39, 17 miles east of Gallup, Jamestown NM 87347

Mailing Address: Route 3, Box 7 Gallup NM 87301

Facility Contact: Ed Riege

Title: Environmental Superintendent

Reporting Date: 7/6/2006

The New Mexico Hazardous Waste Generation Fee is comprised of two parts: a Business Fee and a Generation Fee. The Business Fee is determined by your generator status and the Generation Fee is determined by the amount of non-recycled hazardous waste, which is generated by the facility. It is important to note that your generator status is determined by adding the recycled and non-recycled hazardous waste generated by your facility each month.

Detailed regulations covering the annual hazardous waste fees are defined at 20.4.3 NMAC.

SECTION II: ANNUAL GENERATION CALCULATIONS

To calculate the annual waste generation amounts, use the schedule below. Enter the total pounds of hazardous waste generated per month and then subtract the pounds of recycled hazardous waste per month. The difference is the amount of non-recycled hazardous waste generated.

Calendar Year: 2005

Month	Total Hazardous Waste (lb)		Recycled (lb)		Non-Recycled (lb)
January	3425	-	0	=	3425
February	26400	-	26400	=	0
March	10999	-	0	=	10999
April		-		=	
May		-		=	
June	51180	-	51180	=	0
July	28899	-	0	=	28899
August		-		=	
September		-		=	
October	12685	-	0	=	12685
November	617	-	0	=	617
December		-		=	
Annual Totals	134205	-	77580	=	56625

SECTION III: GENERATION STATUS DETERMINATION

Determine your generator status using the largest amount of total hazardous waste generated during any one calendar month (from first column in Section II).

GENERATOR STATUS:

* **If you generate 220 lbs (100 kg) or less of hazardous waste (recycled and non-recycled) in any one month, you are a Conditionally Exempt Small Quantity Generator (CESQG).**
* **If you generate more than 220 lbs (100 kg) but less than 2,206 lbs (1,000 kg) of hazardous waste (recycled and non-recycled) in any one month, you are a Small Quantity Generator (SQG).**
* **If you generate more than 2,205 lbs (1,000 kg) of hazardous waste (recycled and non-recycled) in any one month, you are a Large Quantity Generator (LQG).**

NOTE: IF YOU ARE A CESQG, YOU DO NOT OWE ANY FEES. PLEASE COMPLETE THE CERTIFICATION SECTION OF THIS FORM AND RETURN TO OUR OFFICE.

SECTION IV: BUSINESS FEES

Based on the generator status determined from Section III, check the appropriate category for this facility and pay the appropriate Business Fee.

Conditional Exempt Small Quantity Generator	.....	no fees due
Small Quantity Generator	.....	$ 200.00
Large Quantity Generator	.....	$2,500.00

SECTION V: ANNUAL GENERATION FEES

1. **Conditionally Exempt Small Quantity Generators** do <u>not</u> owe any annual generator fees.

2. **Small Quantity Generators** shall pay the following fees based on **<u>the average monthly amount of non-recycled hazardous waste generated.</u>**

   Annual total non-recycled hazardous waste from Section II divided by twelve equals monthly average

   _____ lb / 12 = _____ pounds per month

1 - 500 pounds/month	.....	$ 35.00
501 - 1,000 pounds/month	.....	$ 100.00
1,001 - 2,205 pounds/month	.....	$ 250.00

   If < 2,206 pounds/month, enter appropriate fee: $_____

3. **Large Quantity Generators** at a site shall pay the following fees **<u>for non-recycled hazardous waste generated for the reporting year</u>**, if both hazardous waste and hazardous wastewater were generated at the site, the generator must determine the amounts for each to calculate the fee. Use the following fee schedules for these calculations.

   a. $ 0.01 per pound of non-recycled hazardous waste generated at the site.

   56625 pounds for the reporting year X $ 0.01 = $ 566.25

   and

   b. $ 0.01 per ton of wastewater designated a hazardous waste solely because it exhibits a hazardous characteristic.

   _____ tons for reporting year X $ 0.01 = $_____

Total LQG annual fee (a + b) = $ 566.25

SECTION VI: PAST DUE FEES

Fees owed for previous years are calculated the same as above and are then multiplied by 1%. The **sum** of the annual business fee (Section IV) and the generation fee (Section V) are **multiplied** by the number of months that the fee is past due:

Business Fee + Generation X 1% X Number of months past due = Late Fee

Example: ($200 + $35) X 0.01 X 10 Months = $23.50

This late fee is added to the business fee, the generation fee, and the administration charge of $100 to determine the total past due fee owed for that year:

Business Fee + Generation + Late Fee + $100 = Total Past Due Fee

Example: $200.00 + $35.00 + $23.50 + $100.00 = $358.50

If you are paying past due fees for multiple years, you pay the administration charge one time only. The fees for each year are due on August 1st of the following year.

Example: Fees for 2004 were due on August 1, 2005. Please calculate past due fees and enter them below:

2002 Fees	$ _____
2003 Fees	$ _____
2004 Fees	$ _____
2005 Fees	$ _____
Administrative Fee	$ 100.00
Total Past Due Fees Owed	$ _____

SECTION VII: CAP FEES

CAP Fees: The aggregate amount of annual generation and business fees to be paid per person [as defined at 20.4.3.107(B)(12) NMAC] for any year based on this Part (20.4.3 NMAC) shall be limited to:

One facility	$35,000.00
Two facilities	$50,000.00
Three or more facilities	$65,000.00

If your facility generates non-recycled hazardous waste in amounts which will result in a total fee greater than the amounts given in the above table, you only pay the CAP Fee indicated. These CAP Fees does not apply to late fees.

SECTION VIII: TOTAL FEES DUE

Total Fees (Business Fees, Generation Fees) Owed for Current Calendar Year	$3,066.25
Total Past Due Fees Owed (if applicable)	
TOTAL FEES	$3,066.25

SECTION IX: CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents. I hereby certify that either based on my personal knowledge or my inquiry of those individuals immediately responsible for obtaining the information, the submitted information is true, accurate and complete. I hereby acknowledge that any person who knowingly omits information from or makes any false statement or representation in a fee report may be subject to criminal penalties under the Act.

Ed Rios
Name (printed or typed)

General Manager
Title

Signature

July 7, 2006
Date

This report must be completed and returned to the address listed below. Make your cashiers check or money order for the full amount due payable to the NMED Hazardous Waste Fund and mail it to:

NMED - Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, New Mexico 87505

RECEIVED JUL 17 2006

GIANT INDUSTRIES, INC.

23733 N. Scottsdale Rd.
Scottsdale, AZ
85255-9969

480
585-8888

Page: 1

Vendor #:76707

Check #:254795

Check Date:07/12/06

Invoice Number	Inv. Date	Description	Gross	Discount	Net
NMD000333211-2401-C	07/06/06		3,066.25		3,066.25
			3,066.25		3,066.25

THE FACE OF THIS CHECK IS PRINTED BLUE - THE BACK CONTAINS A SIMULATED WATERMARK

GIANT INDUSTRIES, INC.

23733 N. Scottsdale Rd.
Scottsdale, AZ
85255-9969

480
585-8888

Bank of America
Bank of America
North Carolina

66-19
530

Valid for 180 days From Date of Issue

Date:07/12/06

Check No. 254795

$*****3,066.25
Amount

Pay
THREE THOUSAND SIXTY SIX AND 25/100
To the Order of

NMED / HRMB
Hazardous Waste Bureau
2905 Rodeo Park Dr E Bldg 1
PO Box 26110
Santa Fe NM 87502

Fredric L. Halliger

VOID VOID VOID VOID VOID VOID

⑈00254795⑈ ⑆053107989⑆ 000480149594⑈

State of New Mexico
ENVIRONMENT DEPARTMENT
Surface Water Quality Bureau
Harold Runnels Building Room N2050
1190 St. Francis Drive - Zip 87505
P.O. Box 26110 - Zip 87502-6110
Santa Fe, New Mexico
Telephone (505) 827-0187
Fax (505) 827-0160
www.nmenv.state.nm.us

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN MOORE
DEPUTY SECRETARY

Certified Mail - Return Receipt Requested

December 19, 2005

Mr. Ed Rios, General Manager
Giant Refining Company
Route 3, Box 7
Gallup, New Mexico 87301

RE: NPDES Storm Water Compliance Evaluation Inspection, Ciniza Refinery, NPDES #NMR05B157, November 10, 2005

Dear Mr. Rios:

Enclosed, please find a copy of the report for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas, for their review. These inspections are used by EPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Problems noted during this inspection are discussed in the Further Explanations section of the inspection report. You are encouraged to review the inspection report, and are required per Part 4.10 of the multi-sector general storm water permit, to amend your Storm Water Pollution Prevention Plan as appropriate based on the findings of this report to incorporate additional structural and non-structural controls as needed to eliminate or significantly minimize pollutants in storm water discharges. Further, you are encouraged to notify in writing, both USEPA and NMED regarding modifications and compliance schedules.

My thanks for the help and cooperation of Messrs. Ed Riege and Steve Morris of your staff during this inspection. If you have any questions, please feel free to contact me at the above address or by telephone at (505) 827-2798.

Sincerely,

Richard E. Powell
Surface Water Quality Bureau

cc: Marcia Gail Bohling, USEPA (6EN-AS)
USEPA, NPDES Permits Branch (6WQ-P)
NMED, District V, Grants
Carl Chavez, EM&NRD, OCD, 1220 S. St. Francis, Santa Fe, New Mexico 87505

NPDES Compliance Inspection
Giant Refining Company/Ciniza Refinery
NPDES Permit #NMR05B157, November 10, 2005

Further Explanations

Introduction

On November 10, 2005, a Compliance Evaluation Inspection was conducted at the Giant Refining Company/Ciniza Refinery (petroleum refining - Standard Industrial Classification 2911) located near Gallup, New Mexico by Richard E. Powell of the State of New Mexico Environment Department (NMED). Carl Chavez and Wayne Price of the NM Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) accompanied the inspector. The primary purpose of this inspection was to document the permittee's status regarding the NPDES multi-sector general storm water permit (MSGP) for industrial activities (this facility has industrial activities being conducted on-site that meet the descriptions of industrial activities in section I) and storm water regulations at **40 Code of Federal Regulations (CFR) Part 122.26.** In addition, this inspection included an assessment of the potential co-mingling of "contaminated runoff" as defined under 40 CFR Part 419.11 that is subject to nationally established effluent guidelines found at 40 CFR Part 419 and ineligible for coverage under the MSGP, with storm water discharges that are eligible.

Permit Status: Overall rating of "Unsatisfactory"

"Contaminated runoff" is defined as "runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property." Most areas at refineries are not eligible for coverage under the MSGP including: raw material, intermediate product, by-product, final product, waste material, chemical, and material storage areas; loading and unloading areas; transmission pipelines; and, processing areas. Runoff that may be eligible for coverage, provided discharges are not co-mingled with "contaminated runoff," include: vehicle and equipment storage, maintenance and refueling areas.

A number of areas from which "contaminated runoff" or co-mingled "contaminated runoff" and storm water runoff appears to discharge were identified during this inspection. These include: a fairly large area in the northeast part of the facility where some (most is contained) of the railcar loading/unloading facility and an LPG tank farm appear to drain either directly offsite or are co-mingled with storm water runoff directed to storm water outfall No. 2; the area along the south side of the main process area (north of the office complex) appears to co-mingle with storm water runoff directed to storm water outfall No. 1; and the area along the north side of the facility where some of the drainage from a scrap yard (from which discharges are likely eligible) appears to co-mingle with drainage from an adjacent (to the east) tank farm and then directed to storm water outfall No. 2. There may be other areas where "contaminated runoff" or co-mingled "contaminated runoff" and storm water runoff discharge from this facility but the difficulty of identifying these areas is exacerbated by the facility operator's failure to identify and provide adequate drainage area mapping. The site maps included in the SWPPP show only general drainage patterns and outfalls, but lack of detailed drainage area mapping creates a situation where even the facility operators may be unaware of exactly what areas drain to "contaminated runoff" containment systems, and what

areas drain offsite or are directed to the storm water outfalls. Figure No. 1 in the SWPPP does delineate eight drainage sectors, which are described in the attached "Storm Water Assessment" narrative, but these appear to be inaccurate per the above discussion. It appears that these eight sectors were determined by merely drawing a large box around a general area rather than making an accurate determination of specific drainage areas.

Section 301 (a) of the Federal Water Pollution Control Act states that "Except as in compliance with this section and sections 302, 306, 307, 318, 402 and 404 of this Act, the discharge of any pollutant by any person shall be unlawful." Since this facility does not have (and has apparently never had) NPDES permit coverage for discharges of process wastewater or contaminated runoff, all past, and continuing, discharges have been (are) in apparent violation of Section 301 of the Clean Water Act, 33 U.S.C. § 1311.

Storm water runoff from this facility discharges to unclassified tributaries to the North Fork of the Rio Puerco (west) in the Little Colorado River minor Basin, Lower Colorado River major Basin. This report is based on a review of files maintained by the permittee and NMED, on-site observation by NMED personnel, and verbal information provided by the permittee's representatives.

An entrance interview was conducted with Messrs. Ed Riege, Environmental Superintendent and Steve Morris, Environmental Engineer at approximately 1025 hours on November 10, 2005. The inspector made introductions, presented his credentials and discussed the purpose of the inspection.

This facility applied for permit coverage under the NPDES multi-sector general storm water permit (MSGP) 2000 and has been assigned reference #NMR05B157 effective April 24, 2002. There was an SWPPP last revised on April 12, 2005, available for review at the site on the date of this inspection. There is no documentation included in the SWPPP, which supports the permittee's determination of permit eligibility with regard to Part 1.2.3.6 (Endangered Species) and Part 1.2.3.7 (Historic Places). There is a signed/certified statement (by Ed Rios) in the "NPDES Certifications" section of the plan regarding eligibility "... due to previous authorization under the Endangered Species Act." However, although the facility may have followed proper procedures (see MSGP Addendum A) to establish MSGP permit eligibility regarding endangered species, no documentation, other than the above statement, regarding this determination was included in the SWPPP. Information to support the permittee's determination of permit eligibility must be included in the SWPPP.

Since most of the time available to conduct this inspection was spent doing the above documented "contaminated runoff" assessment, only a cursory, and after the fact review of the SWPPP, was completed. Some of the major findings of this brief review are as follows:

Storm Water Pollution Prevention Plan (SWPPP)

Pollution Prevention Team: Overall rating of "Marginal"

Part 4.2.1 of the permit states, in part, "You must identify the staff individual(s) (by name or title) that comprise the facility's storm water Pollution Prevention Team ... Responsibilities of each staff individual on the team must be listed."

Although, Mr. Riege appears to have rather significant responsibilities regarding storm water pollution prevention and implementation of the SWPPP, the permittee's SWPPP does not identify this individual or his responsibilities.

Description of Potential Pollutant Sources: Overall rating of "Marginal"

Part 4.1.1 of the permit requires that permittees "Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from your facility."

The permit requires that this description include such things as a site map, an identification of the types of pollutants that are likely to be present in storm water discharges, an inventory of the types of materials handled at the site that potentially may be exposed to precipitation, a list of significant spills and leaks of toxic or hazardous pollutants, sampling data, a narrative description of the potential pollutant sources from specific activities at the facility, and identification of specific potential pollutants.

As noted above, the permittee has prepared an SWPPP for this facility. As above, the site map does not include an accurate depiction of drainage areas, all structural controls (berms, including berms associated with the truck parking and staging area; straw bale dikes; secondary containment; etc.) or receiving waters. The SWPPP must include a general location map and a site map identifying such things as: drainage areas, drainage patterns and outfalls, all structural BMPs, surface watercourses, all potential pollutant sources, locations of major spills or leaks, locations of all industrial activities exposed to precipitation, etc. The plan does a very thorough job of pollutant and pollutant source identification.

Although not specifically required (conducting analytical monitoring may be dictated for appropriate site assessment procedures, as well as documentation of SWPPP effectiveness) at these types of facilities by the MSGP 2000, benchmark analytical monitoring was required and conducted under the baseline general storm water permit as well as more limited monitoring since. Results of the September 1991, May 1997, August 2000, and August 2003 analytical monitoring indicate that the MSGP cut-off concentrations for total suspended solids (TSS) was greatly exceeded (range from 42 - 48,000 mg/L) most of the time, and results for COD (range 64 – 428 mg/L) was exceeded some of the time. These elevated analytical results (as well as the results of the quarterly visual examinations) must be taken into consideration during the facility's "Comprehensive Site Compliance Evaluation." These results must be used, in part, to determine required amendments to the SWPPP to incorporate additional structural and non-structural controls as appropriate to eliminate or significantly minimize pollutants in storm water discharges so that these pollutant levels are reduced to below cut-off concentrations. The operator has apparently taken no action to amend the SWPPP as required. However, the permittee has sampled outfalls that are located in "waters of the U.S." Because of this, these results may not be representative of actual discharges from the industrial activities at this facility. Sampling must be conducted in a location that is after the last treatment unit and prior to entry into a "water of the U.S." Also, the permittee has apparently not conducted required Quarterly Visual Monitoring (see 5.1.1 of the MSGP 2000) at this facility.

Description of Appropriate Measures and Controls: Overall rating of "Unsatisfactory"

Part 4.2.7 of the permit requires that the permittee, "Describe the type and location of existing non-structural and structural best management practices (BMPs) selected for each of the areas where industrial materials or activities are exposed to storm water," and describe appropriate proposed BMPs for areas not yet affected, and implement such controls.

Non-structural and structural BMPs to be described and implemented by the permittee include such things as good housekeeping, preventive maintenance, spill prevention and response procedures, periodic inspections, employee training, record keeping, non-storm water evaluations and certifications, sediment and erosion control, as well as implementation/maintenance of traditional storm water management practices, where appropriate.

Some of the BMPs are overly generic (e.g., "maintain in a clean and orderly work environment"). In addition, although the facility apparently does occasionally clean and repair storm water conveyances and replace straw bales dikes, the SWPPP does not include a record of regular inspections and preventive maintenance of these storm water management controls. Part 6.I.4.3.1 of the MSGP 2000 requires facility inspections at a minimum of 6-month intervals and at least quarterly inspections of equipment and vehicles that store, mix or transport chemicals/hazardous materials. It appears that these inspections are not conducted or are, at least, not recorded.

Routine facility storm water inspections must be recorded, including their scheduled frequency, personnel conducting the inspection, dates of the inspection, results of the inspection, actions taken to correct problems encountered during the inspection, etc., in the SWPPP. These inspections must include observations of all areas of the facility where industrial materials or activities are exposed to storm water, and include an evaluation of all BMPs, including sediment and erosion control measures such as silt fences, check dams, etc. These inspections must be conducted by "qualified" personnel and include a reasonable set of tracking or follow-up procedures to be used to ensure that appropriate actions are taken (deficiencies must be corrected no later than 14 days after the inspection) in response to problems documented during the inspections. As above, there are apparent problems at this facility with "contaminated runoff" control practices that the permittee has not addressed. This is the sort of problem that should be documented during the permittee's periodic inspections, and appropriate and timely corrective actions taken and documented.

Although the SWPPP includes a "Non-Storm Water Discharge Assessment Certification" that lists cooling tower mist as a source of non-storm water discharge, there is no description of results of tests/evaluations, evaluation criteria or testing methods used, dates of any testing and/or evaluation, or any other information upon which the certification decision could be based.

Annual Site Compliance Evaluation Reports: Overall rating of "Unsatisfactory"

Part 4.9 of the permit states, in part, "You must conduct facility inspections at least once a year. The inspections must be done by qualified personnel provided by you."

According to the plan, the last annual site compliance evaluation was conducted in December 2004. Ed Riege and Darren Joe, neither of whom are on the Pollution Prevention Team, conducted this evaluation. Other than the apparent failure to incorporate changes dictated by the above-mentioned

analytical sampling data, the areas evaluated, the recording of findings, follow-up, and post evaluation activities for these annual evaluations appear very thorough. However, the staff conducting the evaluations apparently failed to observe, document, and properly address the areas that appear to produce discharges of "contaminated runoff" from this facility. In addition, reports of these evaluations have not been signed and certified by a cognizant official or authorized representative per requirements in Parts 4.9.4 and 9.7.1 of the MSGP.

Per Part 4.9 of the permit, the required annual site compliance evaluation must be done by "qualified personnel that are knowledgeable and possess the skills to assess conditions at your facility that could impact storm water quality and assess the effectiveness of the BMPs ..." This inspection must include a comprehensive evaluation of the SWPPP and the entire facility, including effectiveness of current measures and controls, and identification of current and anticipated potential pollutant sources. The evaluation should include a review of the SWPPP to ascertain that all required inspections, maintenance, and good housekeeping activities are conducted and recorded, and that these activities are effective in controlling pollutant loads in storm water runoff. It should also include a review of visual and analytical monitoring results, and result in appropriate revisions to the SWPPP that describe, and provide for, implementation of any required changes/additions in a timely manner.

Based on this inspection, the operator(s) must prepare, and include with the SWPPP, a properly signed report (and reports documenting any follow-up actions taken) signed by a cognizant official or an authorized representative (see Part 9.7 of the permit) which summarizes the scope of the inspection, includes the name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and any incidents of non-compliance (or a certification that the facility is in compliance with the SWPPP and the permit).

An exit interview to discuss the preliminary findings of this inspection was conducted from approximately 1515-1550 hours on November 10, 2005 with Mr. Ed Rios, General Manager, Mr. Stan Fisher, Operations Manager, and Messrs. Riege and Morris all of Ciniza Refinery, as well as Messrs. Chavez and Price of OCD, at the site.

EPA

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspec. Type	Inspector	Fac Type
1 N 2 5 3	N M R 0 5 B 1 5 7 11	12 0 5 1 1 1 0 17	18 W	19 S 20	2

Remarks

P E T R O L E U M R E F I N E R Y S I C 2 9 1 1

Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved
67 69	70 1	71 N 72	N 73 74	75 80

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*	Entry Time /Date	Permit Effective Date
GIANT REFINING COMPANY/CINIZA REFINERY, JAMESTOWN, NM. EAST OF GALLUP ON I 40, EXIT 39 BEHIND PILOT TRAVEL CENTER MCKINLEY COUNTY	1025/11-10-05	10-30-00
	Exit Time/Date 1550/11-10-05	Permit Expiration Date 10-30-05

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
*ED RIEGE, ENVIRONMENTAL SUPERINTENDENT 505-722-0217
*STEPHEN MORRIS, ENVIRONMENTAL ENGINEER 505-722-3833

Other Facility Data
LAT 35 29 10.9
LONG -108 25 36.3

Name, Address of Responsible Official/Title/Phone and Fax Number
*ED RIOS, GENERAL MANAGER, CINIZA REFINERY, ROUTE 3 BOX 7, GALLUP, NM 87301
505-722-0202

Contacted
Yes [*] No [ ]

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

U	Permit	N	Flow Measurement	N	Operations & Maintenance	N	CSO/SSO
M	Records/Reports	U	Self-Monitoring Program	N	Sludge Handling/Disposal	U	Pollution Prevention
U	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
N	Effluent/Receiving Waters	N	Laboratory	U	Storm Water	N	Other:

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

1. FACILITY HAS COVERAGE UNDER THE MSGP 2000 (UNDER CINIZA REFINERY, JAMESTOWN, NM) AND HAS PREPARED A SWPPP.
2. THIS INSPECTION INCLUDED AN ASSESSMENT OF THE POTENTIAL CO-MINGLING OF "CONTAMINATED RUNOFF" AS DEFINED UNDER 40 CFR PART 419.11 THAT IS SUBJECT TO NATIONALLY ESTABLISHED EFFLUENT GUIDELINES FOUND AT 40 CFR PART 419 AND INELIGIBLE FOR COVERAGE UNDER THE MSGP, WITH STORM WATER DISCHARGES THAT ARE ELIGIBLE. A NUMBER OF AREAS FROM WHICH "CONTAMINATED RUNOFF" OR CO-MINGLED "CONTAMINATED RUNOFF" AND STORM WATER RUNOFF APPEARS TO DISCHARGE WERE IDENTIFIED DURING THIS INSPECTION.
3. "PETROLEUM REFINERY OF MODERATE COMPLEXITY RATING" WITH CATALYTIC CRACKING CAPABILITY, REFORMING, AND TOPPING (BASIC DISTILLATION).
4. SEE REPORT AND FURTHER EXPLANATION.

	Agency/Office/Telephone/Fax	Date
RICHARD E. POWELL	NMED/SWQB 505-827-2798	
Signature of Management QA Reviewer Sandy Spon	Agency/Office/Phone and Fax Numbers NMED/SWQB 505-222-9560	Date

EPA Form 3560-3 (Rev. 9-94) Previous editions are obsolete.

GIANT
REFINING COMPANY

ROUTE 3 BOX 7
GALLUP
NEW MEXICO 87301

PHONE
505-722-3833
INTERNET
WWW.GIANT.COM

January 30, 2006

Certified Mail # 7005 0390 0004 3145 6753

Richard Powell
New Mexico Environmental Department
Surface Water Quality Bureau
P.O. Box 26110
Santa Fe NM 87502-6110

Re: Response to NPDES Storm Water Compliance Inspection Report, Ciniza Refinery, NPDES #NMR05B157

Dear Mr. Powell:

Enclosed please find a copy of the response to the written inspection report you provided for the Ciniza refinery inspection on November 10, 2005. This response is designed to respond to and clarify some of the preliminary observations set forth in the Inspection Report and to set forth efforts by Giant to properly manage effluents regulated under Part 419 and stormwater discharges within the Multi-Sector permit.

Giant appreciates the suggestions for improvement of its written SWPPP and has, where appropriate, incorporated those suggestions into a newly revised SWPPP. With respect to some of the comments, it appears the inspection report comments seek modifications at the Ciniza Refinery over and above what is required for MSGP 200 Compliance. Where those comments make sense as a good practice, Giant has included them in the attached SWPPP revision.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Thank you for this opportunity to respond with additional information.

Sincerely,

Ed Rios

c: Marcia Gail Bohling, USEPA (6EN-AS)
USEPA, NPDES Permits Branch (6WQ-P)
NMED, District V, Grants
Carl Chavez/Wayne Price, OCD, Santa Fe
Ed Riege Giant, Ciniza
David Kirby Giant, Scottsdale

Enclosure-2

Thank you for this opportunity to respond with additional information.

Sincerely,

Ed Rios

c: Marcia Gail Bohling, USEPA (6EN-AS) — Region 6 — 1445 Ross Ave Dallas TX 75202-2733
USEPA, NPDES Permits Branch (6WQ-P) /
NMED, District V, Grants — 1212 1/2 Lobo Canyon RD Grants NM 87026
Carl Chavez/Wayne Price, OCD, Santa Fe
Ed Riege Giant, Ciniza
David Kirby Giant, Scottsdale

Enclosure-2

New Mexico Energy Minerals + Natural Resources Dept
OCD Envir Bureau
1220 S. St Francis Dr
Santa Fe NM
87505

Response to NPDES Compliance Inspection Report
Giant Refining Company/Ciniza Refinery
NPDES Permit # NMR05B157, November 10, 2005

On November 10, 2005, there was an inspection that focused on the Ciniza Refinery's management of stormwater and compliance with appropriate EPA regulatory programs for stormwater discharge. A written inspection report (hereinafter the "Inspection Report") prepared by Mr. Richard E. Powell of the Surface Water Quality Bureau of the New Mexico Environment Department set forth a number of preliminary observations regarding the status of NPDES stormwater compliance by the Ciniza Refinery, which utilizes NPDES Permit # NMR05B157 (the October 30, 2000 Multi-Sector General Permit for Industrial Activities) for the occasional discharge of "industrial stormwater." This response is designed to respond to and clarify some of the preliminary observations set forth in the Inspection Report and to set forth efforts by Giant to properly manage effluents regulated under Part 419 and stormwater discharges within the Multi-Sector permit. Giant is committed to meeting the NPDES requirements and goals of appropriate stormwater management, takes its obligations seriously, and sincerely appreciates the opportunity to respond with additional information.

I. OVERVIEW OF CINIZA REFINERY WASTEWATER AND STORMWATER MANAGEMENT

As an overview, it is important to remember this refinery, in operation since the late 1950s, is located in a relatively arid region of New Mexico. While precipitation does infrequently occur, much of it often can be managed on-site, without any discharge to a water of the United States. The purview of the NPDES program is a discharge, namely an addition of a pollutant that reaches a water of the U.S. through a point source. If there is no regulated discharge, no NPDES permit is required.

Over the years since the enactment of the initial 1970 Army Corps federal permit program for discharges into waters of the U.S. and their tributaries (which became the NPDES permit program in 1972), the Ciniza Refinery has taken a number of significant measures to assure compliance with surface water quality protection requirements. Properly operated and maintained, these measures keep the Ciniza Refinery in compliance with NPDES requirements.

Today, there are three types of stormwater at the Ciniza Refinery that theoretically could discharge to a water of the United States, if not otherwise managed or controlled to avoid such discharges. The first type of stormwater is "contaminated runoff," as regulated under the technology-based effluent limitations adopted in 1985. 40 C.F.R. Part 419. This is managed in a "zero discharge" system that has been constructed, maintained and operated so as to keep process wastewater (and "contaminated runoff") from reaching a water of the U.S. The second type of stormwater is "stormwater discharge associated with industrial activity," as defined in 40 C.F.R.

Section 122.26 (b)(14), exclusive of the "contaminated runoff" already regulated under Part 419.[1] It is permissible to discharge such industrial stormwater pursuant to the 2000 MSGP, although the Ciniza Refinery generally manages its industrial stormwater for no discharge as well, except in the case of significant precipitation events that would cause the retention facilities' capacity to be exceeded. After significant precipitation events, valves are opened to discharge such industrial stormwater. (There are concrete barriers with valves that discharge to a drainage running across a portion of the property to Outfall 2; there is also a valve system at Outfall 1). The third type of stormwater at this facility is unregulated stormwater. This is stormwater that neither meets the definition of Part 419 contaminated runoff nor 122.26 (b)(14) "stormwater discharge associated with industrial activity." The 1987 Clean Water Act amendments and subsequent EPA regulations make it clear that this stormwater is not, at least at present, subject to NPDES requirements (so long as it is not commingled with other regulated forms of stormwater).

The Ciniza Refinery also maintains and implements an aggressive Integrated Contingency Plan. In the event of a minor spill, the source of a spill is isolated, the spill is contained, and cleanup occurs. A vacuum truck with an 80 bbl capacity is kept operational in the Maintenance Yard as just one of the ICP's precautionary measures to prevent spills from creating problems. As part of the standard operating procedures in the ICP, process surveillance rounds are conducted during each shift. Process equipment, vessels, tanks, piping, and grounds are visually inspected for signs of abnormal conditions, leakage and spills. Spills are immediately reported to the Shift Supervisor and response action is initiated.

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[1]Unless commingled, these two types of "CWA-regulated" stormwater are managed under separate NPDES regulatory programs, with "contaminated runoff" discharges being regulated under the traditional NPDES process wastewater discharge program and the "stormwater discharge associated with industrial activity" being regulated under the NPDES stormwater discharge program, which can include use of the 2000 MSGP.

In brief, Giant operates and maintains a "zero discharge" retention system that has been constructed to manage Part 419 process wastewater and "contaminated runoff" without an NPDES permit. Part 419 regulated effluent is managed in "zero discharge" retention impoundments.[2] At the time of the November 10, 2005 inspection referenced in the Inspection Report, no discharges of "contaminated runoff" (or process wastewater) regulated under Part 419 were occurring. All process wastewater and any associated "contaminated runoff" was being directed into the "zero discharge" system on that date, as is the standard operating procedure at the Ciniza Refinery every day. As a result of Giant's operation and maintenance of the "zero discharge" retention system for all process wastewater and "contaminated runoff" as that term is defined in Part 419, no NPDES permit for Part 419 regulated effluent is required at the Ciniza Refinery. Building, maintaining and operating a "zero discharge" NPDES treatment system eliminates the need for that type of NPDES permit.

As presently operated by Giant, "industrial stormwater"[3] (not under Part 419) generally will not discharge from the Ciniza Refinery. It is captured initially in an industrial stormwater management retention system. In contrast to the "zero discharge" system for Part 419 regulated effluents, some "industrial stormwater" occasionally must be discharged after a significant precipitation event but only from two stormwater basins (controlled by valve systems) that drain to the areas known as Outfall 1 and Outfall 2. The Ciniza Refinery manages its regulated "industrial stormwater" from the Outfall 1 and Outfall 2 basins in a separate stormwater retention system that does not have sufficient capacity to hold all the "industrial stormwater" volumes that may infrequently result during significant precipitation events. Giant has obtained coverage under the 2000 MSGP to allow such discharges of "industrial stormwater" for those infrequent occasions when its "industrial stormwater" retention capacity for those two basins is exceeded.

On the November 10, 2005 inspection date, there were no such volumes of "industrial stormwater" at the Ciniza Refinery, and there were no discharges of any "industrial stormwater" of the type sought to be covered by the 2000 MSGP. Before any discharge occurs from the Ciniza Refinery "industrial stormwater" retention systems for the Outfall 1 and Outfall 2 basins, the opening of specific valves[4] in the retention system must occur. All valves were closed on

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[2]Federal programs to permit discharges (additions of pollutants) to waters of the United States, started with Executive Order 11574 in 1970, which led to the 1970 establishment of the Refuse Act Permit Program regulations (the "RAPP"), the forerunner of the NPDES permit. The Ciniza Refinery began to make a number of structural, maintenance and operational modifications to keep process wastewater (and what became Part 419 "contaminated runoff") from being discharged to a water of the United States, resulting in the zero discharge system it currently maintains and operates.

[3]This term of "industrial stormwater" excludes the "contaminated runoff" regulated under Part 419.

[4]"Contaminated runoff" covered under Part 419 is not discharged on those infrequent occasions when it is necessary to open valves and discharge some MSGP "industrial

November 10, 2005. The facility was not discharging. No illegal discharges were occurring at the facility. There were no discharges whatsoever on November 10, 2005.

II. The Ciniza Refinery's Response to the Federal Permit Requirement for Process Wastewater/"Contaminated Runoff" Discharges (Effluents Regulated Under Part 419) Has Been to Design, Construct, Maintain and Operate a "Zero Discharge" Retention System For All Part 419 Effluent Streams. As a Result, No NPDES Permit is Required for Part 419 Discharges at the Ciniza Refinery.

The Inspection Report focuses on stormwater issues, and properly points out that, today, regulated stormwater discharges at petroleum refineries may be under Part 419 or they may be under the "industrial stormwater" program that took effect in the 1990s (after the Congressional amendments of the Clean Water Act in 1987). This portion of the response focuses on the management of Part 419 process wastewater and "contaminated runoff."

A series of federal regulatory developments, beginning with the initial 1970 Refuse Act Permit Program (run by the Army Corps with EPA assistance), then followed by the Congressional adoption of the NPDES permit requirement in 1972, and the EPA efforts starting in 1973 to adopt technology based regulations governing "contaminated runoff" (Part 419) from petroleum refineries, resulted in the determination in the 1970s by the Ciniza Refinery to manage its process wastewater (and the stormwater that meets the definition of "contaminated runoff" under Part 419) in a zero discharge retention system. **Giant continues to maintain and operate this zero discharge system for process wastewater and "contaminated runoff," regularly inspecting (on a weekly basis) the condition of the retention system and the freeboard (remaining capacity). Records are kept of each such inspection. This zero discharge retention system has a demonstrated track record of effectively handling all Part 419-regulated effluent. The retention system has been highly successful over the past 30-plus years with respect to preventing discharges of Part 419 process wastewater and any "contaminated runoff."** No NPDES permit for Part 419 effluent is necessary.

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stormwater." Giant directs all Part 419 "contaminated runoff" into the zero-discharge retention system, not into the "industrial stormwater" detention system which has these valves.

As far back as the early 1970s, the Ciniza Refinery designed and constructed a "zero discharge" system, which it subsequently has maintained, upgraded at times and continuously operated, to appropriately handle process wastewater and "contaminated runoff" as defined under Part 419.[5] The recent Inspection Report, however, incorrectly implied that the Ciniza Refinery directs "contaminated runoff" regulated under the Part 419 program into the detention system for "industrial stormwater." To the contrary, Part 419 "contaminated runoff" is directed to the zero discharge retention system, set up and maintained since the 1970s to respond to the process wastewater NPDES requirements (for which the technology based limitations are set forth in Part 419).

[5]After the 1987 CWA amendments regulated additional "industrial stormwater," a stormwater detention system was utilized to keep the bulk of that additional "industrial stormwater" on-site as well, although occasional discharges are necessary from the retention system when its capacity is exceeded by a significant precipitation event.

To fully understand how Part 419 "contaminated runoff" is regulated, and properly managed at the Ciniza Refinery, it is helpful to review the history of regulatory developments that impacted the Ciniza Refinery's management of stormwater. The review is also helpful to clarify exactly what is defined as "contaminated runoff" subject to Part 419. These regulatory developments logically led the Ciniza Refinery to the design, construction, regular maintenance and operation of an NPDES-compliant "zero discharge" retention system for Part 419 regulated effluent streams (including process wastewater and "contaminated runoff").[6]

The relevant regulatory history begins with a federal mandate in 1970 that an oil refinery, such as the Ciniza Refinery, may no longer discharge into a water of the United States (or its tributaries) unless a federal permit was obtained to assure the pollution would not be unduly harmful. These initial federal efforts to require a permit for discharges of wastewater from industrial facilities such as this oil refinery utilized the authority of the Rivers and Harbors Act (also known as the Refuse Act), administered by the Army Corps of Engineers. Earth Day and public concerns led Richard Nixon not only to create the U.S. Environmental Protection Agency in 1970, it also led to his 1970 issuance of Executive Order 11574.

> "Executive Order 11574 initiated the Section 13 (R&H Act of 1899) permit program known as the **Refuse Act Permit Program (RAPP) for controlling all discharges into navigable waters and their tributaries.** RAPP administered by Corps with oversight and decision authority by EPA."

Summary of History of Army Corps Regulatory Programs (prepared by the Army Corps) at page 1; on the Internet at http://www.usace.army.mil/inet/functions/cw/cecwo/reg/reghist.pdf. (Bold emphasis added.)

In 1972, Congress enacted the Clean Water Act requiring NPDES permits for facilities adding pollutants to federally protected waters through a point source, which continued the regulation of discharges to navigable waters and their tributaries but moved the permit program from the Army Corps of Engineers to EPA (with the exception of 404 dredge and fill discharges, for which permitting authority was kept in the Army Corps). The new NPDES permits were more detailed in terms of what was to be included, and specifically required technology-based effluent limitations (TBELs) and, where necessary to assure attainment with water quality standards for the receiving waters, water-quality based effluent limitations (WQBELs).[7]

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[6]As discussed in the next section of this response, the Congressional mandate to regulate "industrial stormwater" in 1987 led to the decision by the Ciniza Refinery to utilize the general permit (currently the 2000 MSGP) for those few occasions when a discharge of "industrial stormwater" (**not "contaminated runoff"**) might be required out of the stormwater detention system that was constructed. This "industrial stormwater" detention system (and occasional discharges from it) should not be confused with the zero discharge retention system for Part 419 regulated process wastewater and "contaminated runoff."

[7]The extent to which the NPDES permit program would address stormwater discharges

For the Ciniza Refinery, these efforts [first (in 1970) by the Army Corps to regulate industrial discharges into navigable waters and their tributaries (the RAPP permit program) and then by EPA in the newly created NPDES program (as continued with EPA's subsequent twelve year effort to develop the Part 419 TBEL regulations for the petroleum refining sector)] **sent a fairly clear signal that, at a minimum, process wastewater would have to be captured in order to meet discharge limitations for these new permits.**

The Ciniza Refinery knew it would have to capture all process wastewater and any other similarly-regulated effluent (including co-mingled stormwater) in order to treat it to discharge standards. Because of the location in an arid climate zone in which evaporation greatly exceeded precipitation, the Ciniza Refinery decided to construct and operate not just a detention system to allow treatment prior to discharge, but an appropriately sized retention system that would allow no discharge. The arid climate allowed the use of evaporative treatment and/or water recycling in a zero discharge system to be implemented by the Ciniza Refinery.

While a series of ponds designed to detain all process wastewater already existed at the facility, the Ciniza Refinery built additional ponds in the early 1970s to hold and retain (without discharge) all process wastewater, and later what EPA would finally define as "contaminated runoff" under the Part 419 regulations in 1985. Ponds 11, 12A and 12B specifically were added to create additional holding capacity for the retention system, enabling the refinery to go to zero discharge treatment of process wastewater and what would later become defined as "contaminated runoff."

Given the size of refinery operations and the amount of product being processed, these new ponds 11, 12A and 12B were required to meet the goal of a "zero discharge" NPDES facility with respect to the process wastewater (and the other associated effluents [i.e., "contaminated runoff"] that eventually became regulated under Part 419 in 1985). Although the Ciniza Refinery has changed ownership since its original construction in 1957 and since it built additional retention capacity to achieve zero discharge, the new owner maintains and operates that zero discharge system to this date. Since Giant, the current owner, acquired the Ciniza Refinery, it has regularly maintained and operated this retention system so as to maintain the "zero discharge" status for Part 419 regulated effluent.

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from industrial facilities was unclear for the first 15 years of the CWA, and eventually would be resolved by the issuance of some technology-based effluent limitations that did address stormwater and then by the development of a new industrial stormwater discharge program in the 1990s, consistent with the clarifying direction of the 1987 CWA amendments.

EPA's efforts to regulate stormwater in the 1970s and 1980s involved a number of different regulatory initiatives, most of which ended up in litigation over issues of scope and legality. With respect to petroleum refining, EPA did make early efforts to begin regulating at least some highly contaminated runoff from process areas as far back as 1973. Eventually, this regulatory effort resulted in the 1985 regulation of "contaminated runoff" under Part 419 and later, in 1992, the regulation of "stormwater discharge associated with industrial activity" under Section 122.26.

While the Part 419 regulations setting discharge quality limitations for "contaminated runoff" did not become finally effective until 1985, the EPA efforts to regulate "process wastewater" also sought to address some contaminated runoff at petroleum refineries at least as far back as 1973, when studies done by contractors led to the first proposal of Part 419 effluent limitations. 38 Fed. Reg. 34542 (December 14, 1973). In the May 9, 1974 Federal Register, EPA regulations were made effective that required NPDES TBELs for the petroleum refining point source category to address some runoff as well as process wastewater. In a final rule that initially created 40 C.F.R. Part 419, that 1974 regulation addressed "runoff" (defined as the "flow of storm water") and provided a method for determining TBEL limits that was based on "storm flow (**process area runoff**) which is treated in the main treatment system." It also provided a TBEL for "[a]ll additional storm runoff (from tank fields and non-process areas), that has been segregated from the main waste stream for discharge. " See, i.e., 39 Fed. Reg. at 16564 (May 9, 1974). EPA stated in the preamble, that in response to comments on the earlier draft rule, it had divided storm runoff as follows:

> "The handling of storm runoff was reevaluated and the run-off from a refinery was broken down further to consider tankfield runoff, process area runoff, and other noncontaminated runoff. This reevaluation also considered the treatment of marginally contaminated runoff. (See "Development Document," Section VII.)
>
> As a result of this evaluation, a limit of 35 mg/l TOC and 15 mg/l oil and grease (both maximums) was set for both tankfield runoff and other uncontaminated runoff. (This is changed from 15 mg/l of TOC and no visible sheen). The limits for contaminated runoff should remain the same."

39 Fed. Reg at 16560 (May 9, 1974). Thus, as far back as 1973 and 1974, there were efforts to have Part 419 address some runoff, which was divided into "contaminated runoff" and "tankfield runoff and other uncontaminated runoff." Stringent discharge limits were set for process wastewater and "contaminated runoff," and the remaining "tankfield and other uncontaminated runoff" had far less stringent limits that generally would not require capture and treatment at a facility like the Ciniza Refinery.

The Ciniza Refinery had already been reengineered towards the zero discharge goal for the process wastewater and contaminated runoff. EPA's effort to regulated uncontaminated runoff was contested by the American Petroleum Institute.

Following these legal challenges by the American Petroleum Institute and others with respect to these initial TBELs for the petroleum refining sector (and the coverage of both the contaminated runoff [which had to be captured and treated] and the tankfield and uncontaminated runoff [which generally did not have to be captured and treated]), EPA solicited additional comments on modifying the Part 419 regulations to eliminate some of these problems. A variety of regulatory modifications were sought.

On May 20, 1975, EPA modified the Part 419 regulations again. 40 Fed. Reg. 29139 (May 20, 1975). Some of the preamble statements in that rulemaking relate to EPA's efforts to develop a properly legal regulatory program that would address some stormwater:

> "In the draft contractor's report the flows from the refineries were broken down into three categories: 1) process water, 2) storm runoff, and 3) once-through cooling water. The process waters included: waters which come into direct contact with a product, intermediate, or raw material; contaminated storm runoff; and cooling tower blowdown. Process waters were considered to require treatment, and were to be segregated and discharged separately from clean storm runoff and once-through cooling water which were presumed to be uncontaminated."

40 Fed. Reg. at 21940. EPA then discussed the proposed and final new regulation's treatment of stormwater:

> "The proposed regulation differed from the contractor's report in several respects. The definition of process water remained the same, except that an added allocation was given for ballast water and contaminated stormwater, over and above the basic allocation. In addition, concentration limits were set for both clean stormwater and once-through cooling water. These changes meant that the basic pollutant allocation was not actually based on process water flows, and the contaminated storm runoff, ballast, clean storm runoff and once-through cooling water each received separate allocations.
>
> In the promulgated regulations, ... the previous definitions of different types of waste streams (process water, ballast water, etc.) were retained. EPA has not modified the contractor's original approach to identifying flows used in the calculation of BAT limitations."

40 Fed. Reg. at 21941.

These indicated EPA's mid-1970s approach to regulating refinery stormwater under Part 419. The EPA and its contractor were taking the position in the development of these regulations that there was one set of requirements for "contaminated runoff" that appeared to be based on "storm flow (process area runoff) which is treated in the main treatment system" (as originally stated at 39 Fed. Reg. 16564 (May 9, 1974); and also "[a]ll additional storm runoff (from tank fields and non-process areas), that has been segregated from the main waste stream for discharge." Id.

A review of the preamble language from 1975 confirmed that storm runoff that commingled with process water would be regulated like process water because it passed through the treatment system as well:

> "the flows from the refineries were broken down into three categories: 1) process water, 2) storm runoff, and 3) once-through cooling water. **The process waters included**: waters which come into direct contact with a product, intermediate, or raw material; **contaminated storm runoff**; and cooling tower blowdown. **Process waters were considered to require treatment, and were to be segregated and discharged separately from clean storm runoff and once-through cooling water which were presumed to be uncontaminated.**"

40 Fed. Reg. at 29140 (May 20, 1975) (Emphasis added). Included in the clean storm runoff category would be stormwater that might come from an area of the refinery where petroleum material might be present, but its method of handling kept the stormwater clean (i.e, it did not have contact with the process materials or process wastewater).

"Clean storm runoff" would occur, for example, if the petroleum material were inside a tank or pipe and not exposed to the stormwater during a precipitation event. This was apparent from EPA's use of language such as the following:

> "The handling of storm runoff was reevaluated.... **As a result of this evaluation, a limit** of 35 mg/l TOC and 15 mg/l oil and grease (both maximums) **was set for both tankfield runoff and other uncontaminated runoff.** (This is changed from 15 mg/l of TOC and no visible sheen). **The limits for contaminated runoff should remain the same.**"

39 Fed. Reg at 16560 (May 9, 1974).

Thus, the Ciniza Refinery naturally had to look at controlling stormwater in two different ways: first, determine what stormwater would become contaminated through contact with petroleum materials or process wastewaters at the facility such that EPA would consider that "contaminated runoff" as having to meet process wastewater limits achievable by handling that water through a wastewater treatment system; second, look at the remaining stormwater in other areas (where petroleum might be managed but was prevented from contacting the precipitation by the physical integrity of the containing tank or pipe or perhaps a roofed structure with a separate drainage system away from the process area) where such stormwater would be considered "clean" or in EPA's words could be "presumed to be uncontaminated." Again, the zero discharge retention system at the Ciniza Refinery, with the new ponds constructed and properly maintained, was managed in such a way as to handle the stormwater that was contaminated by contact with petroleum materials or commingled with process wastewaters.

The legality of EPA's authority to regulate runoff, including "uncontaminated runoff," was disputed by industry, along with other alleged deficiencies challenged in the Part 419

litigation. The 1975 modifications did not resolve adequately all of the industry concerns and the court challenge continued. Although by this time the Ciniza Refinery was managing process wastewater and co-mingled contaminated runoff in a zero discharge system in the spirit of these Part 419 regulations, the Part 419 stormwater regulations adopted in 1974 and 1975 did not survive the legal challenges.

The **litigation challenges** to this Part 419 regulatory effort by EPA to develop TBEL regulations for petroleum refineries **stormwater resulted in an invalidation of the Part 419 effort to regulate stormwater** and a remand to EPA by the court. *American Petroleum Institute v. EPA*, 540 F. 2d 1023 (10th Cir. 1976). **On October 18, 1982, EPA formally withdrew the Part 419 storm water effluent limitations that had been promulgated on May 9, 1974.** See 47 Fed. Reg. 46434 (October 18, 1982).[8] Once again, more litigation ensued, resulting in another settlement agreement in which EPA agreed to propose "effluent limitations guidelines for contaminated storm water runoff." 49 Fed. Reg. at 34152 (August 28, 1984). (EPA was no longer proposing any limits for "uncontaminated runoff.")

Thus, in 1984, EPA proposed changes to the Part 419 regulations that, once again, would address "contaminated runoff." EPA again observed the question of what stormwater was and was not regulated under technology based requirements in NPDES permits was highly confusing:

> "In the October 18, 1982 rulemaking the Agency withdrew storm water effluent limitations guidelines for BPT, BAT and NSPS because they were remanded by the U.S. Court of Appeals in *American Petroleum Institute v. EPA,* 540 F.2d 1023 (10th Cir. 1976).
>
> Since that remand there has been some confusion on the part of permit writers and others as to whether storm water runoff ('runoff") effluent limitations should be contained in permits. There are two kinds of such runoff, i.e., contaminated and uncontaminated. The purpose of this rulemaking is to establish BPT, BCT and BAT effluent limitations guidelines for contaminated storm runoff.
>
> * * *
>
> In today's proposal, EPA is defining contaminated runoff, for purposes of these regulations only, to be runoff which comes into contact with any raw material, intermediate product, finished product, by-product, or waste product located on petroleum refinery property. Any other storm water runoff at a refinery is considered uncontaminated. . . .
>
> Contaminated runoff constitutes an additional source of pollution which must be managed during periods of precipitation along with process wastewater from refinery operations. The regulations being proposed today do not establish numerical effluent limitations for uncontaminated runoff. Effluent limitations, including but not limited to

[8]Nevertheless, the Ciniza Refinery had already engineered its facility to contain process wastewater and what EPA appeared to be referring to in the overturned regulations as "contaminated runoff."

allocations, for uncontaminated runoff may be established by the permit writer based on his/her professional judgment."

49 Fed. Reg. at 34154 (August 28, 1984)(underlined emphasis added).

Thus, in 1984 (as later finalized as the final Part 419 regulations in 1985), EPA was continuing the concept that **there would be two kinds of discharged stormwater from a petroleum refinery, that which was contaminated because it had directly contacted process materials (the precipitation "came into contact with" the raw material or the product or the waste product) and that discharged stormwater that was uncontaminated by direct contact with such materials (such as that in an area where all petroleum materials were kept segregated from contact with storm water so that the runoff was previously identified by EPA as presumably clean).**[9] The former would have to be captured and treated along with

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[9]It was certainly EPA's apparent position in 1985 that only in those areas in which petroleum was managed regularly so that it would come into contact with stormwater that Part 419 effluent limitations would apply to that "contaminated runoff" and that such "contaminated runoff" would now have to be permitted under Section 402. It would be completely incorrect to read Part 419 as covering any effluent from any location where a petroleum spill might ever occur. It only covered those process areas where petroleum would regularly contact stormwater such that it was "contaminated runoff," not any place an accidental spill might occur.

Roughly contemporaneous with EPA's issuance of the Part 419 effluent limitations in 1985 was its issuance of updated Part 110 spill reporting regulations that sought to clarify which oil spills would have to be reported under Part 110 and which ones were considered to be covered under Part 402. In the March 11, 1985 proposed rule amending Section 311 oil spill reporting [40 C.F.R. Part 110], EPA clarified which spills are handled under the NPDES permit reporting for a facility with an NPDES permit and, conversely, which would be handled under Section 311 and the Part 110 oil spill reporting procedure. Here, in 1985, EPA was proposing new amendments to 40 C.F.R. Part 110 to incorporate the 1978 CWA Congressional clarification as to which oil spills get handled under an NPDES permit as opposed to under Section 311 of the CWA. See, generally, 50 Fed. Reg. 9776 (March 11, 1985). [Obviously, if a spill is under Part 110, it is not subject to 402 and thus neither is that spill nor any contacting runoff subject to Part 419.]

EPA headquarters set forth (in this March, 1985 Federal Register preamble) the following instructive guidance:

> In addition to changing the harmful quantity language in the 1978 amendments to the CWA, Congress also modified the definition of "discharge" in section 311 (a)(1) to exclude from Section 311 coverage three types of discharges that are subject to the Section 402 National Pollutant Discharge Elimination System (NPDES) and Section 309 enforcement provisions. Specifically, Congress provided that the following discharges be excluded from section 311 coverage:
>
> *(A) discharges in compliance with a permit under section 402 of this Act,*

(B) discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of this Act, and subject to a condition in such permit, and (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of this Act, which are caused by events occurring within the scope of relevant operating or treatment systems.

The basis for this specific exclusion stems from the uncertainty under the old statute as to whether and to what extent discharges from facilities with NPDES permits were subject to the provisions of section 311. Senator Stafford, a principal sponsor of the amendment to section 311, explained the general nature of the changes:

** * *we are attempting to draw a line between the provisions of the act' under sections 301, 304, 402 regulating chronic discharges and 311 dealing with spills. At the extremes it is relatively easy to focus on the difference but it can become complicated. The concept can be summarized by stating that those discharges of pollutants that a reasonable man would conclude are associated with permits, permit conditions, the operation of treatment technology and permit violations would result in 402/309 sanctions; those discharges of pollutants that a reasonable man would conclude are episodic or classical spills not intended or capable of being processed through the permitted system and outfall would result in the application of section 311. (* 124 **Congressional Record** 37683 (1978)).

More specifically, Senator Stafford related that "the changes make it clear that discharges, from a point source permitted under section 402 which are associated with manufacturing and treatment, are to be regulated under Sections 402 and 309. 'Spill" situations will be subject to section 311, however, regardless of whether they occur at a facility with a 402 permit" (124 **Congressional Record** 37683 (1978)).

50 Fed. Reg. at 9777.

In the April, 1987 final rule adopting these Section 311 changes to 40 C.F.R. Part 110, EPA again spoke to the clear and complete distinction that Congress mandated in the 1978 Congressional amendment on CWA spill reporting [a spill is either to be reported under section 311 or under the facility's NPDES permit, but 311 and 402 are meant to be mutually exclusive]:

Congress intended this amendment to clarify which section of the CWA governs discharges of oil and hazardous substances from point sources holding NPDES permits. Foreseeable or chronic point source discharges that are permitted under section 402, and that are either due to causes associated with the manufacturing or other commercial activities in which the discharger is engaged or due to the operation of the treatment facilities required by the NPDES permit, are to be regulated under the NPDES program. "Classic spill" situations are subject to the requirements of section 311. Such spills are governed by section 311 even where the discharger holds a valid and effective NPDES permit under section 402.

the process wastewater.

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52 Fed. Reg. 10712, 10714 (April 2, 1987).

This history of what is under Part 402 (and, thus potentially covered under Part 419) versus what is under Section 311 also supports the conclusion that in 1985 EPA and Congress did not take the position that the mere possibility of a spill in a particular area made all of the runoff from that area that contacted such a spill into Part 419 regulated effluent under an NPDES (402) permit.

Whether or not the stormwater was regulated hinged not on whether it was in a particular area of the refinery, but instead on whether it contacted the process raw or waste materials or any petroleum product. (This was the specific and unambiguous, plain language expressly chosen to define "contaminated runoff" in Part 419.) If not, it was uncontaminated runoff that would be regulated only if commingled with regulated Part 419 process wastewater/contaminated stormwater or if the permit writer, in the course of writing the permit, chose to so regulate it.[10]

EPA sought, however, **to discourage the routing of uncontaminated water (i.e., from a tank or pipe area where no contact occurred) into the same treatment system as the process wastewater and contaminated runoff**, believing it to be a far sounder environmental practice to discharge that uncontaminated stormwater separately:

> "These proposed regulations do not address uncontaminated runoff which is discharged through the process wastewater treatment facility. This is because the Agency believes that introducing uncontaminated runoff to the process wastewater treatment system may result in the discharge of an increased mass of pollutants to the environment compared to the mass of pollutants discharged if no uncontaminated runoff were present in the process wastewater treatment system. Therefore, the Agency does not want to encourage this practice on a national basis."

49 Fed. Reg at 34155. Here EPA was encouraging refineries to take stormwater that did not come into direct contact with petroleum process materials, as opposed to precipitation on the actual process area where it would actually contact petroleum materials (or petroleum waste), and not to put that uncontaminated stormwater into the same system as the Part 419 stormwater.

In the 1985 preamble to the final Part 419 regulations, EPA made this point again (in responding to various comments on the 1984 proposed Part 419 regulations):

> "[C]larifications were requested on the Agency's definition of contaminated runoff and its intentions to include only water which comes into direct contact with raw materials or petroleum products (i.e., exposed or spilled oil) or to extend its coverage to runoff from storage areas or tank farms where, ideally, no direct contact occurs.
>
> The Agency's intent in promulgating storm water runoff limitations is to provide a mechanism for the control of storm water when this waste stream is, or is very likely to

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[10]The legality of EPA addressing stormwater that was uncontaminated and not co-mingled at an industrial facility was questionable, until Congress clarified this issue in the 1987 CWA amendments and EPA developed the resulting definition of regulated "stormwater discharge associated with industrial activity" at Section 122.26(b)(14).

be, contaminated by direct contact with raw, intermediate or final products. The collection and treatment of storm water runoff that is uncontaminated can be costly and burden the refinery's wastewater treatment system. For this reason, the **Agency wishes to encourage refineries which segregate uncontaminated storm water runoff from contaminated wastewater streams to continue this practice.**"

50 Fed. Reg. at 28522 (July 12, 1985)(bold emphasis added). **EPA was clearly telling** the petroleum refining sector, including the **Ciniza Refinery, not to route stormwater that did not become contact-contaminated into the same treatment system with the process wastewater**, but that EPA preferred instead that such water be discharged elsewhere. [Two years later, Congress would (in the 1987 CWA amendments) direct EPA to provide an altogether different approach for regulating such stormwater at industrial facilities, which today is embodied in 40 C.F.R. Section 122.26.]

After these Part 419 regulations were promulgated, the stormwater flows at the Ciniza Refinery were such that **stormwater that did come into contact with petroleum materials** was directed, along with the process wastewaters, **into the zero discharge wastewater treatment** system of retention ponds and basins constructed and operated to assure that Part 419 regulated effluents directed into this system would not discharge. The EPA was still expressly stating that uncontaminated stormwater (any stormwater that had not come into contact with the petroleum raw materials, intermediate or final products or petroleum waste) should generally not be commingled if possible, and that such presumably uncontaminated water was not subject to any numeric effluent limitations under Part 419.

As discussed below in the section on discharges of "industrial stormwater" regulated under Section 122.26, a second retention system is set up to hold that "industrial stormwater" without discharge as well, except when it is determined the holding capacity (not engineered for all of the runoff from large storm events) will be exceeded. Such discharges of industrial stormwater from these valved systems will occur in the summer monsoon rains, and occasionally in a big spring rain event. At that time, a decision is made to open the 122.26 "industrial stormwater" retention system valves to allow valved discharge in the areas denominated as Outfalls 1 and 2.

In the event a problem occurs with the zero discharge stormwater management system for retaining Part 419 regulated effluents, and either process wastewater or "contaminated runoff" that had contacted petroleum materials escaped this zero discharge system, that does not mean it would then discharge to a "water of the U.S." in violation of the CWA. The process wastewater or Part 419 "contaminated runoff" would then go into the 122.26 "industrial stormwater" retention system, which does not discharge unless valves are opened. In such a situation involving an unintended escape of Part 419 effluents from the main zero discharge retention system, these Part 419 effluents would then be captured in the "industrial stormwater" retention system, cleaned up and, as appropriate, placed into oil recovery units or into the zero discharge WWTU retention system. The Ciniza Refinery thus has a redundancy built in to its control of

Part 419 effluents to keep it zero discharge, even if a problem with the main zero discharge containment system occurs.

The Ciniza Refinery continues to manage all Part 419 process wastewater and "contaminated runoff" (as defined and then clarified by the foregoing regulatory history and relevant preambles for the twelve year history of the Part 419 regulations) in its zero discharge retention system, consistent with EPA's 1985 regulations, and should not need an NPDES permit for Part 419 effluents as a result of the operational and maintenance protocols which successfully maintain this system as zero discharge.

III. The Ciniza Refinery Generally Manages "Storm Water Discharge Associated With Industrial Activity" [or "Industrial Stormwater"] As Appropriate Under The New EPA Regulatory Program Arising From the 1987 Clean Water Act Amendments and 40 C.F.R. Section 122.26. Only Two Areas at the Refinery Have "Industrial Stormwater" (Not Commingled With "Contaminated Runoff") That Occasionally Must Be Discharged from A Separate Storm Water Retention System By Opening Valves (for Outfalls 1 or 2) When Precipitation Events Exceed Retention Capacity.

In 1987, Congress amended the Clean Water Act, in part to help resolve some of EPA's administrative and legal difficulties (as shown by numerous court challenges) in seeking to regulate stormwater discharges. The 1987 Water Quality Act required EPA first (by October 1, 1992) to regulate storm water discharges "associated with industrial activity."[11] EPA set forth that definition of what was a "stormwater discharge associated with industrial activity" in 40 C.F.R. 122.26(b)(14) and it was discussed at some length at 55 Fed. Reg. 48007-15 (Nov. 16, 1990).

The new "industrial stormwater" program was not intended to cover discharges already under a TBEL regulation, like Part 419 "contaminated runoff," but it took what EPA previously had described as "clean" or "uncontaminated runoff" from industrial areas at petroleum refineries which did not have "contact" with the Part 419 petroleum materials and subjected that non-contact stormwater (i.e., from tank farms, roofed areas, and other locations where stormwater fell in an industrial area) to this new program.

The 1990 stormwater regulations that EPA developed for this new "industrial stormwater" program then defined what portions of a facility with a listed SIC code are considered to have industrial activity, such as industrial plant yards, material handling sites, refuse sites, shipping and receiving areas, manufacturing buildings, material storage areas for raw

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[11]Included by Congress in the list of SIC industries considered to have industrial stormwater discharges were facilities classified as SIC code 29, which covers petroleum refineries.

material, intermediate and finished products. 40 C.F.R. Section 122.26(b)(14).[12]

The approach to determining what was regulated was different in the new "industrial stormwater" program as well. In the Part 419 program, the determination of whether runoff was regulated turned on whether the stormwater "comes into contact with" petroleum products, raw materials or petroleum waste products. In this new "industrial stormwater" program, it was not the contact with materials that made the stormwater regulated, it was the area at the industrial facility on which the stormwater fell that determined if it was regulated.

The sweep of the new "industrial stormwater" provisions clearly covered many areas of the Ciniza refinery whenever such stormwater in that area did not come into contact with raw material, intermediate or finished product or petroleum waste. Thus stormwater that had never contacted any petroleum materials (thus not "contaminated runoff" under Part 419) would still require a permit for discharge under this new regulatory program if it met the definition of a "stormwater discharge associated with industrial activity" in 40 C.F.R. Section 122.26(b)(14). While EPA in 1985 had clearly and expressly encouraged petroleum refineries not to commingle such "industrial stormwater" with the "process wastewater" and "contaminated runoff" already regulated under Part 419, now this new "industrial stormwater" program would require a separate permit for discharge under Section 122.26.

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[12]In response to a comment, EPA specifically stated:

> "[T]ank farms at industrial facilities are included. Tank farms are in existence to store products and materials created or used by the facility. Accordingly they are directly related to manufacturing processes."

55 Fed. Reg. at 48009.

"Industrial stormwater" at the Ciniza Refinery typically falls into two categories: (1) that which does not discharge at all, and thus is not regulated[13]; and (2) that which is handled in stormwater drainage basins that have retention systems, but must occasionally discharge when the holding capacity is exceeded.[14] There are two such basins, which discharge to the areas denominated as Outfall 1 and Outfall 2. It **is this latter category of occasionally discharged "industrial stormwater" that is subject to the MSGP requirements.** This is the only regulated "industrial stormwater" at the Ciniza Refinery under 122.26.

Much of the 122.26 regulated "industrial stormwater" is directed into initially routed to retention containments. **Giant generally manages such regulated "industrial stormwater"** in this "industrial stormwater" retention systems (prior to discharge at the Outfall 1 or Outfall 2 locations) **to prevent discharge except in the case of a significant precipitation event.** Such a precipitation event could cause the holding capacity of this "industrial stormwater" retention system to be exceeded. **When necessary, valves are opened and "industrial stormwater" discharged at the locations at the Ciniza Refinery denominated in its Stormwater Pollution Prevention Plan as Outfalls 1 and 2.**

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[13]This category does not include "contaminated runoff" directed into the zero-discharge system for managing Part 419 effluent. It includes runoff from industrial areas that happen to drain into other "no outlet" areas where the stormwater either percolates or evaporates, but does not discharge to a "water of the United States."

[14]There is one location on the north and east side of the LPG tank farm area where some stormwater can flow to the drainage leading to Outfall 2 without passing through the valved retention system. As a result of the concern about this expressed in the Inspection Report, even though Giant is unaware of any stormwater from that area being discharged after a spill in this one portion of the tank farm, Giant has budgeted, engineered and contracted for full containment of this area so it will become zero discharge for stormwater.

Because the Ciniza Refinery did have a few areas where uncontaminated stormwater occurs that meets the definition of a "stormwater discharge associated with industrial activity" in 40 C.F.R. 122.26(b)(14), the Ciniza Refinery would have some "industrial stormwater" that could require a permit for discharge under this newer program.[15]

In 1992, the first 122.26 permit coverage requirement for discharge of this "industrial stormwater" took effect. Giant (the owner of the Ciniza Refinery at that time) properly filed a Notice of Intent for discharge coverage under the baseline industrial Storm Water General Permit. By Permit Coverage Notice from EPA dated December 31, 1992, Giant received a confirmation of authorization under NPDES storm water permit number NM00A172 for discharges in New Mexico from the Ciniza Refinery. Giant continues to manage its occasional discharges of 122.26 "industrial stormwater" under the available general stormwater permits. Since this program took effect, Giant has sought to manage its "industrial stormwater" in basins that have retention capacity allowing discharges to be limited to just a few times in a year, at most.[16]

The 1992 baseline industrial general permit eventually was replaced by a Multi-Sector General Permit. Today, for the occasional 122.26 discharge of industrial stormwater, Giant utilizes the 2000 MSGP (NPDES Permit # NMR05B157) to authorize such occasional discharges of "industrial stormwater" when its retention capacity is exceeded. [Part 419

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[15]Unless stormwater "comes into contact with any raw material, intermediate product, finished product, byproduct or waste product" located at the Giant refinery, it does not meet the definition of "contaminated runoff" and thus is not under Part 419.

[16]As previously mentioned, there is one portion of the LPG tank farm area that drains towards Outfall No. 2 without first going through the "industrial stormwater" retention system. That is in the process of being converted to a zero discharge area with the construction of new berms to prevent stormwater from that area from reaching the Outfall 2 drainage. Giant personnel are not aware of any spills in that area that have contaminated storm discharges.

"contaminated runoff" is not discharged when the valves are opened.[17]]

The October 30, 2000 Multi-sector General Permit under which the Ciniza Refinery is currently operating states in pertinent part:

> **"6.I. Sector I - Oil and Gas Extraction and Refining**
> **6.I.1. Covered Storm Water Discharges**
>
> The requirements in Part 6.I apply to storm water discharges associated with industrial activity from Oil and Gas Extraction and Refining facilities as identified by the SIC Codes specified under Sector I in Table 1-1 of Part 1.2.1.
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> * * *
>
> **6.I.3. Limitations on Coverage**
>
> 6.I.3.1. *Prohibition of Storm Water Discharges.* This permit does not authorize contaminated storm water discharges from petroleum refining or drilling operations that are subject to nationally established BAT or BPT guidelines found at 40 C.F.R. Parts 419 and 435, respectively. Note: **most contaminated discharges at petroleum refining** and drilling facilities **are subject to these effluent guidelines and are not eligible for coverage** by this permit.
>
> 6.I.3.2. *Prohibition of Non-Storm Water Discharges.* Not authorized by this permit: discharges of vehicle and equipment washwater, including tank cleaning operations."

65 Fed. Reg. at 64830 (Oct. 30, 2000)(bold emphasis added).

The 2000 MSGP correctly is pointing out that **it is the "contamination"** as **that term is defined in Part 419 that makes the discharge covered by Part 419**, not the area of the facility from which it comes.

This 2000 Multi-Sector Permit indicates "most contaminated discharges" are not eligible for discharge under the MSGP, because most such discharges meet the definition of "contaminated runoff" under Part 419. **If the industrial stormwater does not contact the requisite petroleum materials so as to meet the Part 419 term "contaminated runoff," it remains runoff eligible for discharge under the MSGP.** Thus, the 2000 MSGP says there will be some contaminated runoff (as long as its not the Part 419 definition of "contaminated"),

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[17]As noted in Section 1.2.3.4 of the 2000 MSGP, discharges subject to effluent limitations under Part 419 are not authorized.

contaminated not by contact with the types of petroleum materials that make it Part 419 regulated, but by something else, as well as uncontaminated stormwater, that can be discharged pursuant to the 2000 MSGP. Giant does not manage its Part 419 "contaminated runoff" in discharges from Outfalls 1 and 2, but it does occasionally discharge 122.26 eligible "industrial stormwater" (which may also contain some contaminants, as long as they don't come from contact with Part 419 petroleum materials or product waste) at the Ciniza Refinery. These 122.26 discharges only occur after significant precipitation events (pursuant to the MSGP), when Giant opens the valves because its 122.26 "industrial stormwater" retention capacity is exceeded.

Giant generally manages its petroleum raw materials, its intermediate petroleum product, its finished petroleum product and its petroleum byproducts and waste products so as to minimize stormwater contact. As previously noted, in those areas where stormwater has a significant likelihood of contacting the petroleum product, byproduct or waste, or any raw material, the flow of that stormwater is routed to a "zero discharge" system that includes the recapture of such petroleum materials in an oil-water separator prior to management of the remaining effluent in a pond system operated to be "zero discharge" to waters of the United States. This is an appropriate wastewater treatment system built, maintained and operated by the Ciniza Refinery in order to meet CWA requirements with respect to Part 419 (covering both process wastewater and any runoff that gets contaminated through contact with petroleum raw materials, products, byproducts or waste.)

To the extent there is a concern that a spill or accidental loss of petroleum product, byproduct, waste or raw material could inadvertently occur in an area that might drain to the contained 122.26 retention areas with valves that could discharge to the areas denominated as Outfalls 1 and 2, it would be cleaned up and appropriately removed before there was a 122.26 stormwater discharge. Giant (as a matter of policy) would not open the valves to discharge such contaminated waters.

First, it is noteworthy that spill events of any significance at the Ciniza Refinery are extremely uncommon and unlikely. There have been no reportable spills under Part 110. A spill prevention containment and countermeasures program is designed to prevent spills, and an aggressive Integrated Contingency Plan assures prompt detection and cleanup of spills.[18] In

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[18] As noted in the April 12, 2005 SWPPP, there are a variety of leak and spill controls, including the following:

> "All petroleum storage tanks are located within full encirclement earthen containment dikes constructed of low permeability soil. All basins are sized to contain the maximum volume of the largest tank within the dike, plus an additional freeboard height of at least 6 inches.... Precipitation is infrequent and stormwater trapped within diked areas typically evaporates. Spills are removed via vacuum trucks or portable pumping systems. Recovered material is transferred to a slop tank or the WWTU [zero discharge wastewater treatment unit that retains all Part 419 wastewater], as appropriate....

addition, the Clean Air Act requires that the refinery maintain an LDAR (leak detection and repair) program, which requires monitoring, inspection and recordkeeping for equipment in VOC and HAP service. These programs make it unlikely that precipitation will have the requisite contact with the types of petroleum materials that are the factual predicate for Part 419 regulation.

Second, even in the case of an unanticipated upset condition, however, Giant can capture, remove and prevent any such petroleum product, byproduct, waste or raw materials from being discharged. By keeping the valves closed and by engaging in appropriate spill response and cleanup prior to the opening of the valves for purposes of discharging "industrial stormwater," stormwater in that area would be cleaned up along with the spilled petroleum materials. Thus, aside from the general direction of runoff from the process areas and areas where it is "contaminated" to the zero discharge system that Giant has implemented, in the event petroleum were released into basins that drain towards Outfalls 1 and 2, Giant under its ICP can capture and clean up such petroleum materials and any associated runoff prior to "industrial stormwater" discharge.[19]

Giant has developed and implemented a Storm Water Pollution Prevention Plan. As a general rule, all regulated areas of the refinery are operated and designed to have all stormwater contained. Part 419 "contaminated runoff" is directed, as noted in the earlier discussion, into the zero discharge retention system. "Industrial stormwater" (from areas regulated under 122.26 but not "contaminated" as defined under Part 419) generally is directed into a stormwater retention system.[20] In order for this "industrial stormwater" from the Ciniza Refinery to reach a water of the United States (i.e, the Rio Puerco nearby), Giant must affirmatively open valves in detention containment areas to permit the stormwater to discharge (i.e., into the areas referred to as Outfalls 1 and 2).[21]

Spilled material which accumulates in any retention basin is removed via portable skimmers and pumps, and then transferred to either a slop tank or the WWTU, as appropriate."

Best Management Practice #4: Leak and Spill Controls.

[19]As explained in some detail earlier, Giant manages Part 419 "contaminated runoff" by directing it to a different wastewater treatment retention system that it manages for zero discharge.

[20]Once again, the only exception is the north and east portion of the LPG tank farm area, and this has now already been engineered and contracted for full stormwater containment.

[21]If, by circumstance, an industrial spill of petroleum materials or other Part 419 regulated byproducts or raw materials into the "industrial stormwater" detention system occurred, Giant

The Ciniza Refinery is designed, constructed, maintained and operated such that only appropriate "industrial stormwater" (not "contaminated runoff") is to be present in the detention system when any of the valves are opened to allow "industrial stormwater" discharge in the areas known as Outfalls 1 and 2.

IV. Ciniza Response to Inspector's Specific Concerns: Introduction

As noted in the last paragraph of the Inspection Report, Giant brought its two highest ranking on-site officials to the closing conference after the inspection: General Manager Ed Rios; and Operations Manager Stan Fisher. Also at the debriefing session were Ed Riege and Steve Morris, top experienced members of the Ciniza Refinery environmental team. Giant takes its compliance obligations and the advice of regulatory staff after an inspection with appropriate respect. We are grateful for the professional courtesy of regulatory staff in providing the closing conference.

Immediately after the inspection closing conference, Giant retained a stormwater consultant to assist with updating and improving its stormwater pollution prevention plan.

When it received the written Inspection Report, Giant addressed the inspector's concerns. These concerns in the written Inspection Report consists of four unnumbered sections (one with three subparts), totaling five single spaced pages, accompanied by a cover letter dated December 19, 2005. The sections in the Inspection Report are entitled as follows (with a numbering system added for easy reference):

1) "Introduction"

2) "Permit Status: Overall rating of 'Unsatisfactory' "

3) "Storm Water Pollution Prevention Plan (SWPPP)"

Subpart a) "Pollution Prevention Team: Overall rating of 'Marginal' "

Subpart b) "Description of Potential Pollutant Sources: Overall rating of 'Marginal' "

Subpart c) "Description of Appropriate Measures and Controls: Overall rating of "Unsatisfactory"

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would clean up any such materials (and water contacting such materials). Giant typically would not open the detention system valves to allow such spills to reach the Rio Puerco or other water of the U.S.

4) "Annual Site Compliance Evaluation Reports: Overall rating of 'Unsatisfactory' "

With respect to the "**Introduction,**" the only substantive statement that warrants any response is that the "inspection included an assessment of the potential co-mingling of "contaminated runoff" as defined under 40 C.F.R. Part 419.11 and ineligible for coverage under the MSGP, with storm water discharges that are eligible."

Giant has taken this concern extremely seriously, and undertook a lengthy review of the development of the Part 419 regulations and the EPA guidance on what is properly considered "contaminated runoff" to double-check its interpretation on this issue. As noted several times by EPA itself in the course of the rulemaking, this area can be misunderstood. Giant had detailed its position and rationale at great length herein, both to make sure Giant itself understands the regulations correctly and to facilitate a mutual understanding with the regulatory authorities as to what is appropriate management of Part 419 "contaminated runoff." Giant is very interested in compliance with these regulations, and never had a problem on this issue with any previous inspections.

Giant's position on this issue has already been outlined above, and Giant believes it has implemented an entirely reasonable interpretation of Part 419 as applied to the facts of its facility, and that its system of zero discharge that it has constructed and endeavored to maintain is fundamentally a good one, consistent with the goals and requirements of the Clean Water Act.

As previously noted, Giant believes it appropriately manages "contaminated runoff" in a zero discharge system, and, on those rare occasions when the Ciniza Refinery does discharge (i.e., by opening the valves to areas denominated as Outfalls 1 and 2), only "industrial stormwater" is discharged and no "contaminated runoff." Giant has taken the inspector's complaint very seriously, has carefully researched guidance on how EPA intended to define and interpret the term Part 419 "contaminated runoff" and believes it has adopted a sensible and logical protocol to manage Part 419 effluents without discharge.

Nevertheless, Giant has gone back and updated its SWPPP, and has designed/implemented some additional barrier systems to maintain even more stormwater in a "zero discharge" retention system in its efforts to be fully responsive to the Inspection Report. While these improvements will add redundant levels to assure that no Part 419 "contaminated runoff" is discharged, the existing system has been highly effective in keeping Part 419 regulated effluents from discharging. The Ciniza Refinery, on those rare occasions when it discharges, does not discharge Part 419 effluent, but only "industrial stormwater" pursuant to 122.26.

The remaining sections of the Inspection Report (2, 3a, 3b, 3c and 4) are discussed in separate sections below. A number of suggestions made by the Inspection Report have resulted in changes in the Ciniza Refinery's efforts to keep stormwater clean, and Giant is grateful for the

regulatory assistance. Giant's goal is to comply with the requirements and, as suggested in several places by the inspector, to go above and beyond basic legal requirements to further isolate stormwater from potential contamination at the Ciniza Refinery.

V. The Finding of "Unsatisfactory" Permit Status Was Improperly Based, as Noted in the Inspection Report, on the Alleged Documented "Contaminated Runoff" Assessment. The Ciniza Refinery Does Not Commingle Part 419 "Contaminated Runoff" with any "Industrial Stormwater" That Is Discharged To the Outfall 1 or 2 Locations.

Giant is understandably concerned and very chagrined about the statement in the Inspection Report that indicates as follows:

Permit Status: Overall rating of "Unsatisfactory"

There are a total of seven paragraphs in this section that follow this tentative "Unsatisfactory" conclusion by the inspector. The very last paragraph reveals the basis for the overall "Unsatisfactory" rating on "**Permit Status**" and is quoted here in pertinent part:

> "Since most of the time available to conduct this inspection was spent doing the above documented "contaminated runoff" assessment, only a cursory, and after the fact review of the SWPPP, was completed."

In other words, the basis of the "Unsatisfactory" **Permit Status** was the perceived commingling of "contaminated runoff" regulated under Part 419 with "industrial stormwater" that the inspector felt was being discharged. To put it another way, the inspector based the "unsatisfactory" determination on what he perceived to be a serious problem of "contaminated runoff" being discharged pursuant to the MSGP at the Outfalls 1 or 2 locations.

The inspector's concern with this issue was such that the entire third paragraph in this section of the Inspection Report was emphasized in bold, and is quoted in its entirety below:

> **"Section 301 (a) of the Federal Water Pollution Act states that "Except as in compliance with this section and sections 302, 306, 307, 318, 402 and 404 of this Act, the discharge of any pollutant by any person shall be unlawful." Since this facility does not have (and has apparently never had) NPDES permit coverage for discharges of process wastewater or contaminated runoff, all past and continuing, discharges have been (are) in apparent violation of Section 301 of the Clean Water Act, 33 U.S.C. § 1311."**

The inspector apparently thought that the Ciniza Refinery was discharging Part 419 "contaminated runoff" to a water of the United States without an NPDES permit, and thus made the "unsatisfactory" permit status finding.

First, there were no discharges occurring on the date of the inspection. There was no precipitation event, there was plenty of capacity remaining in the detention system, and no industrial stormwater valves were opened. The Part 419 retention system, of course, was not discharging either (as it is managed as a zero discharge system).

Second, as noted previously in this response, Giant believes it has appropriately set up a system that keeps all process wastewater and "contaminated runoff" in its zero discharge retention system. Since it designed, constructed, maintains and operates this retention system to be zero discharge, there should be no problem whatsoever that no NPDES permit exists for the zero discharge portion of this system where Part 419 process wastewater and "contaminated runoff" is directed.

Thus, the "unsatisfactory" finding on **Permit Status** seems unwarranted as the inspector perhaps unfairly assumed that "contaminated runoff" is being directed to the "industrial stormwater" detention system and that Part 419 "contaminated runoff" is being discharged through valves at the Outfall 1 or 2 locations. This is not the case.[22]

Giant has struggled to determine the rationale for this seemingly unfair conclusion by the inspector that Part 419 effluent is being discharged and believes it stems from a misreading of a sentence in the 1998 MSGP preamble. **In the first paragraph of this Permit Status section of the Inspection Report are three sentences**, the first which correctly quotes the definition of Part 419 "contaminated runoff" and **the second and third which appear to be quotes taken from a preamble to the 1998 Multi-Sector Stormwater Permit notice in the September 30, 1998 Federal Register**. It is the first of these two sentences from the 1998 MSGP preamble that the inspector apparently based his "unsatisfactory" determination upon, for that single sentence seemingly caused him to conclude stormwater from certain geographic areas at the facility necessarily had to be "contaminated runoff," even if that stormwater never contacted petroleum materials.

However, since Part 419 is clear on its face that the prerequisite for Part 419 regulation of stormwater is the "contact" with "raw material, intermediate product, finished product, by-product or waste product" produced by the petroleum refining process, and since the preambles to the various iterations of the Part 419 regulations show that the Ciniza Refinery's interpretation of Part 419 "contaminated runoff" and its management of such "contaminated runoff" in a zero

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[22]As of the November 10, 2005 date the inspector was at the facility, there was no discharge of any kind whatsoever occurring, so this was not a case of actual discharge observed. It was, in the inspector's mind, a logical deduction that an improper discharge of Part 419 "contaminated runoff" must have occurred in the past and would occur again in the future at the Outfall 1 or 2 locations. While understandable given the single misleading sentence in the 1998 MSGP preamble relied upon by the inspector, that sentence ambiguously characterizes the scope of Part 419 coverage. The Ciniza Refinery does not discharge Part 419 effluent when it is maintaining, operating and managing its retention and detention systems properly.

discharge system is appropriate, the inspector's determination based on his interpretation of a single sentence in the 1998 MSGP preamble is unfair as applied to the Ciniza Refinery.

The second paragraph in the **Permit Status** section of the Inspection Report then proceeds to unfairly penalize the Ciniza Refinery based on that single ambiguous sentence from the 1998 MSGP preamble (ignoring the express language in the Part 419 definition of "contaminated runoff" that first requires that runoff "**contact**" with "raw material, intermediate product, finished product, by-product or waste product" in order for the runoff to meet the Part 419 definition of "contaminated"). As a result of, first, not applying the plain requirement of "contact" before finding an area had "contaminated runoff" and, second, of misapplying one ambiguous sentence in a preamble on the 1998 MSGP in a manner which clearly contradicts the regulatory history of Part 419 development as well as the plain language of the Part 419 "contaminated runoff" definition, this inspector appears to have unfairly assigned a permit status of "unsatisfactory." While it is apparent how he reached the conclusion that illegal Part 419 discharges were occurring and was troubled that the Ciniza Refinery did not have an NPDES permit for Part 419 discharges, unfortunately, that "unsatisfactory" **Permit Status** finding was based on a misunderstanding of the scope of Part 419 coverage. Hopefully, Giant's lengthy exploration of the Part 419 coverage in the first part of this response appropriately resolves the ambiguity in the 1998 MSGP preamble sentence at issue.

To specifically understand how this unfortunate misunderstanding arose, it is useful to review in greater detail the specific sentence in the November 10, 2005 Inspection Report relied upon by the inspector, and to review the source for that sentence, the 1998 MSGP preamble in the Federal Register.

The first paragraph in this **Permit Status** portion of the Inspection Report consists of three sentences. The first correctly quotes the definition of "contaminated runoff" from Part 419 of the regulations. As noted, runoff must "come into contact" with petroleum product, byproduct, waste product or raw material before it is considered to be "contaminated runoff."

The second sentence in this first paragraph states that "[m]ost areas at refineries are not eligible for coverage under the MSGP including: raw material, intermediate product, by-product, final product, waste material, chemical and material storage areas; loading and unloading areas; transmission pipelines; and, processing areas." It is this second sentence that the inspector mistakenly interpreted to come to the conclusion that the Ciniza Refinery was improperly discharging Part 419 effluent without an NPDES permit.

The third sentence in this first paragraph of this portion of the Inspection Report then states: "[r]unoff that may be eligible for coverage, provided that discharges are not co-mingled with "contaminated runoff," include: vehicle and equipment storage, maintenance and refueling areas."

To find the source of that second sentence, we need to go back to 1998, when EPA

terminated the 1992 Baseline Industrial General Permit for Stormwater and issued an expanded Multi-Sector General Permit that now covered industrial stormwater discharges from petroleum refineries.

In seeking to provide cursory (shorthand) guidance as to what was "contaminated stormwater" under Part 419 as opposed to what was "industrial stormwater" under the Multi-Sector General Permit, the 1998 preamble for the Multi-Sector Permit stated:

> "I. **Storm Water Discharges Associated with Industrial Activity from Oil and Gas Extraction Facilities and Petroleum Refineries**
>
> 1. *Discharges Covered Under This Section*
> (a) *Coverage.*
> * * *
>
> This section also covers petroleum refineries listed under SIC code 2911. Contaminated storm water discharges from petroleum refining or drilling operations that are subject to nationally established BAT or BPT guidelines found at 40 C.F.R. 419 and 435 are not included.
>
> Note that areas eligible for coverage at petroleum refineries will be very limited because the term "contaminated runoff," as defined under 40 C.F.R. 419.11, includes "* * * runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property." Areas at petroleum refineries which may be eligible for permit coverage, provided discharges from these areas are not co-mingled with "contaminated runoff," include vehicle and equipment storage, maintenance and refueling areas. Most areas at refineries will not be eligible for coverage including : raw material, intermediate product, by-product, final product, waste material, chemical and material storage areas;, loading and unloading areas; transmission pipelines; and, processing areas."

63 Fed. Reg. at 52484 (September 30, 1998) (underlined emphasis added).

The underlined sentence in this 1998 preamble could be read two ways:

(1) the way the Inspection Report did, which is that all stormwater in these areas would automatically come into contact with raw material, intermediate product, finished product, by-product or waste product so as to meet the definition of Part 419 "contaminated runoff, " or,

(2) that most such areas will have the requisite Part 419 "contact" between runoff and petroleum materials, and thus the runoff would be "contaminated" and thus ineligible.[23]

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[23]Even under this second interpretation, if an accidental spill of petroleum materials occurred at the facility somewhere, say if a truck overturned on the road out of the facility, and it happened to rain at exactly that moment, there is still a question as to whether the stormwater contacting such a spill makes this into a 402 permitted effluent, or if this is a classic type of spill

The latter reading is consistent with the plain language and regulatory history and preambles for Part 419, and is the appropriate reading.

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not intended for 402 but for Section 311 of the CWA. The earlier discussion in the regulatory history of EPA's efforts to distinguish spills regulated under CWA Section 402 and the NPDES permit from spills regulated under CWA Section 311 suggests that the mere occurrence of a spill does not make stormwater that contacts it automatically subject to Part 419 effluent limitations. The first question to ask is whether this is a 402 covered spill or a 311 spill. Only if it is a 402 spill is it even potentially subject to Part 419 at all.

If, due to some management practice, the runoff in that area referred to in that 1998 MSGP preamble sentence [say an area in which some raw materials or finished petroleum product was stored] **did not contact the requisite petroleum materials** (the obvious example being a completely roofed area in which the stormwater in that area did not contact any petroleum materials, and so the stormwater would be from that geographic area of the refinery but clearly would not be Part 419 "contaminated runoff"), **it would not be Part 419 "contaminated runoff."** Nowhere in the history of the Part 419 regulations is there anything that suggests that stormwater that falls on an area with some petroleum material, even if that material is inside containers, inside a roofed structure, and therefore clearly not in contact, is automatically Part 419 "contaminated runoff." The opposite is true: there is no Part 419 "contaminated runoff" unless there is stormwater contact with the requisite materials.[24] It is not a geographic determination; instead, it is a materials-contact determination.

If the factual predicate of "contact" with "raw material, intermediate product, finished product, by-product or waste product" (required for Part 419 "contaminated runoff") does not occur, the precipitation could not be "contaminated' by contact such that it is subject to Part 419. With respect to the scope of Part 419, it is the plain language requiring actual contact, as explained through the regulatory history (including the Part 419 preambles) that is controlling, and not a single ambiguous sentence made in a preamble for the MSGP issuance in 1998.

As demonstrated by the lengthy review of the development of the Part 419 regulations, it

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[24]Even if stormwater contacts petroleum materials, it is not Part 419 stormwater if the petroleum came from a spill that is covered by 40 C.F.R. Part 110 and CWA Section 311 as opposed to the NPDES program. In 1985, EPA was intending to cover under Part 419 stormwater in areas with regular (not incidental) contact with petroleum materials.

is the **actual contamination by contact**[25] **with petroleum materials** (raw materials, intermediate or finished petroleum products or petroleum waste products) **that can create Part 419 "contaminated runoff,"**not the location where the precipitation occurs.[26]

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[25]The 1985 and 1987 preamble statements and the 1978 Congressional amendment to the CWA distinguishing incidental oil spills under Section 311 from oil spills that typically are through the NPDES (CWA 402) treatment system for process wastewater further indicates this must be some regularized contact, not just an incidental spill.

[26]In fact, in Part 419, EPA strongly encouraged refineries to manage their precipitation in all locations to keep it uncontaminated by contact and to not route such uncontaminated runoff it into wastewater treatment systems that were handling process waste water. To now take the position that any place where a facility might ever spill petroleum now required all stormwater in that area to be routed into the process wastewater treatment system would be the exact opposite of the EPA statements that stormwater in that generally uncontaminated area should NOT be routed into the same process wastewater treatment system.

It is the Part 419 regulation itself that should be looked to for defining the scope of Part 419. Where there is ambiguity, it is the preambles to the Part 419 regulatory development previously discussed that provide further clarity. It is illogical to utilize a single, out of context and ambiguous sentence in a 1998 MSGP preamble, not written by someone who would have worked on the development of the Part 419 regulations, to overrule either the explicit language of the definition of "contaminated runoff" in Part 419, or the far more illuminating preambles to the relevant Part 419 regulations.[27]

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[27]The 1998 Federal Register permit notice for the MSGP was not a regulation itself and thus could not change the 1985 adoption of Part 419. The single inartful sentence in a preamble to the 1998 notice of MSGP permit issuance simply cannot overrule the plain meaning of a Part 419 regulation nor should it carry any weight contrary to the preambles that accompanied the Part 419 regulatory development.

The 2000 MSGP permit preamble fortunately does not repeat such misleading language, either in its authorization of allowable discharges or in its preamble. Simply put, a single sentence in a notice issuing the 1998 MSGP does not change the definition of what is "contaminated runoff" under Part 419.[28]

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[28]In the one and only location in the "industrial stormwater" rules where EPA had been required to define contaminated runoff, not for purposes of Part 419, but for purposes of determining the scope of a different stormwater exemption for oil and gas extraction and production facilities, EPA took the position the stormwater was uncontaminated unless it had a 24 hour reportable quantity discharged with it. In this analogous situation, where EPA was interpreting what "contaminated by contact" with "raw material, intermediate products, finished byproduct or waste products" located at "oil and gas exploration, production, processing or treatment operations" for purposes of 40 C.F.R. Section 122.26(a)(2), EPA stated that stormwater is not "contaminated by contact" unless the stormwater has had a discharge of a reportable quantity under 40 C.F.R. Sections 117.21, 302.6 or 110.6 or else is sufficiently contaminated to contribute to an actual violation of a water quality standard. 54 Fed. Reg. 246 (Jan. 4, 1989). See 40 C.F.R. Section 122.26(c)(1)(iii). As recently noted in the Federal Register by EPA:

"[W]ith respect to oil or grease or hazardous substances, the determination of whether storm water is contaminated by contact with such materials, as established by the Administrator, shall take into consideration whether these materials are present in such storm water runoff in excess of reportable quantities under section 311 of the CWA or section 102 of CERCLA."

71 Fed. Reg. at 896 (Jan. 6, 2006)). Even if this were the appropriate definition of "contaminated runoff to use, the Ciniza Refinery would not be discharging "contaminated runoff" at Outfalls 1 or 2. The bottom line is that the appropriate definition of "contaminated runoff" for Part 419 purposes is the one at Part 419, and any clarification sought must be found in the preambles to that rulemaking, not in the preamble to a notice of general permit issuance for "industrial stormwater."

The second paragraph in the **Permit Status** section of the Inspection Report stated there are a "number of areas from which 'contaminated runoff' or co-mingled 'contaminated runoff' and storm water runoff appear to discharge...." The Inspection Report then identifies three areas where it alleges Part 419 "contaminated runoff" is being discharged (bold numbering and additional spacing below added for ease of reference):

> "These include: **[1]** a fairly large area in the northeast part of the facility where some (most is contained) of the railcar loading/unloading facility and an LPG tank farm appear to drain either directly offsite or are commingled with storm water runoff directed to storm water outfall No. 2;
>
> **[2]** the area along the south side of the main process area (north of the office complex) appears to co-mingle with storm water runoff directed to storm water outfall No. 1;
>
> and **[3]** the area along the north side of the facility where some of the drainage from a scrap yard (from which discharges are likely eligible) appears to co-mingle with drainage from an adjacent (to the east) tank farm and then directed to storm water outfall No. 2."

Thus, it appears the Inspection Report finding of "unsatisfactory" is based on the understanding that in these three areas, stormwater does contact petroleum materials (triggering Part 419) and then is discharged to either Outfall 1 or 2 after a valve is opened. (It is indisputable no such discharge of any kind was occurring on the date of the inspection since there was no precipitation event and the valves had not been opened.)

With respect to the first concern that stormwater that has come into contact with petroleum materials such that Part 419 effluent is discharged from the railcar loading/unloading facility and an LPG tank farm, the Ciniza Refinery carefully manages the stormwater in that area to assure that no spilled petroleum materials and associated runoff are discharged from that area.

In the area at the railcar facility where spills may be likely to occur, a separate catchment system for any spills and any stormwater that would contact such spills is utilized to keep spills (and "contaminated runoff") at zero discharge in that area. This system is based on grate drains under the railroad tracks which captures the stormwater that falls in the immediate vicinity of the railroad. There are concrete stormwater barriers that prevent the stormwater from leaving this area. Spills in this area are, as is standard protocol, kept contained and cleaned up (along with any contacting "contaminated runoff") without discharge.[29] While it does not happen, even if a spill did escape this first concrete barrier catchment system, it would then encounter a berm

[29]If runoff carried spills into the Rio Puerco, it likely would be a reportable event under Part 110 since the threshold for harmful quantities of oil under Part 110 is so low. The Ciniza Refinery has had no such reportable events, which is consistent with the management of stormwater to avoid discharge of Part 419 effluents.

system designed to keep such a spill from entering the standard 122.26 "industrial stormwater" retention system. On November 10, 2005, there was some damage to that berm. Thus, the second level of protection was somewhat compromised and this created concern on the part of the inspector. Still, the first barrier system was still fully operational. It was just a problem with the second redundant barrier in this railcar area that concerned the inspector, which has since been fixed. Even if the first concrete barrier and the second berm barrier is compromised in the railcar area, the spill from the railcar area would then be caught in the 122.26 "industrial stormwater" retention system in this area. At that point, a valve would have to be opened at this additional concrete barrier system before the spill could reach the water of the United States associated with Outfall No. 2. Thus, the inspector's two fold concerns are unwarranted [First, his concern is that the stormwater in this area should be considered Part 419 stormwater, which is not correct. Second, his concern was that a spill would, with associated stormwater, get into a water of the U.S., which is not the case due to a three barrier system protecting this railcar area where spills may occur.] Giant is appropriately upset that the second barrier in this three barrier system was compromised at the time of the inspection, but that did not result in a discharge of spilled material or associated stormwater from the railcar area.

In the areas further away from the railcar facility where spills are far less likely, only the single retention system control is utilized, along with a strong spill response plan, to assure that no spills (or runoff contacting such spills) will be discharged when the valves for a 122.26 "industrial stormwater" discharge are opened. Petroleum materials are unlikely to be spilled in this area, and any spills that occurred would be cleaned up prior to any 122.26 discharge of "industrial stormwater."

On the date of the inspection (November 10, 2005), perhaps the inspector was concerned that one of the berms in an additional catchment/berming system in an area where chemicals are loaded into railcars had been damaged as a result of vehicle traffic. While unlikely that runoff will be contaminated by contact with such unloaded chemicals in this area (not a process area), the Ciniza Refinery has sought to maintain an additional berm system to keep railcar area stormwater redundantly contained here. Such a redundant system protects in the event a precipitation event happened to occur right at the time unloading was occurring and a spill occurred. (It is unlikely such unloading would occur during the rainstorm, as staff would probably wait until the rain stopped.)

At no time, however, did a spill or any runoff that contacted a spill from this railcar area reach a water of the U.S. Hypothetically, had any runoff contacted a spill that occurred before the spill was cleaned up and then that runoff escaped the redundant catchment because the berm had been damaged by vehicle traffic, that runoff would have been caught in the "industrial stormwater" retention system and, if contaminated, appropriately removed prior to any opening of any valves for discharge. Giant agrees that it is entirely appropriate to repair that first berm compromised by vehicle traffic; there was no discharge of Part 419 regulated effluent at any time while it was compromised due to the redundancy of catchment systems maintained for such occurrences at the Ciniza Refinery. We are chagrined that the redundant berm in the railcar area

was compromised, but it did not result in any improper discharge. Since that inspection date, the berm was repaired.

With respect to the LPG tank farm area referred to by the inspector, the majority of this area drains to a zero discharge depression (sometimes referred to as a grassy swale). There is no discharge to a water of the U.S. from this drainage, and as such, no potential for NPDES regulation. On the other hand, the inspector may have been duly concerned that a smaller portion of this LPG tank farm area does drain towards the area denominated as Outfall No. 2. The storm runoff in this area is not captured.

First, Giant notes that it has not had spills in this northern/eastern area of the tank farm that have contaminated runoff discharged to waters of the United States. No reportable spill events have occurred. Second, Giant appreciates the inspector's concern that such a spill could occur. As a result, Giant has, subsequent to the inspection, engineered and contracted for the construction of a bermed system for this area to keep stormwater from this northern/eastern portion zero discharge. This should be constructed shortly, thus eliminating the spill's potential for contaminating stormwater that would be discharged into a water of the United States. Thus, the Ciniza Refinery does not believe accidental spills and certainly no Part 419 effluents will be discharged towards Outfall No.2 from this northern/eastern LPG tank farm area.

In the second area of concern noted by the inspector, the concern is that the "area along the south side of the main process area (north of the office complex) appears to co-mingle with storm water runoff directed to storm water outfall No. 1." In response, the Ciniza Refinery notes that it is aware that risk of a spill or leak occurring in the Process Area is high, and thus its system directs storm water in this Process Area into the zero discharge WWTU retention system. Generally, any precipitation that falls in this area is captured by drop inlets (gravity flow) to a piping system below through which it then flows into the zero discharge WWTU retention system. While gravity flow directs the stormwater in the Process Area into these drop inlets, a redundant system of curbing also generally assures that such stormwater would not leave the area even if the drop inlets somehow were plugged or otherwise not adequately draining the stormwater in this Process Area.

In the extremely unlikely situation that a spill (or "contaminated runoff") escaped the catchment system that keeps the Process Area zero discharge, this Part 419 effluent would then be caught within the 122.26 retention system and be cleaned up before valves were opened to discharge.

On November 10, 2005, the inspector may have been concerned with broken curbing in part of the zero discharge system for this Process Area. There was no problem with the drop inlets, which were all functioning as intended to drain this Process Area. The Ciniza Refinery has never had a problem with the drop inlets being sufficiently sized to handle even the precipitation flow (of even the largest storms) from the Process Area, and thus any Part 419 "contaminated runoff" from the Process Area gravity flows into the zero discharge WWTU retention system.

Even had Part 419 effluents drained out through the compromised curbing (which definitely did not occur on November 10, 2005), the redundant protections for this Process Area prevent any discharge to waters of the United States. Redundant protections are helpful and permit the Ciniza Refinery to make repairs, such as the one needed for this curbing, in an orderly fashion. Such a repair has been appropriately scheduled after the problem was noticed. Giant is grateful to the inspector for pointing out this appropriate action to be taken.

It is important to remember, even though there was compromised curbing and repair is appropriate, there were no discharges of Part 419 effluents to "waters of the U.S." from the Process Area. (Even had such Part 419 effluents escaped through any compromise in the zero discharge system, they would have been caught and cleaned up prior to any opening of valves to discharge "industrial stormwater" to Outfall No. 1.)

The third area of concern raised by the inspector related to "the area along the north side of the facility where some of the drainage from a scrap yard (from which discharges are likely eligible) appears to co-mingle with drainage from an adjacent (to the east) tank farm and then directed to storm water outfall No. 2." First, this tank area does not drain to a stormwater outfall area. The drainage from this area is to a depression (sometimes referred to as a grassy swale) that has no discharge at all to waters of the United States. All water in this depression evaporates. Nevertheless, Giant has engineered additional berms to be constructed which, when constructed, will even prevent additional stormwater even from reaching the zero discharge grassy swale depression. Tanks with secondary containment with enough freeboard also keep precipitation that would contact a spill contained. Even if a spill or runoff contacting such a spill could escape the these catchment systems, it would be captured in zero discharge grassy swale depression without discharge to a water of the United States.

While the **Permit Status** section predominantly bases its "unsatisfactory" finding on the concern that Part 419 "contaminated runoff" is being discharged (which was not occurring), it also raises legitimate concerns with respect to the inclusion of the documentation supporting the Endangered Species and Historic Places determinations for MSGP eligibility. This information inadvertently was not included in the 4/12/05 SWPPP revision and has been updated and incorporated in the new SWPPP. A copy of the relevant document is attached hereto as Attachment One.

VI. Giant Appreciates the Suggestions for Improvement of Its Written SWPPP and Has, Where Appropriate, Incorporated Those Suggestions Into A Newly Revised SWPPP. With Respect to Some of the Comments, It Appears the Inspection Report Comments Seek Modifications at the Ciniza Refinery over and Above What is Required for MSGP 2000 Compliance. Where Those Comments Nevertheless Make Sense as A Good Practice, Giant Has Included Them in the SWPPP Revision.

The **Storm Water Pollution Prevention Plan (SWPPP)** portion of the Inspection Report had three subsections. The first rated the **"Pollution Prevention Team"** only "marginal" because Giant did not make Mr. Riege a member of this team; the second subsection rated the **"Description of Potential Pollutant Sources"** only "marginal" even though the inspector specifically stated in writing in this Inspection Report subsection that "[t]he plan does a very thorough job of pollutant and pollutant source identification"; and the third subsection rated the **"Description of Appropriate Measures and Controls"** as "unsatisfactory."

Each subsection, after its title and overall rating, then references in bold a specific provision of the MSGP and then states in italics a paragraph which appears to be the inspector guidance for conducting an EPA stormwater inspection for MSGP compliance for that provision of the MSGP. Thereafter, in each subsection of this Inspection Report are a series of observations and suggestions made by the inspector.

Giant appreciates the suggestions for improvement made, and has carefully considered and, where appropriate, incorporated all of the suggestions into the revised SWPPP prepared with the assistance of a stormwater consultant after the review of the Inspection Report.

With respect to the omission of Mr. Riege on the **"Pollution Prevention Team"** in the April 12, 2005 SWPPP, Part 4.2.1 of the MSGP mandates neither that the facility environmental superintendent be a formal member of the SWPPP team nor that an individual such as Mr. Riege may not involve himself on such pollution prevention matters without being formally listed as a member of the team. With all due respect to Mr. Riege, the SWPPP already includes several highly capable individuals on the Pollution Prevention Team, including the Team Leader, Steve Morris (Environmental Engineer), who has been at the Ciniza Refinery significantly longer than Mr. Riege and who is also highly competent in environmental issues and is an appropriate representative of the environmental staff at the facility for this Team, and a deep, varied and experienced set of additional members from the facility that complement the environmental team leader. As EPA noted when it first developed the 1995 MSGP,

> "When selecting members of the team, the plant manager should draw on the expertise of all relevant departments within the plant to ensure that all aspects of plant operations are considered when the plan is developed."

60 Fed. Reg. at 50815 (Sept. 29, 1995). In this case, the plant manager (Mr. Ed Rios) is also a member of the team, appointed a key member of the environmental staff to head the team. The team has then been rounded out with Mr. Stan Fisher (Operations Manager); Ted Gonzales (Maintenance Manager); John Laurent (Technical Services Manager); Tony Allen (Purchasing and Warehouse Manager), and Charley Arnold (Safety Manager). What each of these team members "brings to the table" is described in the SWPPP, and Giant therefore submits that this Pollution Prevention Team should be considered more than "marginal" in composition, simply because Mr. Riege is not a formal member. The Team is charged with the responsibility for the SWPPP, and it does regularly consult with and utilize Mr. Riege's services as well. Mr. Riege

has many other primary responsibilities, particularly air quality, but he does materially provide additional backup assistance to the Pollution Prevention Team.

Nothing in the regulations, the MSGP, or any preambles or other guidance indicates it is EPA's interpretation that a Pollution Prevention Team must include the Environmental Superintendent and not only an Environmental Engineer, nor does anything in the regulations, the MSGP or preambles or other guidance indicate there is anything improper about assistance on stormwater issues from an environmental superintendent if he (or she) is not listed on the Pollution Prevention Team. Typically, at complex facilities such as a refinery, many people not listed on the Pollution Prevention Team may undertake duties to help maintain stormwater compliance. This should be encouraged.

Out of respect for the inspector's regard for Mr. Riege and the inspector's apparent conclusion this will enhance stormwater compliance, and because Mr. Riege has agreed, Giant has added the Environmental Superintendent as a member of the Pollution Prevention Team in the SWPPP revision that has been prepared since the November 10, 2005 inspection.

The second subsection rated the **"Description of Potential Pollutant Sources"** only "marginal," even though the inspector specifically states in writing in the last sentence of the first paragraph of his observations in this subsection that "[t]he plan does a very thorough job of pollutant and pollutant source identification." That same first paragraph of observations does, however, criticize the site map in the April 12, 2005 SWPPP as being insufficiently accurate in terms of its depiction of drainage areas and structural controls.

The site map in the April 12, 2005 SWPPP may not have been to scale with respect to everything shown on the map, but it met the basic requirements of the EPA regulations and associated guidance. EPA did not intend that regulated entities hire consultants to prepare engineering scale drawings and elevation contour maps to depict drainage and controls in substantially greater detail than in the April 12, 2005 SWPPP for the Ciniza Refinery. In fact, when EPA first developed the general permit requirement to require identification of pollutant sources, EPA responded to criticism that this was a costly new requirement in a manner clearly indicating it did not expect a facility to have to hire expensive consulting engineers for this portion of the SWPPP:

> "The second component of the plan, **description of pollutant sources**, is achievable because it **is based on the information that should generally either be readily available** from the normal business practices at the facility (e.g. materials inventories) or **from standard evaluations or observations**."

57 Fed. Reg. at 41265 (Sept. 9, 1992). In fact, in 1992, EPA contemporaneously issued a guidance document it still utilizes today entitled "**Storm Water Management for Industrial Activities:** Developing Pollution Prevention Plans and Best Management Practices," (EPA 832-R-006; Sept. 1992), which includes illustrative figures (Figure 2.3 "Example Site Map" at page

facilities like the Ciniza Refinery on the level of detail required in the maps.[30] A comparison of EPA's illustration of what is an adequate site map with drainage and controls to the April 12, 2005 Ciniza Refinery SWPPP map shows that Giant's map has substantially more detail than the representative EPA template.[31]

Nevertheless, Giant did retain, after the inspection, an outside engineering and consulting firm to prepare, at substantial expense, a far more detailed map that not only meets the regulatory requirements (as did the old map), but includes all the additional details mentioned in the Inspection Report. Copies of those new maps are included with the SWPPP as Attachment 1.

Giant did conduct some monitoring which the inspector now claims should trigger various obligations under the MSGP, including a rewrite of the SWPPP and (in his opinion) the following:

> "These elevated analytical results (as well as the results of the quarterly visual examinations) must be taken into consideration during the facility's 'Comprehensive Site Compliance Evaluation.' **These results must be used**, in part, to determine required amendments to the SWPPP **to incorporate additional structural and non-structural controls as appropriate to eliminate or significantly minimize pollutants in storm water discharges so that these pollutant levels are reduced to below cut-off concentrations**." (Bold emphasis added.)

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[30]This 1992 guidance is still the current EPA guidance and can be found at the EPA stormwater current guidance publications webpage at the following location on the Internet : http://cfpub.epa.gov/npdes/docs.cfm?document_type_id=1&view=Policy%20and%20Guidance%20Documents&program_id=6&sort=name.

[31] "EPA expects that many facilities will have existing site maps indicating the major features of the facility or will be able to develop such maps based on site inspections. Plant managers or other employees should be readily able to develop descriptions of potential pollutant sources and use best professional judgement in evaluating the pollution potential of various activities. A prediction of the direction of flow can be based on site topography and simple observations of drainage patterns." 57 Fed. Reg. at 41271 (Sept. 9, 1992).

water discharges so that these pollutant levels are reduced to below cut-off concentrations." (Bold emphasis added.)

According to this inspector, if a facility does monitoring, and they happen to exceed cutoff benchmark monitoring concentrations specified for some other sector, that then triggers a duty on the part of the industry sector doing such monitoring to make structural and non-structural changes to its facility **until it can now meet benchmark monitoring cutoff concentrations.**

This use of benchmark monitoring cutoffs to mandate additional controls is not what EPA intended:

> "**The benchmark concentrations are not effluent limitations and should not be interpreted or adopted as such. These values are merely levels** which EPA has used **to determine if a storm water discharge** from any given facility **merits further monitoring** to insure that the facility has been successful in implementing a storm water pollution prevention plan."

60 Fed. Reg. at 50895 (Sept. 29, 1995).

Nevertheless, Giant appreciates the suggestions of the inspector that it take a close look at what additional steps it can take to reduce pollutant loading in those infrequent occasions that a 122.26 stormwater discharge actually occurs. A number of additional berming projects have been authorized to further segregate industrial activities from potential discharge and the 122.26 retention basins and the SWPPP rewrite has also included a variety of additional changes consistent with further pollution prevention.

The Inspection Report also notes that the location noted on the map as Outfall 2 is actually below the point where the valves from the "industrial stormwater" retention basin discharge into the drainage that runs across the Ciniza Refinery, carrying ephemeral flows across the Giant property. Visual examination of the stormwater always occurs at the valves, and the new maps show the actual outfall at this location. Outfall No.1 is appropriately located at the valved discharge location.

Giant visually monitors at each valved location before these stormwater valves are opened. Were oil present and visible, its spill response would be triggered and reporting requirements likely would apply if the valves were opened at that time. The inspector correctly pointed out that Giant was not keeping records of its visual inspections (which are quarterly required, although many quarters are zero discharge for "industrial stormwater") and has now changed its protocol to assure such records are being appropriately kept.

The third subsection on the Inspection Report's discussion of the **"Stormwater Pollution Prevention Plan (SWPPP)"** rated the **"Description of Appropriate Measures and Controls"** as "unsatisfactory." There are three problems listed in this subsection:

1) "Some of the BMPs are overly generic (e.g., "maintain in a clean and orderly work environment)."

2) "In addition, . . . the SWPPP does not include a record of regular inspections and preventive maintenance of these storm water management controls. Part 6.I.4.3.1 of the MSGP 2000 requires facility inspections at a minimum of 6-month intervals and at least quarterly inspections of equipment and vehicles that store, mix or transport chemicals/hazardous materials. It appears that these inspections are not conducted or are, at least, not recorded.

Routine facility storm water inspections must be recorded. . . ."

3) "Although the SWPPP includes a "Non-Storm Water Discharge Assessment Certification" that lists cooling tower mist as a source of non-storm water discharge, there is no description of results of tests/evaluations, evaluation criteria or testing methods used, dates of any testing and/or evaluation, or any other information upon which the certification decision could be based."

First, the rewritten SWPPP has incorporated lengthier SWPPP discussions of so-called generic provisions. Second, EPA has stated:

> "[T]oday's permits also require inspections of designated equipment and areas of the facility. This requirement recognizes that periodic routine inspections of certain equipment or areas of the facility are appropriate pollution prevention measures. The Agency has included this provision of the permit separately to ensure that facilities conduct more frequent inspections of certain activities (e.g., leak detection measures for specified equipment or daily or weekly walkthroughs to ensure good housekeeping) without the burdens of a more intensive comprehensive site evaluation."[32]

57 Fed. Reg. at 42174-75 (Sept. 9, 1992). EPA was concerned that facilities do regular checks to see if materials might have leaked or otherwise become exposed to stormwater.

The 4/12/05 SWPPP includes an inspection procedure as a Best Management Practice No. 3 that fully meets what EPA was seeking, as process areas, tank farms and loading facilities are inspected each shift and other areas are inspected daily with leaks or spills immediately reported to the Shift Supervisor. Once a month, stormwater control facilities are inspected.

The Inspection Report notes that the results of such inspections are not included in the

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[32]While a good practice, the agency did not mandate that these individuals who conduct either comprehensive site compliance evaluations or more routine inspections be members of the pollution prevention team. EPA merely stated that generally these personnel should be members, but did not make it a requirement. 57 Fed. Reg. at 41275 (Sept. 9, 1992).

SWPPP. The inclusion of inspection reports in addressed in the new SWPPP.

With respect to the inspector's concern that cooling water mist be evaluated for harmful chemicals, the SWPPP does reference the determination to eliminate the chromate-causing chemicals from cooling water treatment as they were determined to be harmful. No new water treatment chemicals are allowed unless approved by environmental staff, who make that determination taking into account the potential water quality standards issues referenced in 4.4.2.3.

VII. With Respect to the Annual Site Compliance Evaluation Reports, Giant Appreciates The General Comment in the Inspection Report That "These Annual Evaluations Appear Very Thorough." With Respect to Comments Suggesting Improvements to Be Made, Giant Has Carefully Evaluated Each Such Comment and, Where Appropriate, Has Made Improvements.

The fourth and final section of the Inspection Report states as follows:

> **"Annual Site Compliance Evaluation Reports:** Overall rating of 'Unsatisfactory.'
>
> **Part 4.9 of the permit states, in part, 'You must conduct facility inspections at least once a year. The inspections must be done by qualified personnel provided by you."**

There are three complaints noted in the Inspection Report with respect to the **Annual Site Compliance Evaluation Reports** that apparently underlie the "unsatisfactory" finding:

1) The "apparent failure to incorporate changes dictated by the above-mentioned analytical sampling data;"

2) "[T]he staff conducting the evaluations apparently failed to observe, document, and properly address the areas that appear to produce discharges of 'contaminated runoff' from this facility;" and

3) "In addition, reports of these evaluations have not been signed and certified by a cognizant official or authorized representative per requirements in Parts 4.9.4 and 9.7.1 of the MSGP."

The first complaint was addressed in the preceding section. The benchmark monitoring cut off concentrations for other industry sectors are not effluent limitations on stormwater discharges for the Ciniza Refinery, and EPA expressly did not even include these concentrations as even enough to trigger monitoring in Sector I in the 2000 MSGP. This facility rarely

discharges, and it does not contribute to violations of water quality standards in the receiving streams. To now argue that these benchmark cutoff concentrations now become effluent limits that mandate additional stormwater control installation through the Annual Site Compliance Evaluation is overreaching.

On the other hand, as previously noted, Giant nevertheless took all of the inspector's suggestions into account in its latest SWPPP revision, providing the entire report to its consultant, and as a result Giant has designed, engineered and/or implemented additional controls.

The second complaint has also been addressed previously. The issue of Part 419 runoff has been carefully considered throughout the history of the Ciniza Refinery, and the contention that Part 419 effluent is being discharged (and therefore that this should have been rectified in the Annual Site Evaluation) is based on a misunderstanding of the regulations.

The third complaint is that the report was not signed and certified by an appropriate official. The report was signed by General Manager Ed Rios on December 22, 2004.