

**AP - 001**

**ANNUAL  
MONITORING REPORT**

**YEAR(S):**

**2002**



**2002 ANNUAL GROUNDWATER MONITORING REPORT**

**FORMER BRICKLAND REFINERY SITE  
SUNLAND PARK, NEW MEXICO**

**TERRACON PROJECT NO. 68997611  
February 2003**

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**ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION**

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***Prepared by:***

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## 1.0 EXECUTIVE SUMMARY

This 2002 Annual Groundwater Monitoring Report documents the results of two semi-annual groundwater monitoring operations conducted by Terracon at the former Brickland Refinery site in Sunland Park, New Mexico. The semi-annual groundwater monitoring operations were conducted in June and December 2002. The report also contains summaries of the historical groundwater elevations and analytical data for the past five years. In addition, the report includes a summary of the free product recovery system. This monitoring and sampling program was conducted in accordance with the Groundwater Monitoring Plan included in Section 3.5 of the Stage 2 Abatement Plan as approved by Mr. Bill Olson of the New Mexico Oil Conservation Division (NMOCD) in his letter dated December 17, 1998.

Conclusions relevant to groundwater conditions and the remediation performance at the old Brickland Refinery are presented below.

- Results of the June 2002 sampling event indicate that benzene concentrations exceeded New Mexico Water Quality Control Commission (NMWQCC) standards in three monitoring wells; MW-4 (100 µg/L), MW-6S (48 µg/L), and MW-14 (11 µg/L). Benzene concentrations in the remaining six wells were below laboratory detection levels. Toluene, ethylbenzene, and xylenes were also detected in the sample MW-6S, but the concentrations were significantly below NMWQCC Standards (see Table 3).
- Results of the December 2002 sampling event indicate that neither benzene, toluene, ethylbenzene, nor xylene was detected in any of the samples collected.
- Polynuclear aromatic hydrocarbons (PAH) levels were below laboratory detection limits in the samples collected from the monitoring wells and the river during the June 2002 sampling event (see Table 4).
- The results for the analyses of the priority pollutant metals for the June 2002 monitoring event indicate that concentrations of boron detected in eight of the eleven samples (MW-7 and the two river samples are excluded) exceeded the NMWQCC levels. Iron levels exceeded NMWQCC standards in nine of the eleven collected from the wells and the river (MW-6S and the upstream river samples were below laboratory detection limits). Manganese exceeded NMWQCC standards in the samples with the exception of the upstream river sample. Selenium concentrations were in exceedence of NMWQCC standards in monitoring wells MW-6S, and MW-7. Minor concentrations of other listed metals were detected but were below NMWQCC standards. Lead was not detected in the eleven samples (see Table 5).

- Free-phase product was not detected in any of the monitoring wells during the June or December 2002 monitoring events. However, one well point (WP-26S) had a free-phase product thickness of 1.80 feet in June 2002, and two well points, WP-26S and WP-27D had measurable thickness of 0.13 feet and 0.46 foot, respectively during the December 2002. Free-phase product levels in well points WP-26S and WP-27D are consistent with prior years' results for December (see Table 6).
- Since the installation of the Xitech product recovery system in December 1998, a total of approximately 90 gallons of free-phase product and water have been removed from recovery well MW-10.

## **2.0 INTRODUCTION**

### **2.1 Background**

The Brickland Refinery Site is located in Sunland Park, New Mexico and herein known as the site. The site consists of approximately 33 acres situated along the west bank of the Rio Grande (see Figure 1). From 1933 to 1958, the site was operated as a petroleum refinery and was producing both gasoline and jet fuel. Huntsman (formerly Rexene Corporation) currently owns the site, which was closed and the plant dismantled in 1958. Between 1964 and 1989, the site was leased to various parties to service trucks, conduct automobile salvage operations, graze livestock and store used bricks.

Petroleum hydrocarbons from the operations of the facility have been detected in soil and groundwater at the site. The nature and extent of the petroleum hydrocarbons were initially investigated by Eder and further quantified by GCL and BDM. These investigations provided the basis for the Stage 2 Abatement Plan. The Stage 2 Abatement Plan provides the methods for abating contamination of groundwater and soil in compliance with New Mexico Water Quality Control Commission (WQCC) regulations on prevention and abatement of water pollution (20NMAC 6.2, Subpart IV), and New Mexico Oil Conservation Division requirements to protect public health and the environment with respect to wastes from the refinement of crude oil (§70-2-12.B(22) NMSA 1978).

As part of the Stage 2 Abatement Plan Terracon has maintained a stand-alone free-phase product recovery system on the site. The system was installed in December 1998 and site visits are now being made approximately every four weeks for maintenance of the system and general observation of the site. The site layout and monitoring well and sampling locations are shown on Figure 2.

### **2.2 Scope of Services**

Terracon performed groundwater monitoring at the subject site on a semi-annual basis in June and December 2002. The proposed monitoring program was conducted in accordance with the Groundwater Monitoring Plan and Stage 2 Abatement Plan as approved by Mr. Bill Olsen of the New Mexico Oil Conservation Division (NMOCD) in his letter dated December 23, 1998. The following scope of services was performed for the semi-annual monitoring events as required by the Groundwater Monitoring Plan and Stage 2 Abatement Plan. Tasks were conducted in general accordance with applicable NMOCD, New Mexico Environment Department (NMED) and Environmental Protection Agency (EPA) regulations, procedures and guidelines.

The semi-annual monitoring included the following items as required by the Groundwater Monitoring Plan and Stage 2 Abatement Plan as approved by the NMOCD.

- Measured depth to groundwater for the ten on-site monitoring wells and eight off-site monitoring wells. The water level is measured but not reported for the fourteen well points since the well points are designed only for the purpose of detecting the presence of free-phase product at the measured depths.
- Measured free-phase product thickness in the eighteen monitoring wells and fourteen well points, and provide a summary of the free-phase recovery system performance.
- Submitted groundwater samples collected from nine (9) monitoring wells in June and December 2002 (MW-3S, MW-3D, MW-4, MW-6S, MW-6D, MW-7, MW-9S, MW-14, and MW-15), and the five (5) offsite wells in December (MW-9S, MW-6D, MW-6S, MW-3D, and MW-3S for laboratory analytical testing. Analytical testing for the June monitoring event included benzene, toluene, ethlybenzene and total xylenes (BTEX), PAH, and nineteen priority pollutant metals. Samples were analyzed for BTEX for the December monitoring event.
- Submitted two water samples collected from the Rio Grande during each semi-annual sampling event for laboratory analytical testing. One sample was collected from the upstream end of the site north of MW-1 and the other sample collected from the downstream end of the site south of MW-9S.
- Coordinated Waste Disposal with Rhino Environmental Services of El Paso, Texas.
- Prepared Daily Field Reports for monthly site visits.
- Prepared this Annual Groundwater Monitoring Report which includes the following elements required by the approved Groundwater Monitoring Plan and Stage 2 Abatement Plan.
  1. A description of the monitoring activities that occurred during the year, with corresponding conclusions and recommendations.
  2. Summary tables of the past and present laboratory analytical results of groundwater and surface water sampling.
  3. Plots of concentrations versus time for contaminants of concern for the groundwater monitoring wells MW-3S, MW-3D, MW-4, MW-6S, MW-6D, MW-7, MW-9S, MW-14 and MW-15.

4. Copies of laboratory analytical reports for the sampling activities conducted at the site during the past year.
5. Plots of water table elevation versus time for the groundwater monitoring wells.
6. Groundwater surface contour maps for the two 2002 semi-annual monitoring events based on groundwater elevations obtained from the monitoring wells.
7. BTEX concentration maps for the two 2002 semi-annual monitoring events.
8. Free-phase hydrocarbon thickness maps for the two 2002 semi-annual monitoring events.

### 3.0 GROUNDWATER ELEVATION, HYDRAULIC GRADIENT AND FLOW DIRECTION

The hydraulic gradient beneath the former Brickland Refinery is relatively level. The hydraulic gradient in June 2002 was approximately 0.0018 foot per foot and groundwater flow direction is estimated to be S 12° E. The hydraulic gradient in December 2002 was almost identical to June; however the flow direction was approximately S 24° E.

Historical groundwater elevations for the monitoring wells are provided in Table 1. Water levels are not listed for the well points because the well points were specifically designed to detect free-phase product at discrete depth and the screen intervals do not correlate with the monitoring well screens. Groundwater elevation contour maps for the June 2002 and December 2002 monitoring events are depicted in Figures 3a and 3b, respectively.

Groundwater levels in the monitoring wells are influenced by the stage of the Rio Grande bordering the site. Due to seasonal fluctuations in the river, water levels in the monitoring wells may vary as much as 2 feet over the course of a year. Groundwater elevations in June 2002 correlate well with the higher levels measured during the summer months of previous years. Similarly, the groundwater elevations in December 2002 correlate well with the lower levels measured during the winter months of previous years.

Gage heights for the gage station located on the Rio Grande (near the Courchesne Bridge in west El Paso) in close proximity to the site were obtained from the International Boundary and Water Commission (IBWC). A graphical plot of gage heights versus time (1993 to present) demonstrates that during the summer months the Rio Grande is usually at its highest stage which correlates with the higher groundwater elevations measured during the same periods. The graphical plot of gage heights versus time is presented on Figure 3c included in Appendix A.

## 4.0 FREE-PHASE PRODUCT REMOVAL

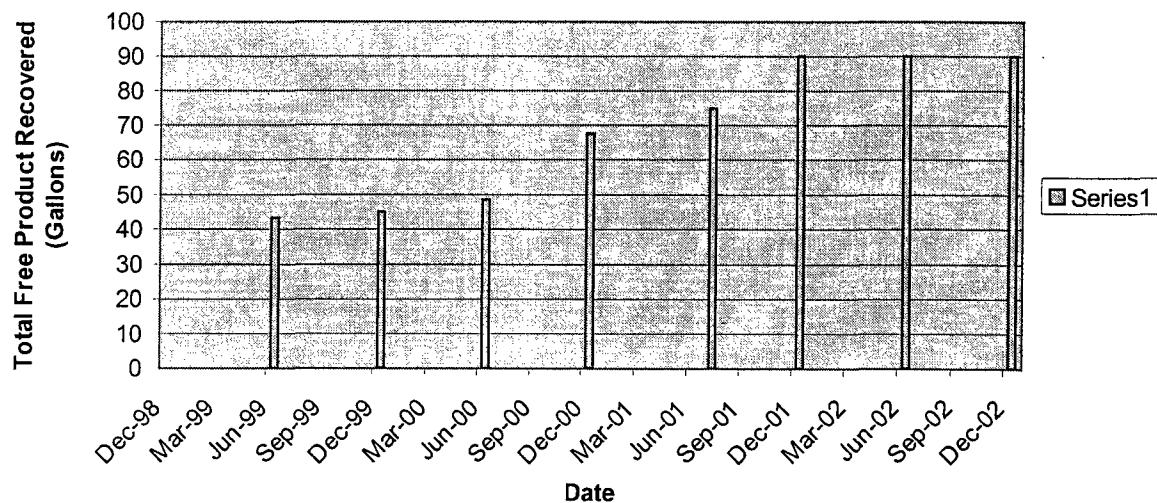
### 4.1 Free-Phase Product Thickness

Free-phase product thickness in each monitoring well and well point was measured with a KECK oil/water interface meter. The June and December 2002 and historical product thickness measurements for each monitoring point are listed in Table 6. Free-Phase Hydrocarbon Thickness maps for the June and December 2002 monitoring events are depicted in Figures 6a and 6b, respectively. Monitoring points with measurable thicknesses of free-phase product during the June and December 2002 monitoring events are summarized below. Recovery well MW-10 has not contained any measurable accumulation of free-phase product since the 2000 sampling event. Both monitor well and well point (WP) measurements are consistent with prior assessments.

### 4.2 Removal and Off-Site Destruction of Free-Phase Product and Contaminated Groundwater

As of December 14, 2002, a total of approximately 90 gallons of free-phase product had been removed from recovery well MW-10 (see chart below). None of this amount was removed during the year 2002.

Free Product Recovery



Additionally, a total of 324 gallons and 149 gallons of water were purged from the sampled monitoring wells during the June and December 2002 monitoring events, respectively.

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Former Brickland Refinery Site  
Sunland Park, New Mexico  
Terracon Project No.: 68997611**

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Terracon coordinated and subcontracted with Rhino for the off-site destruction of the contaminated groundwater. The purged groundwater of each monitoring event was stored in a 325-gallon polyethylene tank by Terracon field personnel. The tank was transported from the site to Rhino for off-site destruction of the contaminated groundwater. No free-phase product from recovery well MW-10 was disposed in 2002. At the time of this report, the free-phase product tank was less than one-half full, therefore off-site destruction has not been initiated.

## 5.0 SAMPLE COLLECTION AND LABORATORY ANALYTICAL TESTING PROCEDURES

The ten on-site monitoring wells and eight off-site monitoring wells were checked for the presence of free-phase product using a KECK oil/water interface meter. Generally, if any detectable free-phase product was found in the wells, the thickness was measured and no sample would be collected from that well; however, no free-phase product was found in the wells to be sampled. The static water surface elevation in each well was measured and recorded for the wells that did not have detectable free-phase product. The static water surface elevations for the two monitoring periods are shown in Table 2.

Nine monitoring wells (MW-3S, MW-3D, MW-4, MW-6S, MW-6D, MW-7, MW-9S, MW-14, and MW-15) were sampled in the June 2002 sampling event to monitor the potential exposure pathway for contaminants of concern to reach the Rio Grande River. In general, the nine wells were sampled by removing approximately three (3) well casing volumes of water from each well, using a submersible mini-purger pump with silicon tubing. During purging, the water quality characteristics of temperature, pH and specific conductivity were measured using a Hydac Model 910 pH/temperature/conductivity meter to confirm that these three characteristics had stabilized before the samples were collected. The mini-purger pump was decontaminated between wells by pumping an Alconox-water mixture through the system, then rinsing/pumping clean water through the system twice. Monitoring wells MW-3S and MW-6S were purged dry in the June 2002 monitoring event. Only five wells (MW-3S, MW-3D, MW-6S, MW-6D and MW-9S) were sampled in the December monitoring event. Monitoring wells MW-6S and MW-3S were again purged dry in the December 2002 event. Of the estimated three well casing volumes of twenty gallons total, only seventeen and nine gallons were able to be purged from MW-3S during the June and December 2002 monitoring events, respectively. Of the estimated nineteen gallons that was to be purged from MW-6S, only twelve gallons and seven gallons could be purged during the June and December 2002. The Groundwater Sampling Data Sheets are provided in the Appendix C.

A total of 325 gallons and 149 gallons of water were purged from the sampled monitoring wells during the June and December 2002 monitoring events, respectively. The purged water was disposed of by Rhino Environmental Services of El Paso, Texas, a licensed waste disposal contractor. A disposal manifest is enclosed in the Appendix D.

Groundwater samples were collected from each well after purging. A duplicate sample of MW-4 was collected during the June monitoring event. For the December 2002 event the duplicate sample was collected from MW-6S. One set of samples was collected in air-tight, septum-sealed, 40-ml glass VOA sample vials with zero head space and preserved with hydrochloric acid (HCl) and refrigeration. These samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8021.

During the June 2002 sampling event, a second set of water samples was collected from each sampled well in one-liter amber-colored bottles for analysis for polynuclear aromatic hydrocarbons (PAH) using EPA Method 8270C/625. A third set of water samples was collected in 500 ml bottles containing nitric acid ( $\text{HNO}_3$ ) as preservative for analysis for priority pollutant metals using appropriate EPA Methods.

The water samples were placed in an ice-filled cooler immediately after collection and shipped to NEL in Las Vegas, Nevada for laboratory analysis. Chain-of-custody (C-O-C) forms, documenting sample identification numbers; the required analysis for each sample; collection times; and delivery times to the laboratories, were completed for each set of samples. A summary of the purging, volume purged from each well, and sampling methods is provided in Table 1. The laboratory results of the analyses of the water samples and C-O-C forms are provided in Appendix C.

## 6.0 GROUNDWATER ANALYTICAL TEST RESULTS

### 6.1 Benzene, Toluene, Ethlybenzene and Total Xylenes (BTEX)

A historical listing of BTEX concentrations for five offsite monitoring wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S) and four on-site monitoring wells (MW-4, MW-7, MW14, and MW-15) is summarized in Table 3. This table lists BTEX concentrations for the period from December 1998 to December 2002. BTEX concentrations for sampling events prior to December 1998 are included in previously submitted reports.

#### 6.1.1 Analyses

Laboratory results from the June 2002 sampling event indicate that benzene concentrations were above NMWQCC standards in three wells, MW-4 (100 µg/L), MW-6S (48 µg/L), and MW-14 (11 µg/L). Benzene was not detected in the other wells. Trace concentrations of toluene, ethylbenzene and xylenes were detected in MW-6S. No hydrocarbon pollutant was detected in the other wells.

Laboratory results for the December 2002 sampling event indicate that no hydrocarbon was detected in the samples collected.

Hydrocarbon concentration maps displaying the benzene concentrations for the two 2002 sampling events are presented in Figure 4a (June 28, 2002) and Figure 4b (December 6, 2002). The relationship between benzene concentrations and static water level for MW-3S, MW-3D, MW-4, MW-6S, MW-6D, MW-7, MW-9S, MW-14, and MW-15 are depicted in Figures 5a through 5i, respectively. The laboratory reports and Chain of Custody (COC) documentation are included in Appendix C.

#### 6.1.2 Comparison to Prior Data

In general, of the five off-site wells located on the eastern perimeter of the site (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S), MW-6S continues to exhibit BTEX concentration levels above the NMWQCC standards. This exceedence however, appears to occur only in the summer months, and for the June 2002 semi-annual monitoring event MW-6S exhibited benzene concentrations above NMWQCC standards. MW-6S also had detectable concentrations of toluene, ethylbenzene and xylene, but these concentrations were well below NMWQCC standards.

The BTEX results from the four on-site wells (MW-4, MW-7, MW-14, and MW-15) indicate a decline in benzene and hydrocarbon concentration on the site over previous years' investigations. MW-4 and MW-14 were the only on-site wells that exhibited a benzene concentration above NMWQCC standards in the two 2002 monitoring events. The other analytes were either below laboratory detection limits or below NMWQCC standards.

## 6.2 Polynuclear Aromatic Hydrocarbons (PAHs)

Historical analytical results for PAHs for five offsite monitoring wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S) and four on-site monitoring wells (MW-4, MW-7, MW14, and MW-15) indicate that no PAH has been detected since 1999. Based on the results of the PAH analyses in the June 2002 monitoring event, it appears that groundwater under the site has not been adversely impacted by PAHs. Nor has the surface water in close proximity to the site been impacted by PAHs. As a result, no PAH concentration map was constructed. The results of PAH for the past five years are listed in Table 4. PAH concentrations for sampling events prior to December 1998 are included in previously submitted reports.

## 6.3 Priority Pollutant Metals

Historical (1998 through 2002) groundwater and surface water (Rio Grande) sample analytical results, for Priority Pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) are presented in Table 5. Seven metals (aluminum, barium, boron, cobalt, iron, manganese, and molybdenum) were added to the list in 2001, since they are regulated metals under NMOCD. The NMWQCC standards are also listed in the tables for comparison. Constituents with concentrations above the NMWQCC standards in 2002 are highlighted in boldface type. Analytical results for years prior to 1998 are included in previously submitted reports. The results of the analyses for metals for the 2002 semi-annual monitoring event indicate that boron concentrations exceeded NMWQCC standards in the water samples except the sample collected from MW-7 and the two river samples (both upstream and downstream). Iron concentrations exceeded NMWQCC standards in the samples except MW-6S (borderline reading at 1.00 mg/L) and the upstream river sample. Additionally, manganese levels exceeded NMWQCC standards in the samples except the upstream river sample. Selenium exceeded NMWQCC standards in monitoring wells MW-6S and MW-7. Minor concentrations of some of the other listed metals were detected, but were below NMWQCC standards.

## 7.0 REMEDIATION SYSTEM PERFORMANCE

A product recovery system was installed at recovery well MW-10 as recommended in the approved Stage 2 Abatement Plan. Installation of the Xitech product recovery system was completed on December 23, 1998. The product recovery system was installed due to the presence of free-phase product, concentrated near the south portion of the site. The product recovery system consists of the following components:

1. Xitech Model ADJ 1000 Smart Skimmer with polyethylene tubing.
2. Xitech Model 2500 ES Electronic Timer powered by a 12-volt battery with solar panel.
3. 80-gallon fiberglass-reinforced plastic (FRP) tank for product recovery containment with automatic shutoff sensor.
4. One K-size (220 cubic feet) bottle of nitrogen gas with regulator to supply.
5. The components listed above are mounted on a metal stand.
6. The components listed above are contained within a 300-gallon capacity corrugated galvanized steel stock tank for secondary containment.
7. The Xitech recovery system and monitoring well MW-10 are enclosed within a 10-foot long by 10-foot wide by 8-foot tall chainlink fence. The top foot of the fence has 3 strands of barbed wire. Access is provided through a 5-foot wide locked gate.
8. The components listed above are situated on a 6-inch layer of gravel.

A schematic drawing and specifications of the installed Xitech product recovery system is provided in Appendix D. The system does not contain any below-grade lines; therefore no pressurized integrity testing is required. Site visits are now conducted at approximately monthly intervals to monitor system performance, adjust pump cycle if deemed appropriate, replace the bottled nitrogen supply when necessary, perform maintenance to system components, and to check for any vandalism.

## 8.0 CONCLUSIONS

Conclusions relevant to groundwater conditions and the remediation performance at the Brickland Refinery are presented below.

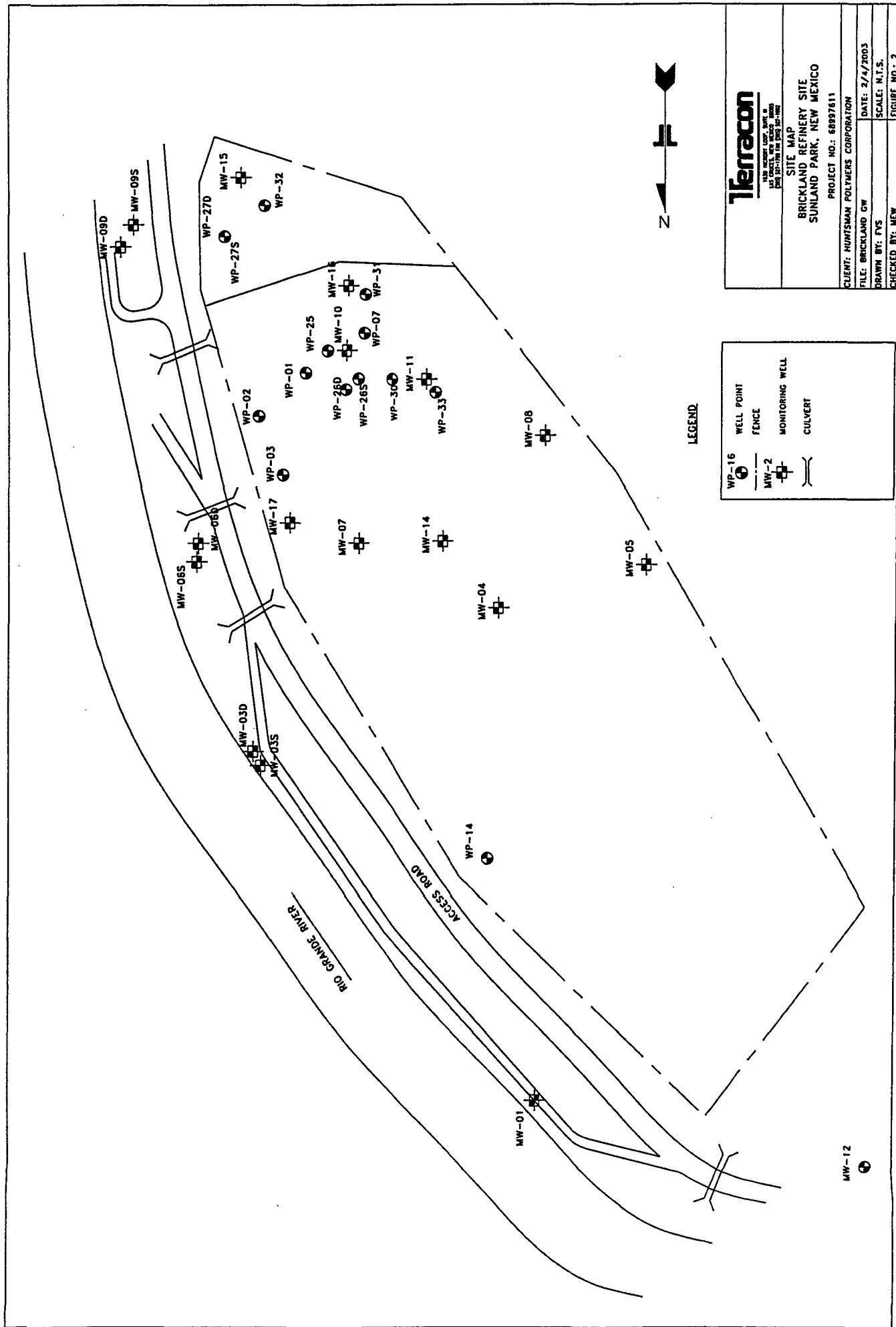
- Results of the June sampling event indicate that benzene concentrations exceeded New Mexico Water Quality Control Commission (NMWQCC) standards in three monitoring wells; MW-4 (100 µg/L), MW-6S (48 µg/L), and MW-14 (11 µg/L). Benzene concentrations in the remaining six wells were below laboratory detection levels. Toluene, ethylbenzene, and xylenes were also detected in the sample MW-6S, but the concentrations were significantly below NMWQCC Standards (see Table 3).
- Results of the December sampling event indicate that neither benzene, toluene, ethylbenzene, nor xylene was detected in any of the samples collected.
- Polynuclear aromatic hydrocarbons (PAH) levels were below laboratory detection limits in the samples collected from the monitoring wells and the river during the June sampling event (see Table 4).
- The results for the analyses of the priority pollutant metals for the June 2002 monitoring event indicate that detected concentrations of boron in eight of the eleven samples (MW-7 and the two river samples are excluded) exceeded the NMWQCC levels. Iron levels exceeded NMWQCC standards in nine of the eleven collected from the wells and the river (MW-6S and the upstream river samples were non-detect). Manganese exceeded NMWQCC standards in all samples except the upstream river sample. Selenium exceeded NMWQCC standards in monitoring wells MW-6S, and MW-7. Minor concentrations of a few of the other listed metals were detected but were below NMWQCC standards. Lead was not detected in any of the eleven samples (see Table 5).
- Free-phase product was not detected in any of the monitoring wells during the June 2002 or December 2002 monitoring event. However, one well point (WP-26S) had a free-phase product thickness of 1.80 feet in June 2002. Product thickness was measurable in two well points, WP-26S (0.13 feet) and WP-27D (0.46 foot) during the December 2002 monitoring event. Free-phase product levels in these two well points are consistent with prior years' results at similar sampling times (see Table 6).
- Since the installation of the Xitech product recovery system in December 1998, a total of approximately 90 gallons of free-phase product and water have been removed from recovery well MW-10.

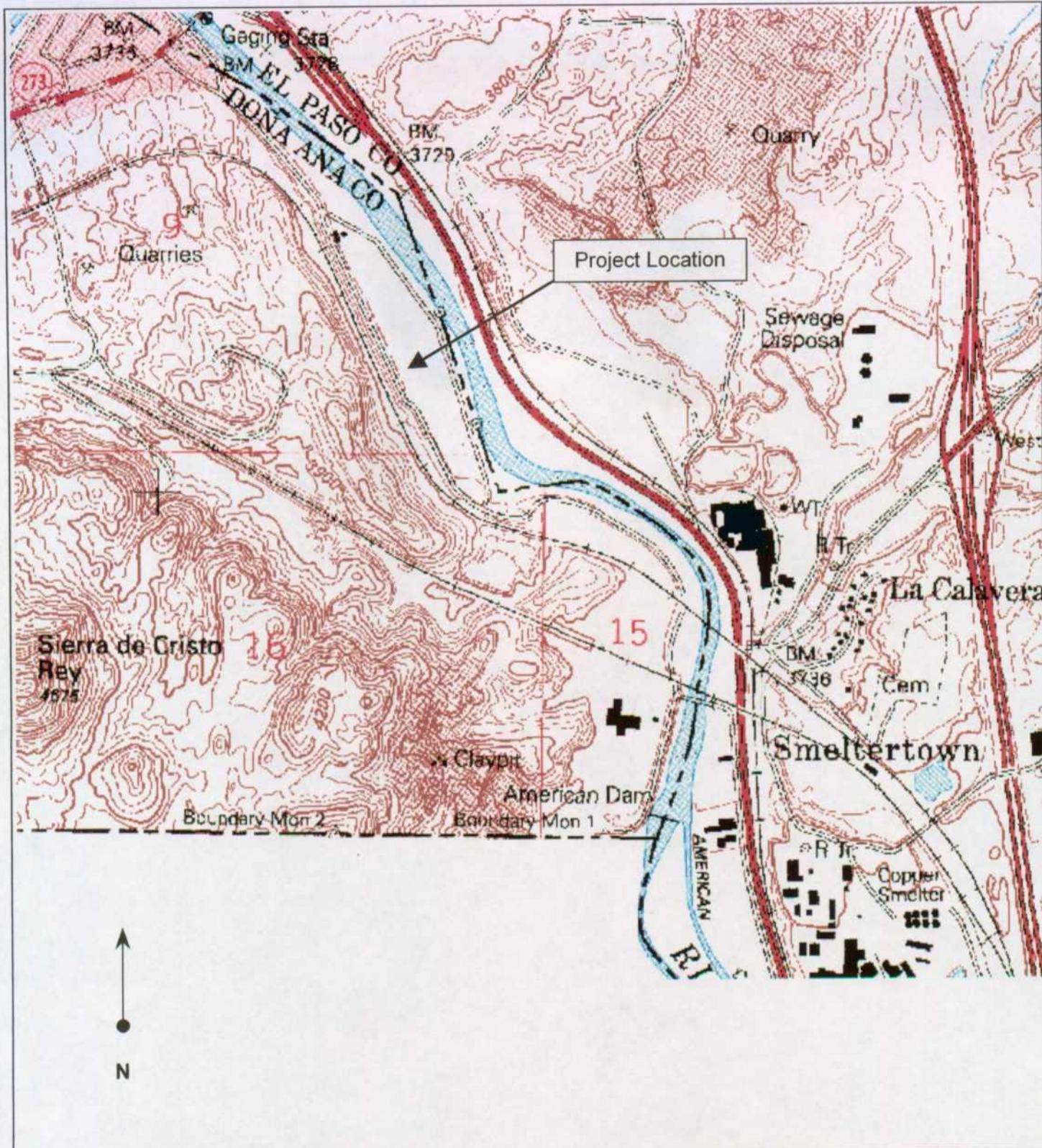
## 9.0 RECOMMENDATIONS

The following recommendations are proposed for the remediation system and monitoring operations at the Brickland Refinery.

- Continue free product recovery operations since the present system has been effective in recovering free product from MW-10.
- Continue with the existing sampling and monitoring program on a semi-annual basis. The next sampling event is scheduled for June 2003. Check recovery well, MW-10 for at least one more year to assess if free-phase product is present.
- Since the groundwater does not appear to be adversely impacted by PAH, as evidenced throughout eight years of monitoring, analysis of PAH may be an unnecessary expense.
- Well points that are dry or have never contained measurable or trace amounts of free-phase product could be removed from the monitoring plan. These well points include the following: WP-3, WP-30, WP-31, and WP-32. The other well points should be maintained for semi-annual monitoring.

**APPENDIX A: FIGURES**





SOURCE: USGS TOPOGRAPHIC MAP, 7.5-MINUTE SERIES,  
"Smelertown, New Mexico, 1973".

**Terracon**

1630 Hickory Loop, Suite H  
Las Cruces, New Mexico 88005  
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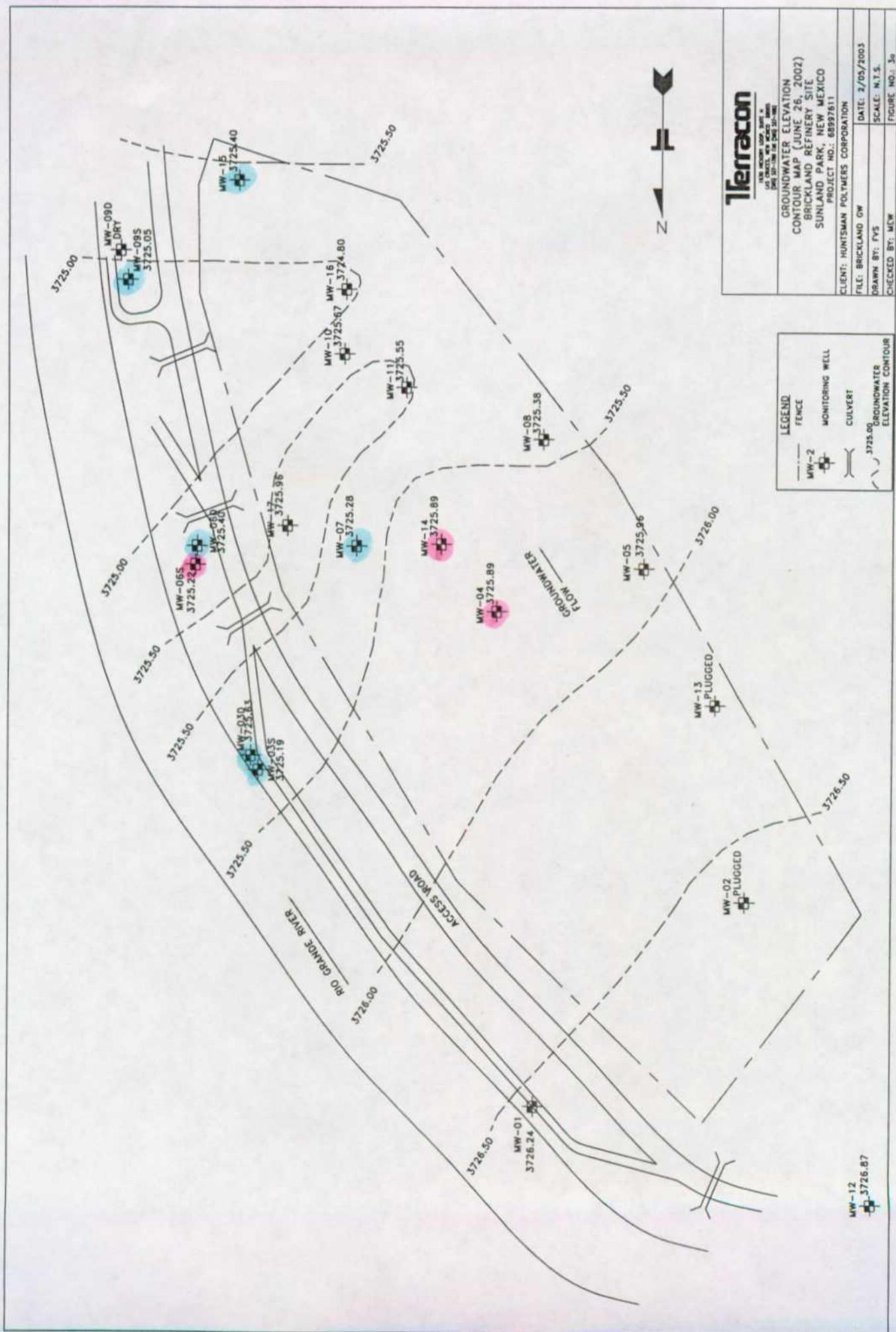
#### SITE LOCATION MAP

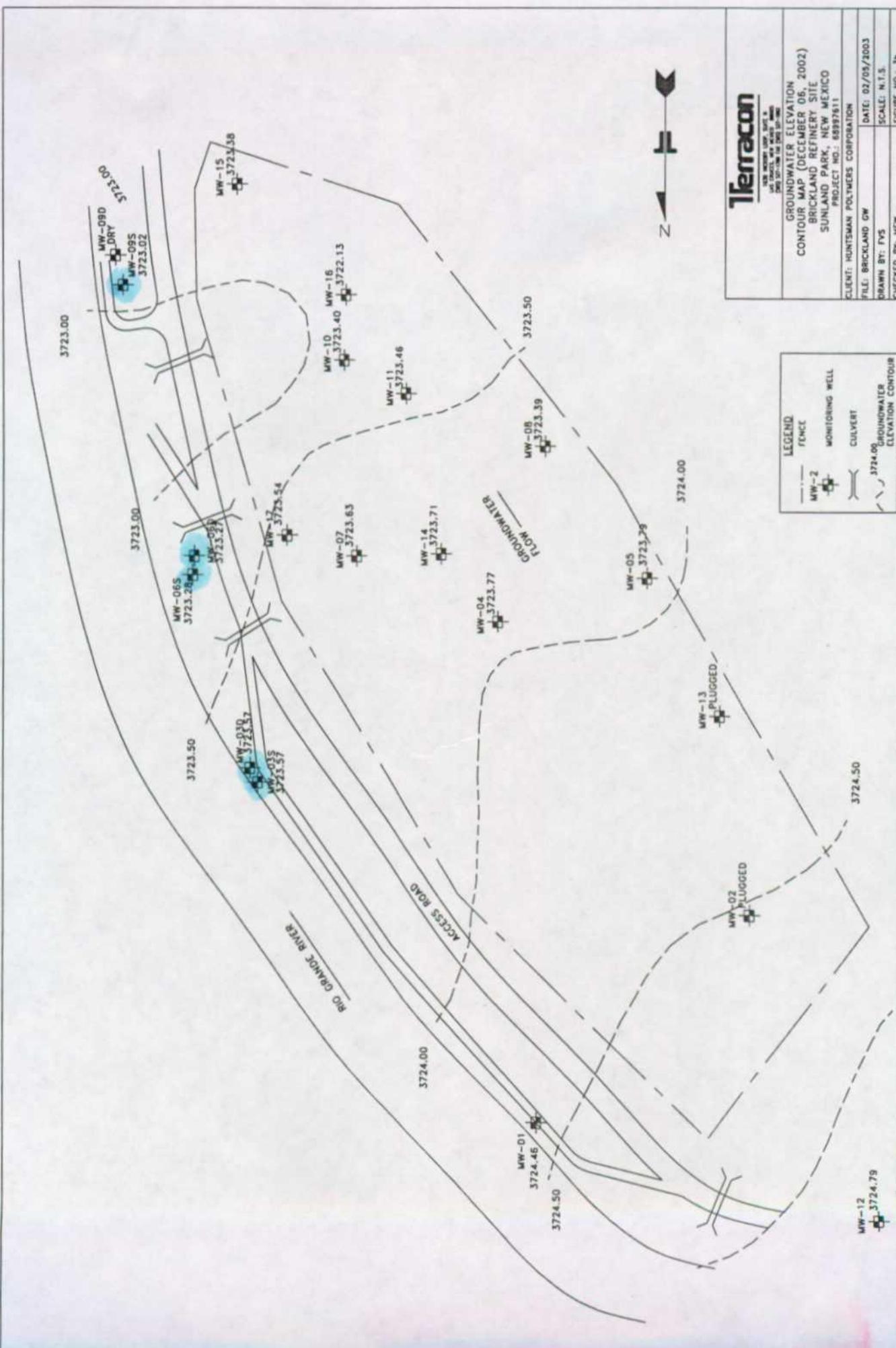
Brickland Refinery Site  
Sunland Park, New Mexico

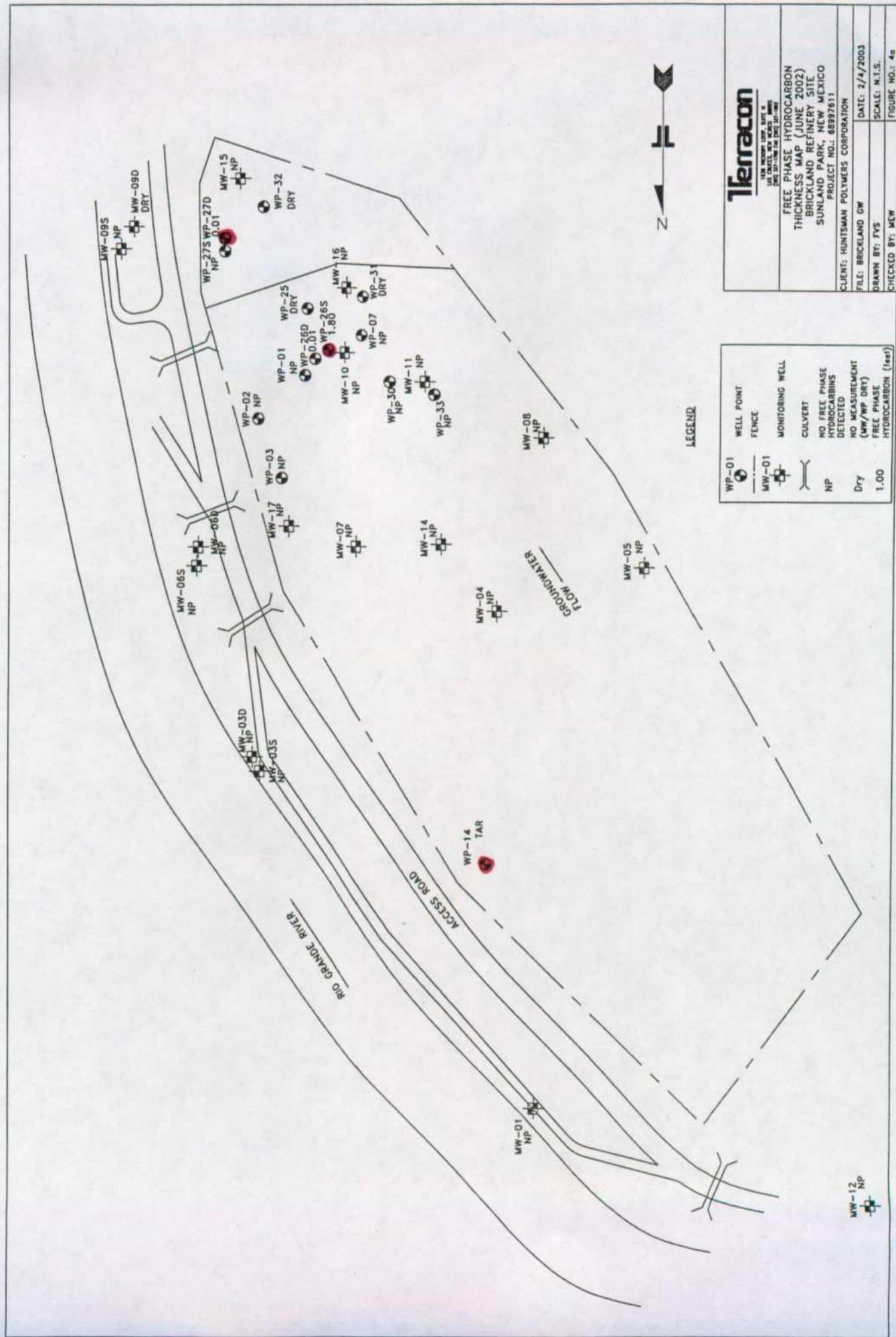
Project No. 68997611  
Date: February 2003

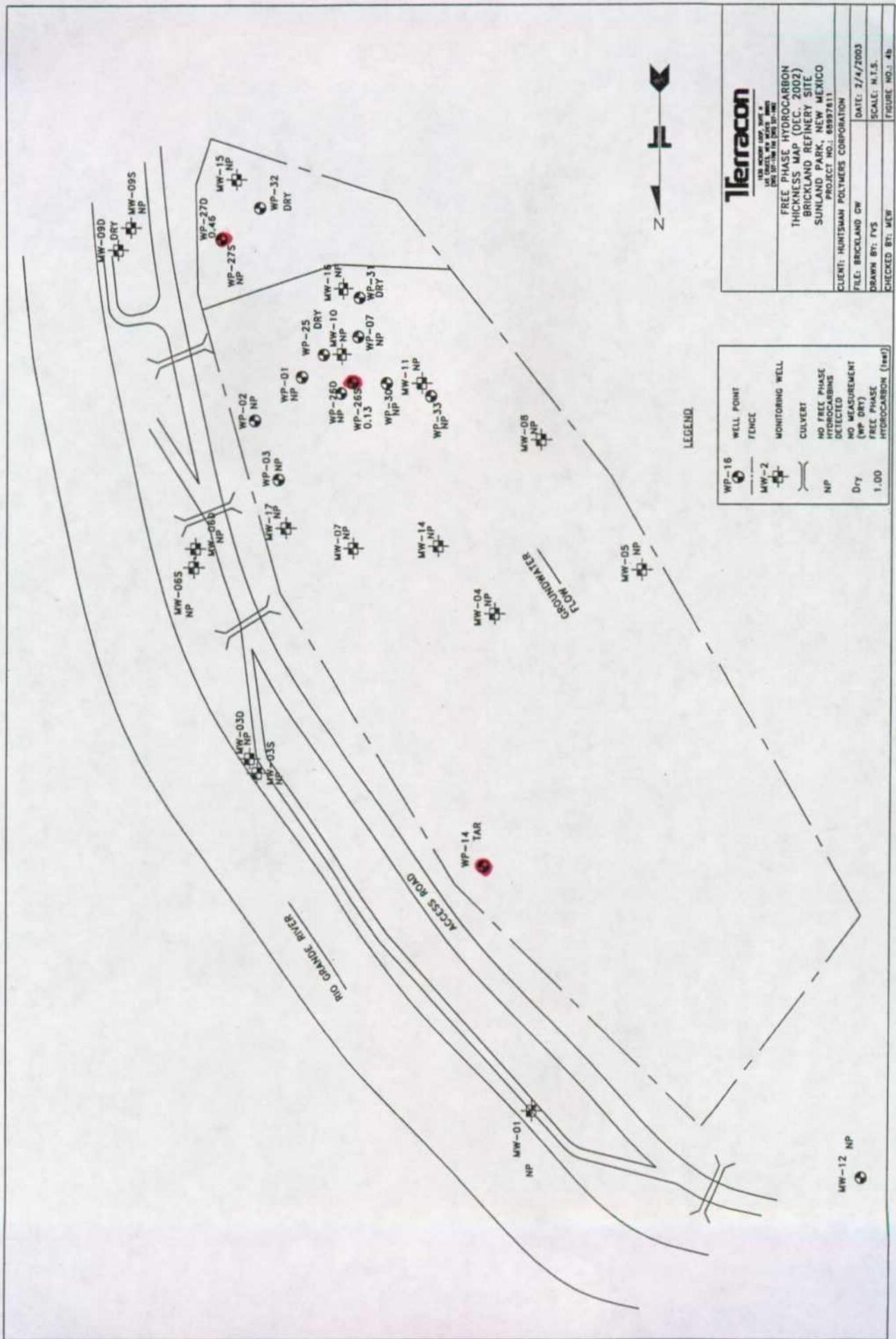
Scale: 1 in. = 1000 ft. (approx.)

**FIGURE 1**

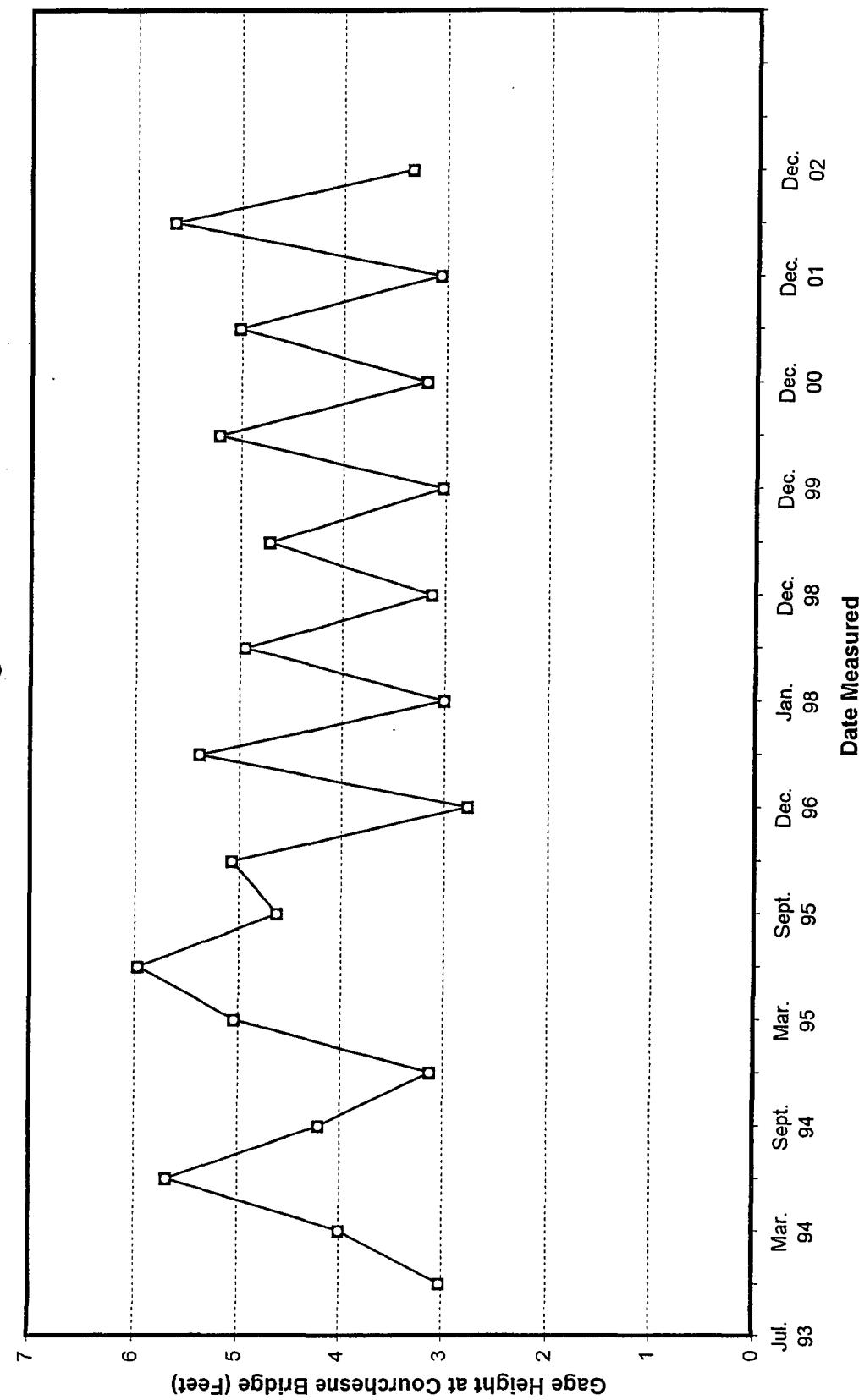




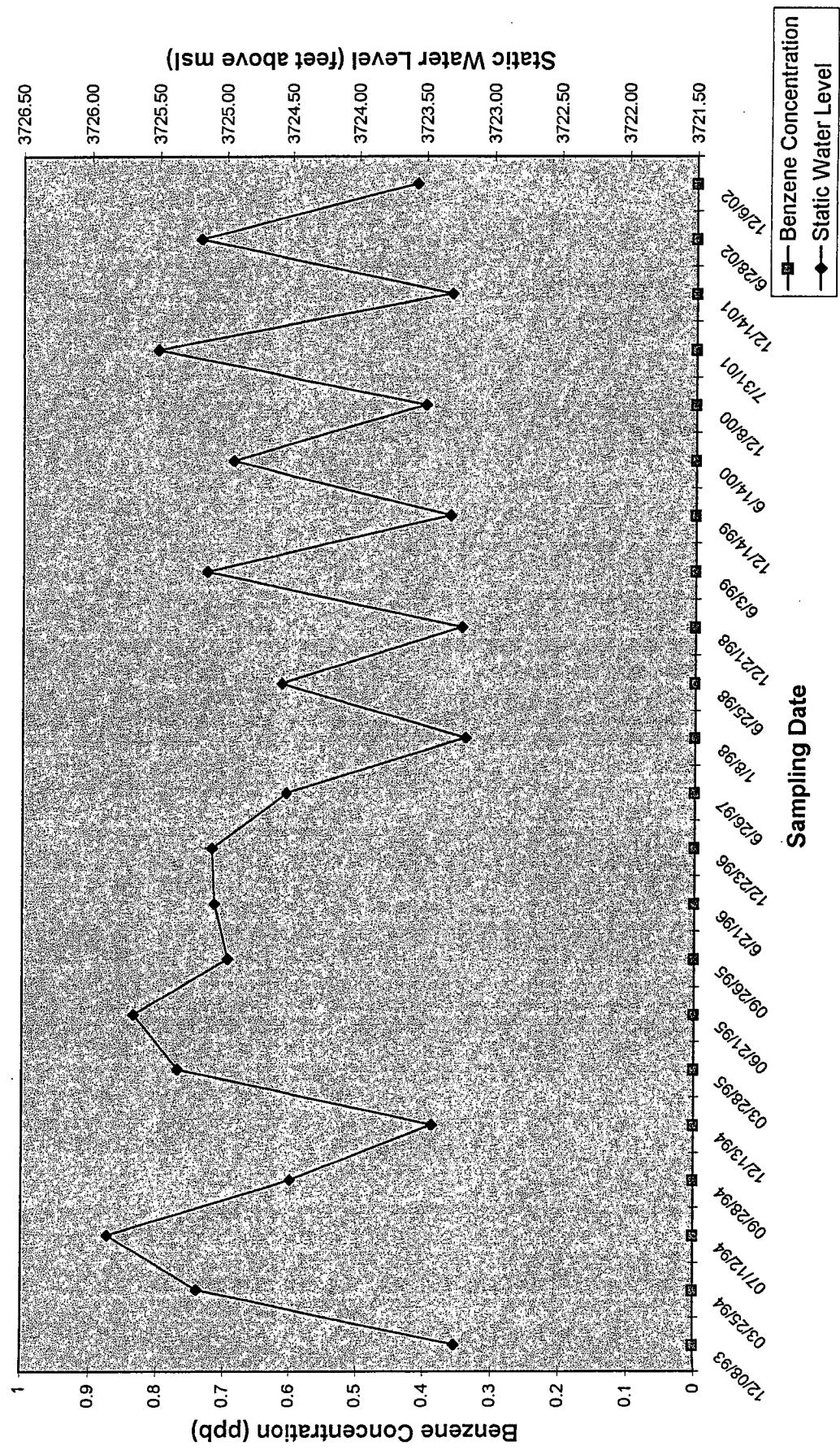




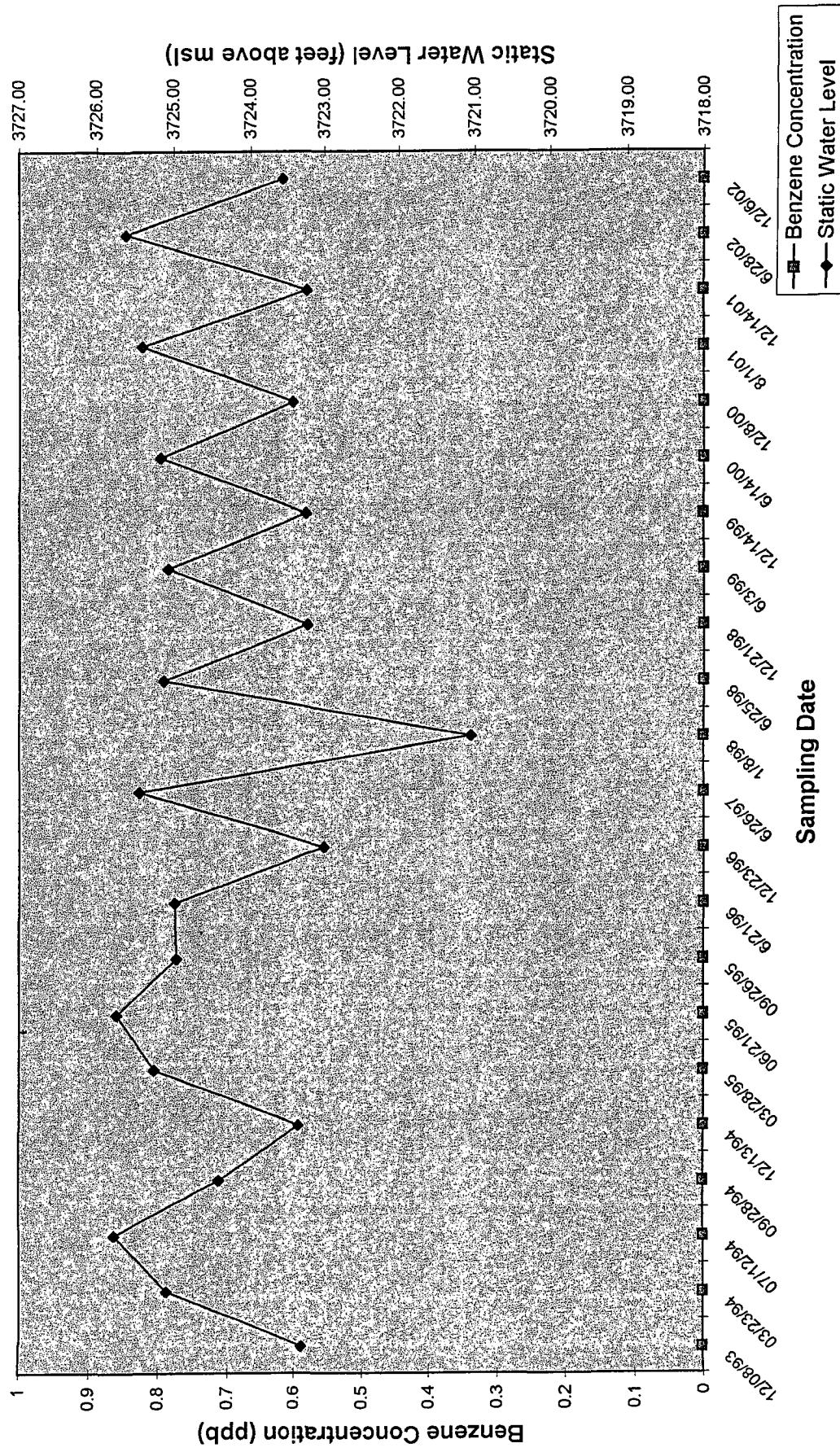
**Figure 3c**  
**Brickland Refinery**  
**Rio Grande Stage Versus Time**



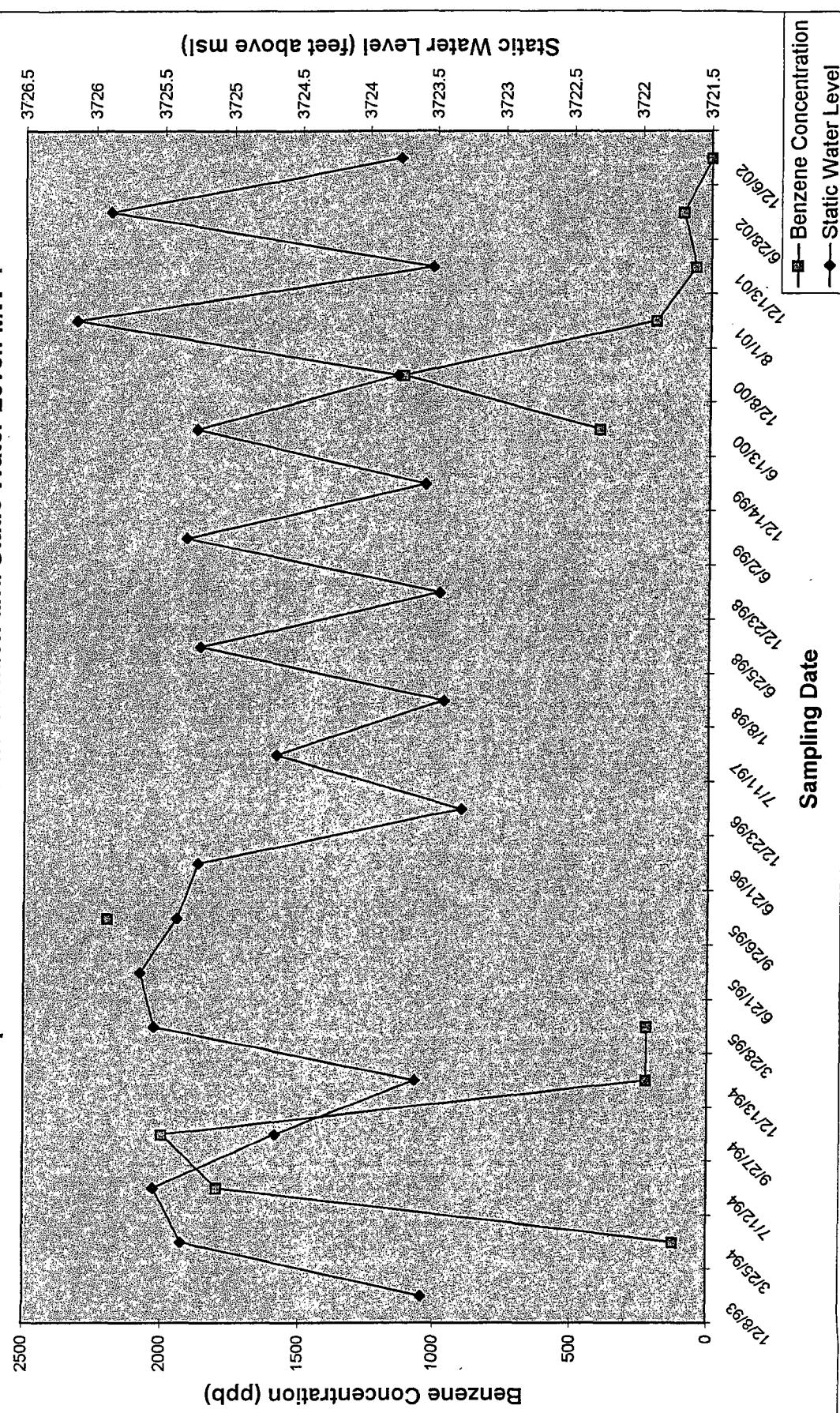
**Figure 5-a**  
**Brickland Refinery**  
**Relationship between Benzene Concentration and Static Water Level: MW-3S**



**Figure 5-b**  
**Brickland Refinery**  
**Relationship between Benzene Concentration and Static Water Level: MW-3D**

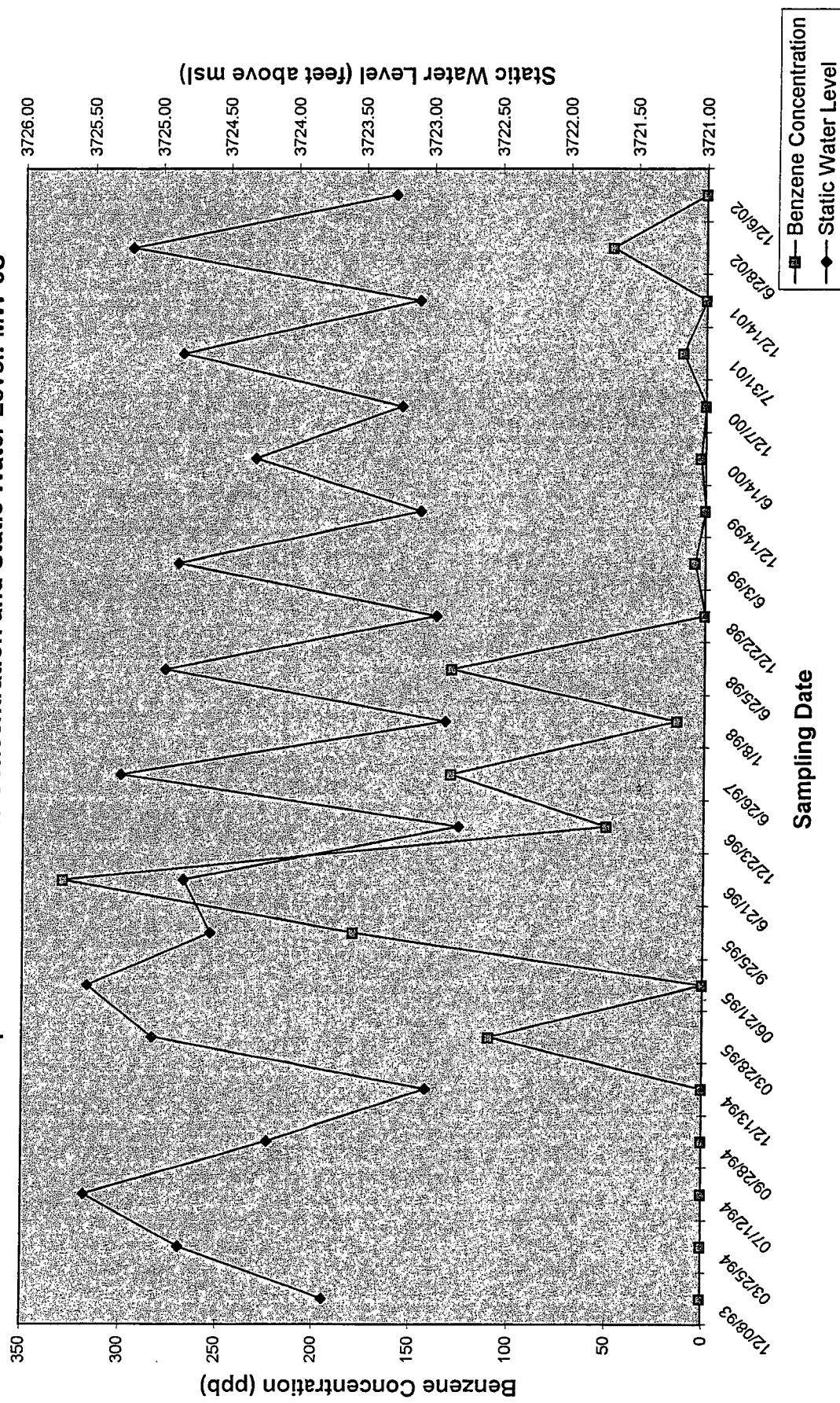


**Figure 5-c**  
**Brickland Refinery**  
**Relationship between Benzene Concentration and Static Water Level: MW-4**



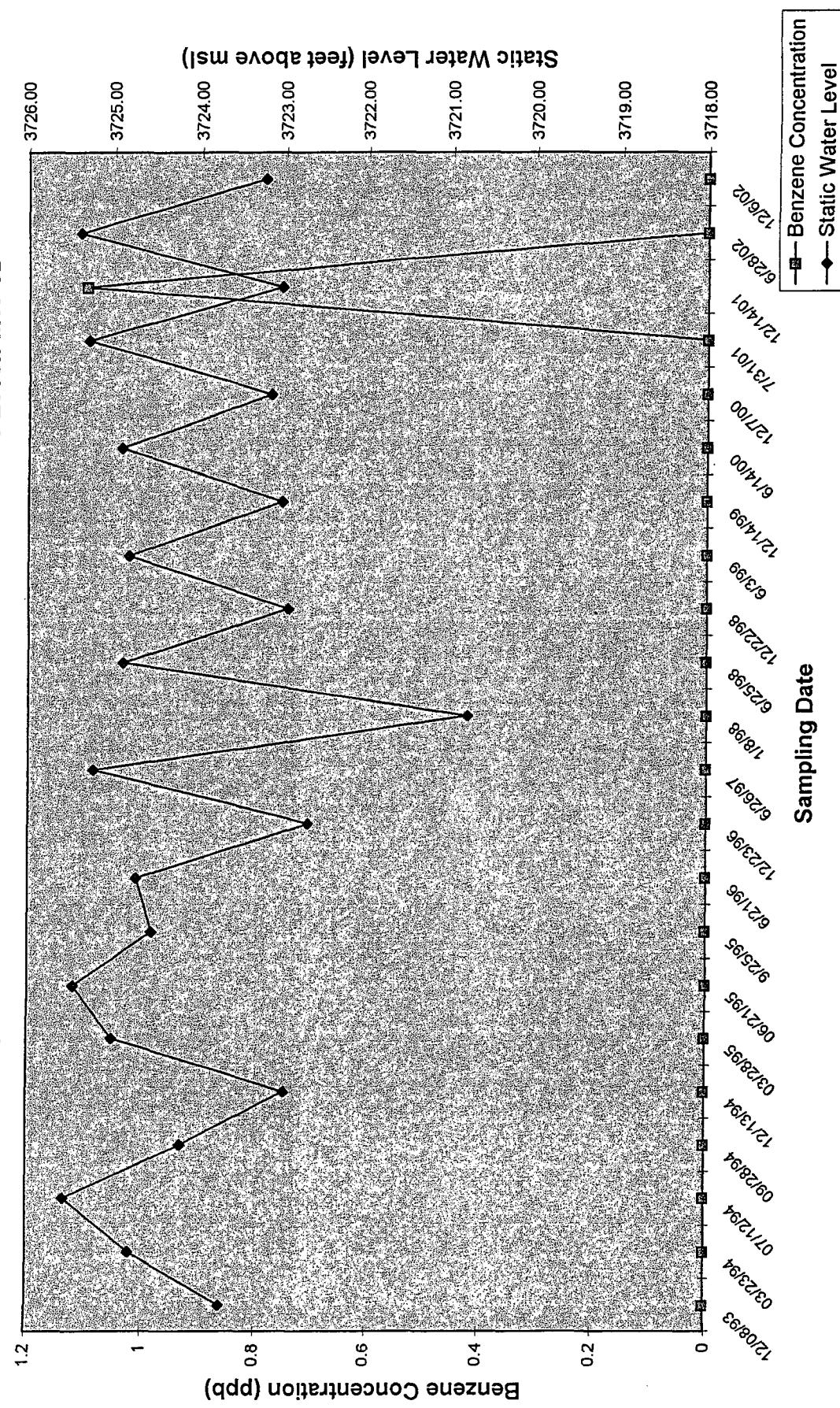
**Figure 5-d**  
**Brickland Refinery**

**Relationship between Benzene Concentration and Static Water Level: MW-6S**



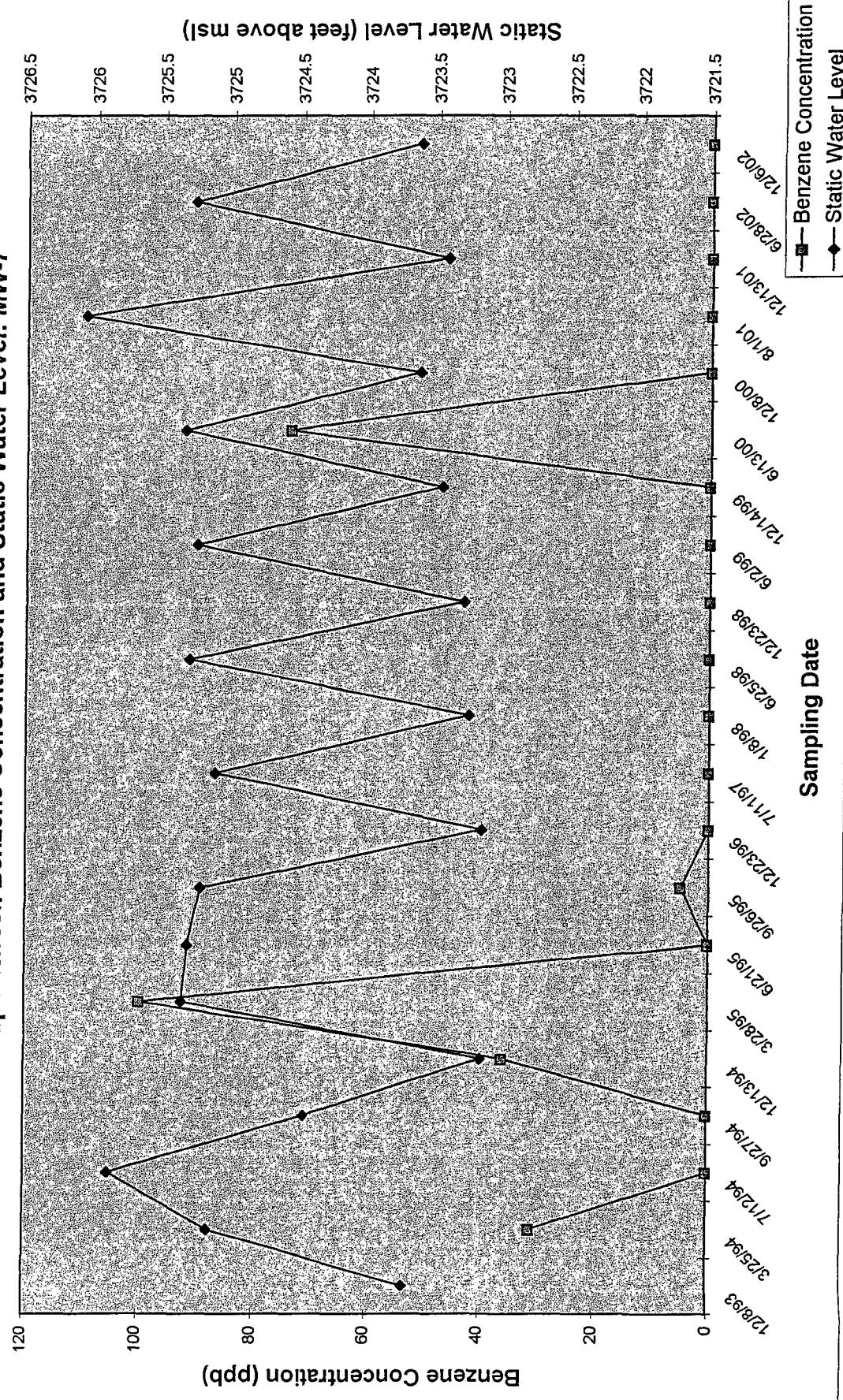
**Figure 5-e**  
**Brickland Refinery**

**Relationship between Benzene Concentration and Static Water Level: MW-6D**

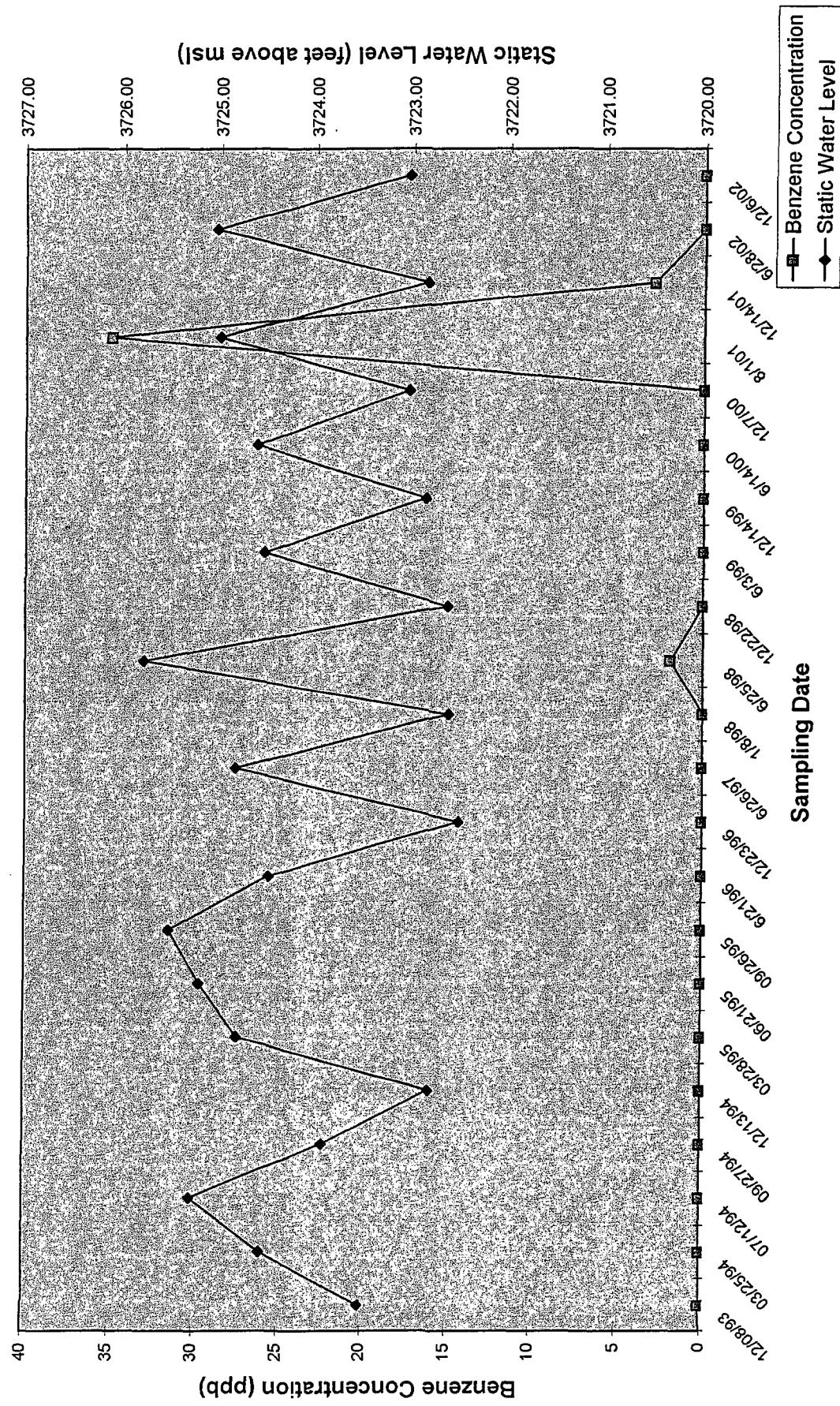


**Figure 5-f**  
**Brickland Refinery**

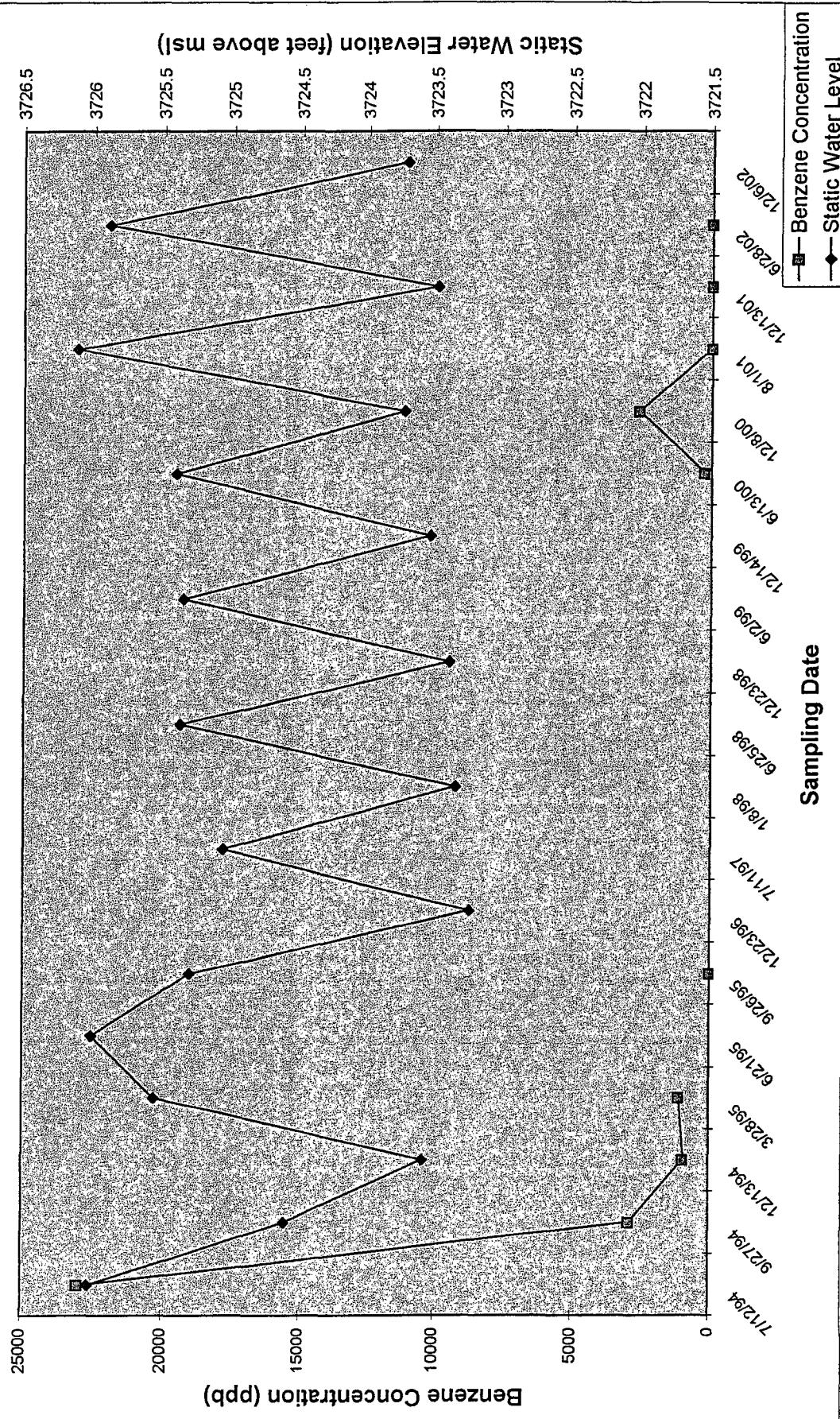
**Relationship between Benzene Concentration and Static Water Level: MW-7**



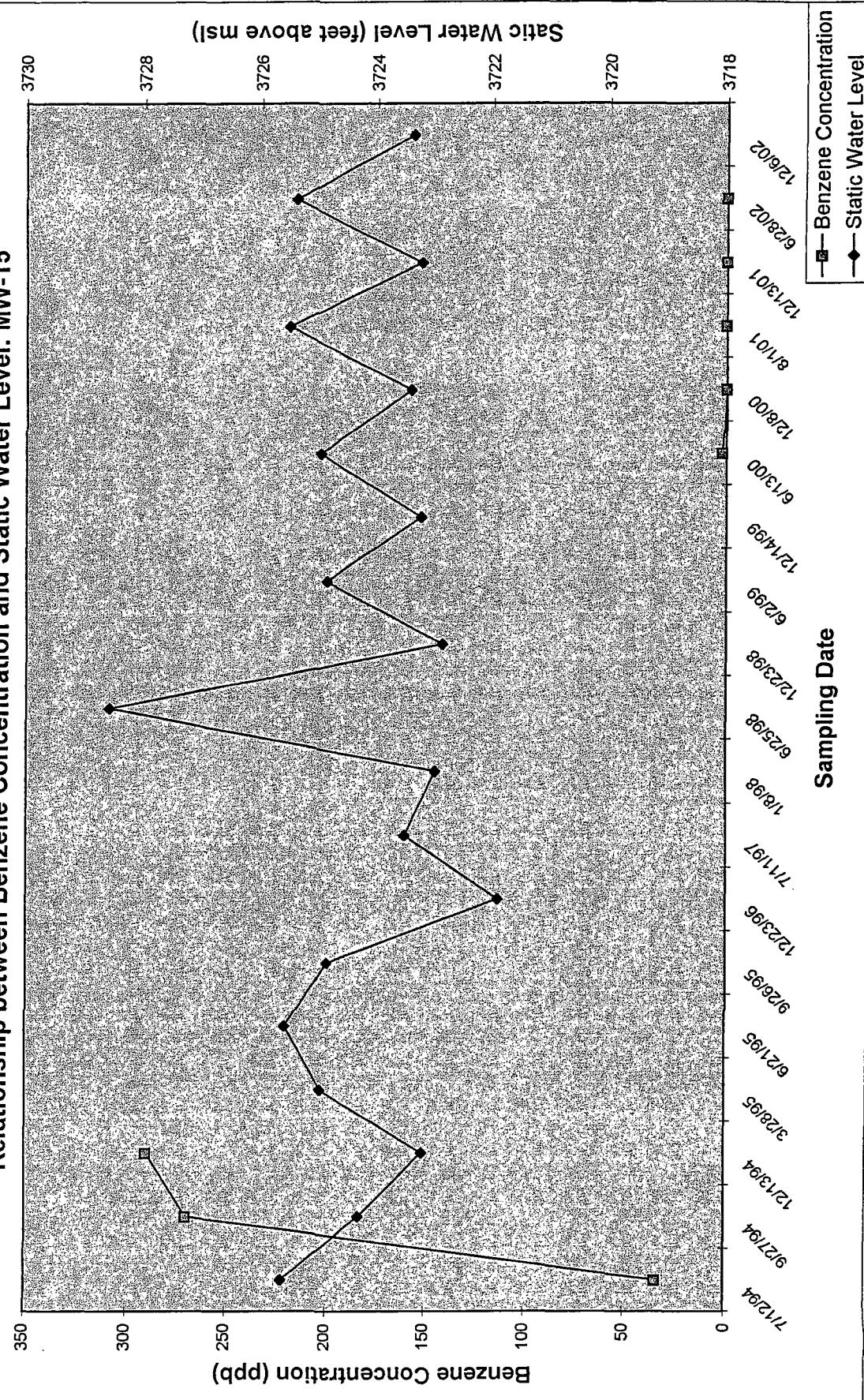
**Figure 5-g**  
**Brickland Refinery**  
**Relationship between Benzene Concentration and Static Water Level: MW-9S**



**Figure 5-h**  
**Brickland Refinery**  
**Relationship between Benzene Concentration and Static Water Level: MW-14**



**Figure 5-i**  
**Brickland Refinery**  
**Relationship between Benzene Concentration and Static Water Level: MW-15**



**APPENDIX B: TABLES**

Table 1  
 Brickland Refinery  
 Well Sampling and Purging Methods

Well No.	2002 Sample Date	Purge Method	Sampling Method	Purge Volume	Laboratory Analytes
MW-3S	6/28/02	Pump	Purge Pump	17 gallons*	BTEX, PAH, and Metals
	12/7/02	Pump	Purge Pump	9 gallons*	BTEX only
MW-3D	6/28/02	Pump	Purge Pump	65 gallons	BTEX, PAH, and Metals
	12/7/02	Pump	Purge Pump	60 gallons	BTEX only
MW-4	6/27/02	Pump	Purge Pump	30 gallons	BTEX, PAH, and Metals
	NS	NS	NS	NS	NS
MW-6S	6/28/02	Pump	Purge Pump	12 gallons*	BTEX, PAH, and Metals
	12/6/02	Pump	Purge Pump	7 gallons*	BTEX only
MW-6D	6/28/02	Pump	Purge Pump	65 gallons	BTEX, PAH, and Metals
	12/6/02	Pump	Purge Pump	60 gallons	BTEX only
MW-7	6/27/02	Pump	Purge Pump	25 gallons	BTEX, PAH, and Metals
	NS	NS	NS	NS	NS
MW-9S	6/27/02	Pump	Purge Pump	20 gallons	BTEX, PAH, and Metals
	12/6/02	Pump	Purge Pump	13 gallons	BTEX only
MW-14	6/27/02	Pump	Purge Pump	45 gallons	BTEX, PAH, and Metals
	NS	NS	NS	NS	NS
MW-15	6/27/02	Pump	Purge Pump	45 gallons	BTEX, PAH, and Metals
	NS	NS	NS	NS	NS
River Upstream	6/28/02	NA	Teflon Dipper	NA	BTEX, PAH, and Metals
	12/7/02	NA	Teflon Dipper	NA	BTEX only
River Downstream	6/28/02	NA	Teflon Dipper	NA	BTEX, PAH, and Metals
	12/7/02	NA	Teflon Dipper	NA	BTEX only
Total volume purged during semi-annual monitoring event in June 2002:				325 gallons	
Total volume purged during annual monitoring event in December 2002:				149 gallons	
Total volume purged during semi-annual and annual monitoring events:				474 gallons	

\* Monitoring well purged dry during sampling event.

NS Not sampled.

NA Not applicable

**Table 2**  
**Brickland Refinery**  
**Monitoring Well Groundwater Elevations (Feet above mean sea level)**

**Table 2 (Continued)**  
**Brickland Refinery**  
**Monitoring Well Groundwater Elevations (Feet above mean sea level)**

Well ID	6/24/98	12/21/98	6/1/99	12/14/99	6/12/00	12/5/00	7/24/01	12/12/01	6/26/02	12/6/02
MW-14	3725.38	3725.56	3725.36	3723.54	3725.41	3723.73	3726.12	3723.49	3725.89	3723.71
MW-15	3728.60	3724.97	3724.87	3723.24	3724.98	3723.42	3725.52	3723.23	3725.40	3723.38
MW-16	3725.02	3724.88	3724.68	3722.97	3724.80	3723.16	3725.13	3722.97	3724.80	3723.13
MW-17	3725.09	3724.88	3725.25	3723.36	3725.27	3723.5	3725.96	3723.38	3725.71	3723.54

**Notes:**

NM = Not measured.

P = Product observed.

Plugged 6/99 = Monitoring well abandoned (in accordance with NMED regulations) prior to soil cap installation in June 1999

**Table 3**  
**Brickland Refinery**  
**BTEX Concentrations ( $\mu\text{g/L}$ ) in Monitoring Wells and River Surface water Samples**  
**June 1998 through December 2002**

MW-3S									
Parameter	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02
Benzene	ND	ND	ND	ND	ND	ND	<1	<1	ND
Toluene	ND	ND	ND	ND	ND	ND	<1	<1	ND
Ethyl Benzene	ND	ND	2.9	ND	ND	ND	<1	<1	ND
Xylenes	ND	ND	5	ND	ND	ND	<1	<1	ND

MW-3D									
Parameter	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02
Benzene	ND	ND	ND	ND	ND	ND	<1	<1	ND
Toluene	ND	ND	ND	ND	ND	ND	<1	<1	ND
Ethyl Benzene	ND	ND	ND	ND	ND	ND	<1	<1	ND
Xylenes	ND	ND	ND	ND	2	ND	<1	<1	ND

MW-4									
Parameter	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02
Benzene	NS	NS	NS	NS	400	1120,1050	196	54.6	100, 87
Toluene	NS	NS	NS	NS	ND	ND, ND	<5*	1.8	ND, ND
Ethyl Benzene	NS	NS	NS	NS	1.8	ND, ND	<5*	<1*	ND, ND
Xylenes	NS	NS	NS	NS	5.1	34, ND	<5*	<1*	ND, ND

Parameter	Detection Limits	Notes:
Benzene	1.0 µg/L	ND = Not detected
Toluene	1.0 µg/L	NS = Not sampled
Ethyl Benzene	1.0 µg/L	* Detection limits for the same analyte may vary due to sample dilution
Xylenes	1.0 µg/L	µg/L = Micrograms per liter

**Table 3 (Continued)**  
**Brickland Refinery**  
**BTEX Concentrations ( $\mu\text{g/L}$ ) in Monitoring Wells and River Surface water Samples**  
**June 1998 through December 2002**

	MM-6S									
Parameter	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02
Benzene	130	ND	4.3, 6.4	ND	2.6	ND	12	<5	48	ND, ND
Toluene	ND	ND	2.2, 2.2	ND	ND, 2.2	ND	14	<5	3.3	ND, ND
Ethyl Benzene	40	ND	3.3, 4.1	ND	2.1	ND	15	<5	5.8	ND, ND
Xylenes	ND	ND	ND, 2.2	ND	4.1	ND	<5	<5	17	ND, ND

Parameter	MW-6D						12/14/01	12/14/01	12/28/02
	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00			
Benzene	ND, ND	ND	ND	ND	ND	ND	<1	1.1	ND
Toluene	ND, ND	ND	ND	ND	ND	ND	<1	<1	ND
Ethyl Benzene	ND, ND	ND	ND	ND	ND	ND	<1	<1	ND
Xylenes	ND, ND	ND	ND	1.7	ND	<1	<1	ND	ND

Parameter	MW-7						12/6/02
	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00	
Benzene	NS	NS	NS	NS	74, 76	ND	<5
Toluene	NS	NS	NS	NS	ND, ND	ND	<1
Ethyl Benzene	NS	NS	NS	NS	ND, ND	ND	<1
Xylenes	NS	NS	NS	NS	2.5, 1.6	ND	<1

Parameter	Detection Limits	Notes:
Benzene	1.0 µg/L	ND = Not detected NS = Not sampled
Toluene	1.0 µg/L	
Ethyl Benzene	1.0 µg/L	
Xylenes	1.0 µg/L	µg/L = Micrograms per liter

**Table 3 (Continued)**  
**Brickland Refinery**  
**BTEX Concentrations ( $\mu\text{g/L}$ ) in Monitoring Wells and River Surface water Samples**  
**June 1998 through December 2002**

Parameter	6/25/98	MW-9S					12/14/01	6/28/02	12/6/02
		12/21/98	6/3/99	12/14/99	6/14/00	12/8/00			
Benzene	1.9	ND, ND	ND	ND	ND	ND	35	2.9	ND
Toluene	2.7	2.7, ND	2.2	ND	14	ND	<5	2	ND
Ethyl Benzene	1.5	4.5, ND	2.5	ND	6.2	ND	<5	<1	ND
Xylenes	6.6	6.7, ND	24	8	43	ND	<5	1.9	ND

Parameter	6/25/98	MW-14					12/14/01	6/28/02	12/6/02
		12/21/98	6/3/99	12/14/99	6/14/00	12/8/00			
Benzene	NS	NS	NS	NS	250	2630	7.7	1.12.0	11
Toluene	NS	NS	NS	NS	ND	ND	3.3	<1,<1	ND
Ethyl Benzene	NS	NS	NS	NS	2.9	ND	<1,<1	<1,<1	ND
Xylenes	NS	NS	NS	NS	5	ND	<1,<1	<1,<1	ND

Parameter	6/25/98	MW-15					12/14/01	6/28/02	12/6/02
		12/21/98	6/3/99	12/14/99	6/14/00	12/8/00			
Benzene	NS	NS	NS	NS	1.9	ND	<5	<5	ND
Toluene	NS	NS	NS	NS	ND	ND	<5	<5	ND
Ethyl Benzene	NS	NS	NS	NS	ND	ND	<5	<5	ND
Xylenes	NS	NS	NS	NS	2.7	ND	<5	<5	ND

Parameter	Detection Limits	Notes:		
		ND = Not detected	NS = Not sampled	* Detection limits for the same analyte may vary due to sample dilution
Benzene	1.0 $\mu\text{g/L}$			
Toluene	1.0 $\mu\text{g/L}$			
Ethyl Benzene	1.0 $\mu\text{g/L}$			
Xylenes	1.0 $\mu\text{g/L}$			

**Table 3 (Continued)**  
**Brickland Refinery**  
**BTEX Concentrations ( $\mu\text{g/L}$ ) in Monitoring Wells and River Surface water Samples**  
**June 1998 through December 2002**

Parameter	River Upstream						6/28/02
	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00	
Benzene	ND	ND	ND	ND	ND	<1	<1
Toluene	ND	ND	ND	ND	ND	3	<1
Ethyl Benzene	ND	ND	ND	ND	ND	3	<1
Xylenes	ND	ND	ND	ND	ND	<1	<1

Parameter	River Downstream						12/6/02
	6/25/98	12/21/98	6/3/99	12/14/99	6/14/00	12/8/00	
Benzene	ND	ND	ND	ND	ND	<1	<1
Toluene	ND	ND	ND	ND	ND	3	<1
Ethyl Benzene	ND	ND	ND	ND	ND	<1	<1
Xylenes	ND	ND	ND	ND	ND	<1	<1

Parameter	Detection Limits	Notes:			
		Benzene	Toluene	Ethyl Benzene	Xylenes
Benzene	1.0 $\mu\text{g/L}$	ND = Not detected			
Toluene	1.0 $\mu\text{g/L}$	NS = Not sampled			
Ethyl Benzene	1.0 $\mu\text{g/L}$				
Xylenes	1.0 $\mu\text{g/L}$				

\* Detection limits for the same analyte may vary due to sample dilution

**Table 4**  
**Brickland Refinery**  
**Total PAH Concentrations for Samples from the River and Monitoring Wells**

Well ID	6/25/98	6/3/99	6/14/00	7/27/01	6/27/02
MW-3S	ND	ND	ND	ND	ND
MW-3D	ND	ND	ND	ND	ND
MW-4	NS	NS	ND	ND	ND, ND
MW-6S	ND	22, 32	ND	ND	ND
MW-6D	ND, ND	ND	ND	ND	ND
MW-7	NS	NS	ND, ND	ND	ND
MW-9S	ND	ND	ND	ND	ND
MW-14	NS	NS	ND	ND, ND	ND
MW-15	NS	NS	ND	ND	ND
River-Upstream	ND	ND	ND	ND	ND
River-Down	ND	ND	ND	ND	ND

**Notes:**

All Results in Micrograms per Liter ( $\mu\text{g}/\text{L}$ )

ND indicates constituent was not detected

NS indicates well was not sampled

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Table 5  
 Brickland Refinery  
 Metal Analytical Results for Monitoring Wells and the River Water Samples

MW-3S							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/14/00	7/31/01	6/28/02
Aluminum	5	C	NS	NS	NS	0.733	ND
Antimony	NA	NA	ND	ND	ND	<0.025	ND
Arsenic	0.1	A	ND	ND	ND	<0.05	0.008
Barium	1.0	A	NS	NS	NS	<0.100	0.081
Beryllium	NA	NA	ND	ND	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	0.653	0.880
Cadmium	0.0100	A	ND	ND	ND	<0.025	ND
Chromium	0.050	A	ND	ND	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	ND	ND	ND	0.047	ND
Iron	1.0	B	NS	NS	NS	2.080	1.500
Lead	0.05	A	ND	ND	ND	0.012	ND
Manganese	0.20	B	NS	NS	NS	1.310	1.700
Mercury	0.0020	A	ND	ND	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	ND	ND	ND	<0.025	ND
Selenium	0.05	A	ND	ND	ND	<0.050	0.021
Silver	0.05	A	ND	ND	ND	<0.0125	ND
Thallium	NA	NA	ND	ND	ND	<0.050	ND
Zinc	10.0	B	ND	0.340	ND	<0.025	ND

MW-3D							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/14/00	7/31/01	6/28/02
Aluminum	5	C	NS	NS	NS	0.102	ND
Antimony	NA	NA	ND	ND	ND	<0.025	ND
Arsenic	0.1	A	ND	ND	ND	<0.05	ND
Barium	1.0	A	NS	NS	NS	<0.100	0.060
Beryllium	NA	NA	ND	ND	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	0.941	1.500
Cadmium	0.0100	A	ND	ND	ND	<0.025	ND
Chromium	0.050	A	ND	ND	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	ND	ND	ND	<0.0125	ND
Iron	1.0	B	NS	NS	NS	2.690	2.300
Lead	0.05	A	ND	ND	ND	<0.01	ND
Manganese	0.20	B	NS	NS	NS	3.600	3.800
Mercury	0.0020	A	ND	ND	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	0.006	ND	ND	<0.025	ND
Selenium	0.05	A	ND	ND	ND	<0.050	0.024
Silver	0.05	A	ND	ND	ND	<0.0125	ND
Thallium	NA	NA	ND	ND	ND	<0.050	ND
Zinc	10.0	B	ND	ND	ND	<0.025	ND

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Table 5 (Continued)  
 Brickland Refinery  
 Metal Analytical Results for Monitoring Wells and the River Water Samples

MW-4							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/13/00	8/2/01	6/28702
Aluminum	5	C	NS	NS	NS	0.271	0.36,0.23
Antimony	NA	NA	NS	NS	ND	<0.025	ND,ND
Arsenic	0.1	A	NS	NS	ND	<0.05	0.007,ND
Barium	1.0	A	NS	NS	NS	0.617	0.083, 0.059
Beryllium	NA	NA	NS	NS	ND	<0.0025	0.005, 0.005
Boron	0.8	C	NS	NS	NS	0.932	1.400, 1.400
Cadmium	0.0100	A	NS	NS	ND	<0.025	ND,ND
Chromium	0.050	A	NS	NS	ND	<0.01	0.014,ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	0.014,ND
Copper	1.0	B	NS	NS	ND	<0.0125	0.021,ND
Iron	1.0	B	NS	NS	NS	3.170	2.900, 3.100
Lead	0.05	A	NS	NS	ND	0.018	ND,ND
Manganese	0.20	B	NS	NS	NS	4.310	5.800, 5.800
Mercury	0.0020	A	NS	NS	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND,ND
Nickel	0.2	C	NS	NS	ND	<0.025	ND,ND
Selenium	0.05	A	NS	NS	ND	<0.050	0.032, 0.032
Silver	0.05	A	NS	NS	ND	<0.0125	0.036, ND
Thallium	NA	NA	NS	NS	ND	<0.050	ND,ND
Zinc	10.0	B	NS	NS	ND	<0.025	ND,ND

MW-6S							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/13/00	8/2/01	6/28702
Aluminum	5	C	NS	NS	NS	0.604	0.21
Antimony	NA	NA	ND	ND, ND	ND	<0.025	ND
Arsenic	0.1	A	ND	ND, ND	ND	0.066	0.053
Barium	1.0	A	NS	NS	NS	0.763	0.490
Beryllium	NA	NA	ND	ND, ND	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	1.000	1.300
Cadmium	0.0100	A	ND	ND, ND	ND	<0.025	ND
Chromium	0.050	A	ND	ND, ND	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	ND	ND, ND	ND	0.089	0.044
Iron	1.0	B	NS	NS	NS	5.530	3.900
Lead	0.05	A	ND	ND, ND	ND	0.017	ND
Manganese	0.20	B	NS	NS	NS	1.340	1.700
Mercury	0.0020	A	ND	ND, ND	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	ND	ND, ND	ND	<0.025	ND
Selenium	0.05	A	ND	ND, ND	ND	<0.050	0.099
Silver	0.05	A	ND	ND, ND	ND	<0.0125	ND
Thallium	NA	NA	ND	ND, ND	ND	<0.050	ND
Zinc	10.0	B	ND	ND, 0.12	ND	<0.025	ND

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Table 5 (Continued)  
 Brickland Refinery  
 Metal Analytical Results for Monitoring Wells and the River Water Samples

MW-6D							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/13/00	8/2/01	6/28702
Aluminum	5	C	NS	NS	NS	<0.200	0.18
Antimony	NA	NA	ND,ND	ND	ND	<0.025	ND
Arsenic	0.1	A	ND,ND	ND	ND	<0.05	ND
Barium	1.0	A	NS	NS	NS	<0.100	0.050
Beryllium	NA	NA	ND,ND	ND	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	0.807	1.400
Cadmium	0.0100	A	ND,ND	ND	ND	<0.025	ND
Chromium	0.050	A	ND,ND	ND	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	ND,ND	ND	ND	0.231	ND
Iron	1.0	B	NS	NS	NS	0.920	1.000
Lead	0.05	A	ND,ND	ND	ND	<0.017	ND
Manganese	0.20	B	NS	NS	NS	5.360	5.700
Mercury	0.0020	A	ND,ND	ND	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	0.015, 0.012	ND	ND	<0.025	ND
Selenium	0.05	A	ND,ND	ND	ND	<0.050	0.015
Silver	0.05	A	ND,ND	ND	ND	<0.0125	ND
Thallium	NA	NA	ND,ND	ND	ND	<0.050	ND
Zinc	10.0	B	ND,ND	0.053	ND	<0.025	ND

MW-7							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/13/00	8/2/01	6/28702
Aluminum	5	C	NS	NS	NS,NS	<0.200	0.200
Antimony	NA	NA	NS	NS	ND,ND	<0.025	ND
Arsenic	0.1	A	NS	NS	ND,ND	<0.05	0.047
Barium	1.0	A	NS	NS	NS	0.211	0.210
Beryllium	NA	NA	NS	NS	ND,ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	0.618	0.750
Cadmium	0.0100	A	NS	NS	ND,ND	<0.025	ND
Chromium	0.050	A	NS	NS	ND,ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	NS	NS	ND,ND	<0.0125	ND
Iron	1.0	B	NS	NS	NS	3.020	2.700
Lead	0.05	A	NS	NS	ND,ND	0.022	ND
Manganese	0.20	B	NS	NS	NS	1.690	1.400
Mercury	0.0020	A	NS	NS	ND,ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	0.011
Nickel	0.2	C	NS	NS	ND,ND	<0.025	ND
Selenium	0.05	A	NS	NS	ND,ND	<0.05	0.090
Silver	0.05	A	NS	NS	ND,ND	<0.0125	ND
Thallium	NA	NA	NS	NS	ND,ND	<0.05	ND
Zinc	10.0	B	NS	NS	ND,ND	0.026	ND

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Table 5 (Continued)  
 Brickland Refinery  
 Metal Analytical Results for Monitoring Wells and the River Water Samples

MW-9S							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/13/00	8/2/01	6/28702
Aluminum	5	C	NS	NS	NS	8.58	ND
Antimony	NA	NA	ND	ND	ND	<0.025	ND
Arsenic	0.1	A	NS	ND	ND	<0.05	0.024
Barium	1.0	A	NS	NS	NS	0.304	0.130
Beryllium	NA	NA	NS	ND	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	1.000	1.200
Cadmium	0.0100	A	0.001	ND	ND	<0.025	ND
Chromium	0.050	A	ND	ND	ND	0.080	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	0.006	ND	ND	0.067	ND
Iron	1.0	B	NS	NS	NS	31.700	6.400
Lead	0.05	A	ND	ND	ND	0.033	ND
Manganese	0.20	B	NS	NS	NS	3.190	2.600
Mercury	0.0020	A	ND	ND	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	ND	ND	ND	<0.025	ND
Selenium	0.05	A	ND	ND	ND	<0.050	0.036
Silver	0.05	A	ND	ND	ND	<0.0125	ND
Thallium	NA	NA	NS	ND	ND	<0.050	ND
Zinc	10.0	B	ND	ND	ND	0.088	ND

MW-14							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/13/00	8/2/01	6/28702
Aluminum	5	C	NS	NS	NS	3.040	0.200
Antimony	NA	NA	NS	NS	ND	<0.025	ND
Arsenic	0.1	A	NS	NS	ND	<0.05	0.010
Barium	1.0	A	NS	NS	NS	0.780	0.110
Beryllium	NA	NA	NS	NS	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	1.260	1.700
Cadmium	0.0100	A	NS	NS	ND	<0.025	ND
Chromium	0.050	A	NS	NS	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	0.110	ND
Copper	1.0	B	NS	NS	ND	<0.0125	ND
Iron	1.0	B	NS	NS	NS	10.500	7.300
Lead	0.05	A	NS	NS	ND	0.015	ND
Manganese	0.20	B	NS	NS	NS	<0.0002	7.200
Mercury	0.0020	A	NS	NS	ND	<0.002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	NS	NS	ND	<0.025	ND
Selenium	0.05	A	NS	NS	ND	<0.05	0.041
Silver	0.05	A	NS	NS	ND	<0.0125	ND
Thallium	NA	NA	NS	NS	ND	<0.05	ND
Zinc	10.0	B	NS	NS	ND	<0.025	ND

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Table 5 (Continued)  
 Brickland Refinery  
 Metal Analytical Results for Monitoring Wells and the River Water Samples

MW-15							
Parameter	NMWQCC Std.	Reference	6/25/98	6/3/99	6/13/00	8/2/01	6/28/02
Aluminum	5	C	NS	NS	NS	<0.200	0.24
Antimony	NA	NA	NS	NS	ND	<0.025	ND
Arsenic	0.1	A	NS	NS	ND	<0.05	0.014
Barium	1.0	A	NS	NS	NS	0.158	0.170
Beryllium	NA	NA	NS	NS	ND	<0.0025	0.006
Boron	0.8	C	NS	NS	NS	1.000	1.500
Cadmium	0.0100	A	NS	NS	ND	<0.025	ND
Chromium	0.050	A	NS	NS	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	NS	NS	ND	0.020	ND
Iron	1.0	B	NS	NS	NS	1.860	2.000
Lead	0.05	A	NS	NS	ND	0.012	ND
Manganese	0.20	B	NS	NS	NS	2.100	2.300
Mercury	0.0020	A	NS	NS	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	NS	NS	ND	<0.025	ND
Selenium	0.05	A	NS	NS	ND	<0.050	0.038
Silver	0.05	A	NS	NS	ND	<0.0125	ND
Thallium	NA	NA	NS	NS	ND	<0.050	ND
Zinc	10.0	B	NS	NS	ND	<0.025	ND

River-Upstream							
Parameter	NMWQCC Std.	Reference	6/25/98	6/2/99	6/13/00	8/21/01	6/28/02
Aluminum	5	C	NS	NS	NS	17.5	1.2
Antimony	NA	NA	ND	ND	ND	<0.025	ND
Arsenic	0.1	A	ND	ND	ND	<0.05	0.005
Barium	1.0	A	NS	NS	NS	0.155	0.083
Beryllium	NA	NA	ND	ND	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	0.252	0.190
Cadmium	0.0100	A	ND	ND	ND	<0.025	ND
Chromium	0.050	A	ND	ND	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	ND	0.280	ND	0.019	0.015
Iron	1.0	B	NS	NS	NS	9.790	0.850
Lead	0.05	A	ND	ND	ND	0.011	ND
Manganese	0.20	B	NS	NS	NS	0.416	0.180
Mercury	0.0020	A	ND	ND	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	0.010
Nickel	0.2	C	ND	ND	ND	<0.025	ND
Selenium	0.05	A	ND	ND	ND	<0.050	ND
Silver	0.05	A	ND	ND	ND	<0.0125	ND
Thallium	NA	NA	ND	ND	ND	<0.050	ND
Zinc	10.0	B	ND	1.170	ND	0.050	ND

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Table 5 (Continued)  
 Brickland Refinery  
 Metal Analytical Results for Monitoring Wells and the River Water Samples

Parameter	NMWQCC Std.	Reference	River-Downstream				
			6/25/98	6/2/99	6/13/00	8/21/01	6/28/02
Aluminum	5	C	NS	NS	NS	7.8	2.1
Antimony	NA	NA	ND	ND	ND	<0.025	ND
Arsenic	0.1	A	ND	ND	ND	<0.05	0.006
Barium	1.0	A	NS	NS	NS	0.125	0.094
Beryllium	NA	NA	ND	ND	ND	<0.0025	ND
Boron	0.8	C	NS	NS	NS	0.190	0.200
Cadmium	0.0100	A	ND	ND	ND	<0.025	ND
Chromium	0.050	A	ND	ND	ND	<0.01	ND
Cobalt	0.050	Cobalt	NS	NS	NS	<0.025	ND
Copper	1.0	B	ND	ND	ND	0.019	ND
Iron	1.0	B	NS	NS	NS	4.710	1.800
Lead	0.05	A	ND	ND	ND	0.012	ND
Manganese	0.20	B	NS	NS	NS	0.261	0.220
Mercury	0.0020	A	ND	ND	ND	<0.0002	NS
Molybdenum	1.0000	C	NS	NS	NS	<0.050	ND
Nickel	0.2	C	ND	ND	ND	<0.025	ND
Selenium	0.05	A	ND	ND	ND	<0.050	ND
Silver	0.05	A	ND	ND	ND	<0.0125	ND
Thallium	NA	NA	ND	ND	ND	<0.050	ND
Zinc	10.0	B	ND	0.110	ND	0.050	ND

Notes:

mg/L = Milligrams per liter

Concentrations listed in **boldface** type during the current year indicate levels exceed New Mexico Water Quality Control Commission (NMWQCC) standards

NS indicates sample was not analyzed for this constituent.

ND indicates concentration was below laboratory detection limits.

NA indicates no NMWQCC standard established.

A indicates standard is from NMWQCC Regulatory Standards Section 3103A - Human Health Standard

B indicates standard is from NMWQCC Regulatory Standards Section 3103B - Domestic Water Supply

C indicates standard is from NMWQCC Regulatory Standards Section 3103C - Irrigation Use

**Table 6**  
**Brickland Refinery**  
**Free-Phase Hydrocarbon Thickness Measurements (Feet)**

Well ID	Jan. 98	Jun. 98	Dec. 98	Jun. 99	Dec. 99	Jun. 00	Dec. 00	Jul. 01	Dec. 01	Jun. 02	Dec. 02
MW-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-2	0.00	0.00	0.00	0.00	A	A	A	A	A	A	A
MW-3S	NM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-3D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-6S	NM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-6D	NM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-9S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-10	2.26	2.21	2.50	0.14	0.00	0.03	0.06	0.00	0.00	0.00	0.00
MW-11	<0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-12	NM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-13	0.00	0.00	0.00	A	A	A	A	A	A	A	A
MW-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-15	0.00	0.00	0.00	0.00	Dry	0.00	0.00	0.00	0.00	0.00	0.00
MW-16	0.00	0.00	0.00	Dry	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-17	Dry	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-1	Dry	0.00	0.74	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-14	Tar										
WP-25	<0.01	0.00	1.05	0.70	Dry						
WP-26S	Tar	0.00	0.39	1.82	1.55	1.70	1.19	1.91	1.45	1.80	0.13
WP-26D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-27S	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-27D	1.18	0.00	0.00	0.13	0.35	0.29	0.45	0.00	0.44	0.01	0.46
WP-30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-31	Dry										
WP-32	Dry										
WP-33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

A = Plugged and Abandoned  
 Dry = Monitoring point was dry

**Notes:**

Tar = Thickness measurement not obtainable because of presence of thick tar-like substance in well point.

**APPENDIX C: LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY  
DOCUMENTATION; GROUNDWATER SAMPLING DATA SHEETS**

**LABORATORY ANALYTICAL REPORTS**

**JUNE 2002 ANALYTICAL RESULTS**



# NEL LABORATORIES

**Corporate Headquarters /****Reno Laboratory**

4750 Longley Lane, Suite 106

Reno, NV 89502

Phone: 775.348.2522

Fax: 775.348.2546

**Las Vegas Laboratory**

4208 Arcata Way, Suite A

Las Vegas, NV 89030

Phone: 702.657.1010

Fax: 702.657.1577

Mary Wells, P.E.  
Terracon  
1630 Hickory Loop, Suite H  
Las Cruces, NM 88005  
TEL: 505-527-1700

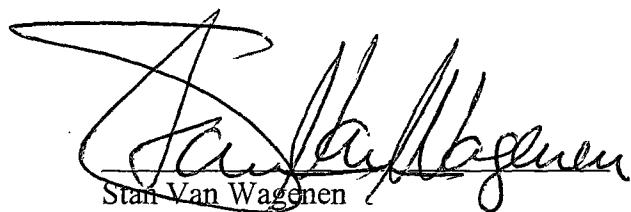
RE Project: **HUNTSMAN**Order No.: **L0206504**

Dear Mary Wells, P.E.:

NEL Laboratories, Las Vegas received 37 samples on 6/29/02 for the analyses presented in the following report.

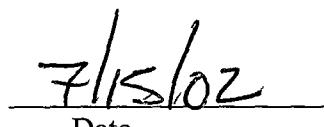
There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.



Stan Van Wagenen

Laboratory Manager



7/15/02

Date

Certifications:	Reno	Las Vegas
Arizona	AZ0520	AZ0518
California	1707	2002
Idaho	Certified	Certified
Montana	Certified	Certified
Nevada	NV033	NV052
New Mexico	Certified	Certified

# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-15  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-001A

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Reporting Limit</u>	<u>DF</u>	<u>Method</u>	<u>Prep Date</u>	<u>Analyzed</u>	<u>Analyst</u>
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	96.1	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-15  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-002A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	Reporting		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/03/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

DF - Dilution Factor

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-15  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-002A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/03/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 2-Fluorophenol	49.0	%REC	0-88	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: Phenol-d6	36.6	%REC	0-63	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 2,4,6-Tribromophenol	88.6	%REC	0-161	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: Nitrobenzene-d5	77.2	%REC	9-132	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 2-Fluorobiphenyl	76.9	%REC	16-127	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 4-Terphenyl-d14	85.6	%REC	16-163	1	SW8270C	07/03/02	07/03/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-15  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-003A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Aluminum	0.24	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.17	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	0.0058	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	1.5	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	D over 20%mg/L		0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	2.0	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	2.3	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.014	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.038	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-4  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-004A

<b>Parameter</b>	<b>Reporting</b>				<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>			
MTBE	ND	µg/L	5.0	1	SW8021	07/07/02	PXC-LV
Benzene	100	µg/L	2.0	1	SW8021	07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021	07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021	07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021	07/07/02	PXC-LV
Surr: Trifluorotoluene	91.7	%REC	60-120	1	SW8021	07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-4  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-005A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/03/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-4  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-005A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/03/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 2-Fluorophenol	42.4	%REC	0-88	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: Phenol-d6	31.9	%REC	0-63	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 2,4,6-Tribromophenol	76.7	%REC	0-161	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: Nitrobenzene-d5	78.4	%REC	9-132	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 2-Fluorobiphenyl	79.7	%REC	16-127	1	SW8270C	07/03/02	07/03/02	JRW-LV
Surr: 4-Terphenyl-d14	94.2	%REC	16-163	1	SW8270C	07/03/02	07/03/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-4  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-006A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Aluminum	0.36	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.083	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	0.0051	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	1.4	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	0.014	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	0.014	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	0.021	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	2.9	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	5.8	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	0.036	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.0072	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.032	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** DUP  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-007A

Parameter	Result	Unit	Reporting		Method	Prep Date	Analyzed	Analyst
			Limit	DF				
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	87	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	94.4	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** DUP  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-008A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** DUP  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-008A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	41.9	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	34.2	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	90.1	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	63.2	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	64.7	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	90.9	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** DUP  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-009A

<b>Parameter</b>	Reporting							<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	
Aluminum	0.23	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.059	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	0.0054	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	1.4	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	3.1	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	5.8	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.032	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-14  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-010A

<b>Parameter</b>	<b>Reporting</b>					<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>			
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	11	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	91.5	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-14  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-011A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-14  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-011A

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Reporting Limit</u>	<u>DF</u>	<u>Method</u>	<u>Prep Date</u>	<u>Analyzed</u>	<u>Analyst</u>
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	46.9	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	36.8	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	97.8	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	70.1	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	75.4	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	89.4	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-14  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-012A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Aluminum	0.20	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.11	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	1.7	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	7.3	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	7.2	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.010	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.041	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-7  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-013A

<b>Parameter</b>	<b>Reporting</b>						<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>				
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV	
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV	
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV	
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV	
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV	
Surr: Trifluorotoluene	87.1	%REC	60-120	1	SW8021		07/07/02	PXC-LV	

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-7  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-014A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-7  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-014A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	66.9	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	53.4	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	109	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	80.0	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	82.6	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	96.3	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-7  
**DATE SAMPLED:** 6/27/02  
**NEL SAMPLE ID:** L0206504-015A

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Reporting Limit</u>	<u>DF</u>	<u>Method</u>	<u>Prep Date</u>	<u>Analyzed</u>	<u>Analyst</u>
Aluminum	0.20	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.21	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	0.75	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	2.7	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	1.4	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	0.011	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.047	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.090	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-9S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-016A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	86.8	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-9S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-017A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-9S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-017A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	36.7	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	31.0	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	95.0	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	57.7	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	60.5	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	89.8	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-9S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-018A

Parameter	Result	Unit	Reporting		Method	Prep Date	Analyzed	Analyst
			Limit	DF				
Aluminum	ND	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.13	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	1.2	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	6.4	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	2.6	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.024	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.036	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-019A

<b>Parameter</b>	<b>Reporting</b>					<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>			
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
<b>Surr: Trifluorotoluene</b>	<b>92.3</b>	<b>%REC</b>	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-020A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-020A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	41.8	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	32.3	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	74.4	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	63.1	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	61.7	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	74.6	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-021A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	Reporting		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Aluminum	0.18	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.050	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	1.4	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	1.0	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	5.7	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.015	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-022A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	Reporting		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	48	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	3.3	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	5.8	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	17	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	80.7	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-023A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-023A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	44.1	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	43.5	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	82.5	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	75.7	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	69.2	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	86.2	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-6S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-024A

<b>Parameter</b>	<b>Reporting</b>							
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
Aluminum	0.21	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.49	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	1.3	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	0.044	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	3.9	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	1.7	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.053	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	0.099	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-025A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	80.8	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-026A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-026A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
<b>Surr: 2-Fluorophenol</b>	<b>36.0</b>	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
<b>Surr: Phenol-d6</b>	<b>28.0</b>	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
<b>Surr: 2,4,6-Tribromophenol</b>	<b>75.5</b>	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
<b>Surr: Nitrobenzene-d5</b>	<b>54.3</b>	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
<b>Surr: 2-Fluorobiphenyl</b>	<b>56.3</b>	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
<b>Surr: 4-Terphenyl-d14</b>	<b>82.2</b>	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3D  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-027A

<b>Parameter</b>	<b>Reporting</b>							
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
Aluminum	ND	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	<b>0.060</b>	<b>mg/L</b>	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	<b>1.5</b>	<b>mg/L</b>	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	<b>2.3</b>	<b>mg/L</b>	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	<b>3.8</b>	<b>mg/L</b>	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	<b>0.024</b>	<b>mg/L</b>	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-028A

<b>Parameter</b>	<b>Reporting</b>					<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>			
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	84.4	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-029A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-029A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	54.4	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	40.3	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	88.2	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	89.1	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	94.7	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	100	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-3S  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-030A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>					
			<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
Aluminum	ND	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	<b>0.081</b>	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	<b>0.88</b>	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	<b>1.5</b>	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	<b>1.7</b>	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	<b>0.0080</b>	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	<b>0.021</b>	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Up  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-031A

<b>Parameter</b>	<b>Reporting</b>					<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>			
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	81.2	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Up  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-032A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzo furan	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Up  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-032A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	31.5	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	22.7	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	61.7	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	56.4	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	53.1	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	71.2	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Up  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-033A

<b>Parameter</b>	<b>Reporting</b>						<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>		
Aluminum	1.2	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.083	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	0.19	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	0.015	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	0.85	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	0.18	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	0.010	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.0054	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Down  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-034A

Parameter	Result	Unit	Reporting			Prep Date	Analyzed	Analyst
			Limit	DF	Method			
MTBE	ND	µg/L	5.0	1	SW8021		07/07/02	PXC-LV
Benzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Toluene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Ethylbenzene	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Total Xylenes	ND	µg/L	2.0	1	SW8021		07/07/02	PXC-LV
Surr: Trifluorotoluene	78.8	%REC	60-120	1	SW8021		07/07/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Down  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-035A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Reporting</b>	<b>Analyzed</b>	<b>Analyst</b>
Acenaphthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Acenaphthylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Aniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Azobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benz(a)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(b)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(k)fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzoic acid	ND	µg/L	25	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(g,h,i)perylene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzo(a)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Benzyl alcohol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethoxy)methane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroethyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-chloroisopropyl)ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Bis(2-ethylhexyl)phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Bromophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Butyl benzyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Carbazole	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chloro-3-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chloronaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Chlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Chlorophenyl phenyl ether	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Chrysene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenz(a,h)anthracene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dibenzofuran	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-butyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,3-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,4-Dichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3,3'-Dichlorobenzidine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Diethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dimethylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Dimethyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4,6-Dinitro-2-methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,6-Dinitrotoluene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4-Dinitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
Di-n-octyl phthalate	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluoranthene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Fluorene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 15-Jul-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Down  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-035A

Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Hexachlorobutadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachlorocyclopentadiene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Hexachloroethane	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Indeno(1,2,3-cd)pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Isophorone	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylnaphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Methylphenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Naphthalene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
3-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitroaniline	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Nitrobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2-Nitrophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
4-Nitrophenol	ND	µg/L	10	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodimethylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodi-n-propylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
N-Nitrosodiphenylamine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pentachlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Phenanthrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyrene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Pyridine	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
1,2,4-Trichlorobenzene	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,5-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
2,4,6-Trichlorophenol	ND	µg/L	5.0	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorophenol	43.6	%REC	0-88	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Phenol-d6	31.4	%REC	0-63	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2,4,6-Tribromophenol	82.4	%REC	0-161	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: Nitrobenzene-d5	73.4	%REC	9-132	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 2-Fluorobiphenyl	72.1	%REC	16-127	1	SW8270C	07/03/02	07/04/02	JRW-LV
Surr: 4-Terphenyl-d14	86.8	%REC	16-163	1	SW8270C	07/03/02	07/04/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 15-Jul-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** HUNTSMAN  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Down  
**DATE SAMPLED:** 6/28/02  
**NEL SAMPLE ID:** L0206504-036A

<b>Parameter</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Aluminum	2.1	mg/L	0.050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Barium	0.094	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Beryllium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Boron	0.20	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Chromium	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Cobalt	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Copper	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Iron	1.8	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Manganese	0.22	mg/L	0.0050	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Molybdenum	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Nickel	ND	mg/L	0.040	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Silver	ND	mg/L	0.010	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Zinc	ND	mg/L	0.10	1	SW 6010B-To	07/02/02	07/05/02	JTY-Reno
Antimony	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Arsenic	0.0055	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Lead	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Selenium	ND	mg/L	0.0050	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno
Thallium	ND	mg/L	0.0020	5	SW 6020-Tota	07/09/02	07/10/02	RMD-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

B - Analyte detected in the associated Method Blank

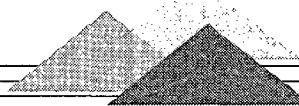
S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Date: 15-Jul-02

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**DECEMBER 2002 ANALYTICAL RESULTS**



# NEL LABORATORIES

**Corporate Headquarters**  
6490 S. McCarran Blvd. # 0-30  
Reno, NV 89509  
Phone: 775.348.2522  
Fax: 775.348.2546

**Las Vegas Laboratory**  
4208 Arcata Way, Suite A  
Las Vegas, NV 89030  
Phone: 702.657.1010  
Fax: 702.657.1577

Fred Small  
Terracon  
1630 Hickory Loop, Suite H  
Las Cruces, NM 88005  
  
TEL: (505) 527-1700

RE Project: **Huntsman-Brickman**

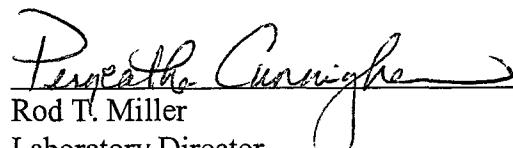
Order No.: **L0212124**

Dear Fred Small:

NEL Laboratories, Las Vegas received 8 samples on 12/10/2002 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.



Rod T. Miller  
Laboratory Director

\_\_\_\_\_  
Date

Certifications:

Arizona	AZ0518
California	2002
Idaho	Certified
Montana	Certified
Nevada	NV052
New Mexico	Certified

# NEL LABORATORIES

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## NEL Laboratories, Las Vegas

Date: 20-Dec-02

CLIENT: Terracon  
Project: Huntsman-Brickman  
Lab Order: L0212124

## CASE NARRATIVE

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Attached are the analytical results for samples in support of the above referenced project.

The samples submitted for this project were not sampled by NEL. Should you have any questions or comments, please feel free to contact our Client Services Department.

Analytical Comments: None.

# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** Huntsman-Brickman  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-09S  
**DATE SAMPLED:** 12/6/02  
**NEL SAMPLE ID:** L0212124-001A

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	Reporting			<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>	<b>Method</b>			
Benzene	ND	µg/L	10	1	SW8021	12/20/02		MKD-LV
Toluene	ND	µg/L	750	1	SW8021	12/20/02		MKD-LV
Ethylbenzene	ND	µg/L	750	1	SW8021	12/20/02		MKD-LV
Total Xylenes	ND	µg/L	620	1	SW8021	12/20/02		MKD-LV
Surr: Trifluorotoluene	106	%REC	60-120	1	SW8021	12/20/02		MKD-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 20-Dec-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Page 1 of 8

# NEL LABORATORIES

**CLIENT:** Terracon

**CLIENT ID:** MW-06D

**PROJECT ID:** Huntsman-Brickman

**DATE SAMPLED:** 12/6/02

**PROJECT #:** 68997611

**NEL SAMPLE ID:** L0212124-002A

**MATRIX:** AQUEOUS

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	Reporting		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Benzene	ND	µg/L	10	1	SW8021	12/20/02	MKD-LV	
Toluene	ND	µg/L	750	1	SW8021	12/20/02	MKD-LV	
Ethylbenzene	ND	µg/L	750	1	SW8021	12/20/02	MKD-LV	
Total Xylenes	ND	µg/L	620	1	SW8021	12/20/02	MKD-LV	
Surr: Trifluorotoluene	105	%REC	60-120	1	SW8021	12/20/02	MKD-LV	

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 20-Dec-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** Huntsman-Brickman  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** MW-06S  
**DATE SAMPLED:** 12/6/02  
**NEL SAMPLE ID:** L0212124-003A

<b>Parameter</b>			<b>Reporting</b>	<b>Limit</b>	<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Units</b>							
Benzene	ND	µg/L		10	1	SW8021		12/20/02	MKD-LV
Toluene	ND	µg/L		750	1	SW8021		12/20/02	MKD-LV
Ethylbenzene	ND	µg/L		750	1	SW8021		12/20/02	MKD-LV
Total Xylenes	ND	µg/L		620	1	SW8021		12/20/02	MKD-LV
Surr: Trifluorotoluene	95.5	%REC		60-120	1	SW8021		12/20/02	MKD-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 20-Dec-02

E - Value above quantitation range

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# NEL LABORATORIES

CLIENT: Terracon  
PROJECT ID: Huntsman-Brickman  
PROJECT #: 68997611  
MATRIX: AQUEOUS

CLIENT ID: MW-03D  
DATE SAMPLED: 12/7/02  
NEL SAMPLE ID: L0212124-004A

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>DF</u>	<u>Method</u>	<u>Prep Date</u>	<u>Analyzed</u>	<u>Analyst</u>
Benzene	ND	µg/L	10	1	SW8021		12/20/02	MKD-LV
Toluene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Ethylbenzene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Total Xylenes	ND	µg/L	620	1	SW8021		12/20/02	MKD-LV
Surr: Trifluorotoluene	102	%REC	60-120	1	SW8021		12/20/02	MKD-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 20-Dec-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Page 4 of 8

# NEL LABORATORIES

**CLIENT:** Terracon                   **CLIENT ID:** MW-03S  
**PROJECT ID:** Huntsman-Brickman    **DATE SAMPLED:** 12/7/02  
**PROJECT #:** 68997611               **NEL SAMPLE ID:** L0212124-005A  
**MATRIX:** AQUEOUS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	Reporting		<u>Method</u>	<u>Prep Date</u>	<u>Analyzed</u>	<u>Analyst</u>
			<u>Limit</u>	<u>DF</u>				
Benzene	ND	µg/L	10	1	SW8021		12/20/02	MKD-LV
Toluene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Ethylbenzene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Total Xylenes	ND	µg/L	620	1	SW8021		12/20/02	MKD-LV
Surr: Trifluorotoluene	99.5	%REC	60-120	1	SW8021		12/20/02	MKD-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 20-Dec-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** Huntsman-Brickman  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-UP  
**DATE SAMPLED:** 12/7/02  
**NEL SAMPLE ID:** L0212124-006A

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Benzene	ND	µg/L	10	1	SW8021		12/20/02	MKD-LV
Toluene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Ethylbenzene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Total Xylenes	ND	µg/L	620	1	SW8021		12/20/02	MKD-LV
Surr: Trifluorotoluene	100	%REC	60-120	1	SW8021		12/20/02	MKD-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 20-Dec-02

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** Huntsman-Brickman  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** River-Down  
**DATE SAMPLED:** 12/7/02  
**NEL SAMPLE ID:** L0212124-007A

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>Reporting</b>		<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
			<b>Limit</b>	<b>DF</b>				
Benzene	ND	µg/L	10	1	SW8021		12/20/02	MKD-LV
Toluene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Ethylbenzene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Total Xylenes	ND	µg/L	620	1	SW8021		12/20/02	MKD-LV
Surr: Trifluorotoluene	103	%REC	60-120	1	SW8021		12/20/02	MKD-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 20-Dec-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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# NEL LABORATORIES

**CLIENT:** Terracon  
**PROJECT ID:** Huntsman-Brickman  
**PROJECT #:** 68997611  
**MATRIX:** AQUEOUS

**CLIENT ID:** Dup-01  
**DATE SAMPLED:** 12/7/02  
**NEL SAMPLE ID:** L0212124-008A

<b>Parameter</b>	Reporting			<b>DF</b>	<b>Method</b>	<b>Prep Date</b>	<b>Analyzed</b>	<b>Analyst</b>
	<b>Result</b>	<b>Units</b>	<b>Limit</b>					
Benzene	ND	µg/L	10	1	SW8021		12/20/02	MKD-LV
Toluene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Ethylbenzene	ND	µg/L	750	1	SW8021		12/20/02	MKD-LV
Total Xylenes	ND	µg/L	620	1	SW8021		12/20/02	MKD-LV
Surr: Trifluorotoluene	98.5	%REC	60-120	1	SW8021		12/20/02	MKD-LV

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

Date: 20-Dec-02

E - Value above quantitation range

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**2002 Annual Groundwater Monitoring Report  
Former Brickland Refinery Site  
Sunland Park, New Mexico  
Terracon Project No.: 68997611**

Terracon

**CHAIN-OF-CUSTODY DOCUMENTATION**

## NEL LABORATORIES

## CHAIN OF CUSTODY

NEL Work Order: L0206504

P1.14

**Reno Laboratory**  
4750 Longley Ln. # 106  
Reno, NV 89502  
Phone: 775-348-2522  
Fax: 775-348-2546

**Las Vegas Laboratory**  
4208 Alcata Way, Ste. A  
N Las Vegas, NV 89030  
Phone: 702-657-1010  
Fax: 702-657-1577

**Albuquerque**      **Boise**      **Las Vegas**      **Phoenix**      **Reno**      **Sacramento**  
866-360-5726    800-200-2952    838-368-3282    888-238-2514    800-368-5221    800-368-5221

Company: **Terracos**

Address:

1630 Hickory Loop Suite H  
Phone Number: 505.527.1700  
Billing Address: 1630 Hickory Loop Suite H  
Los Cruces, NM 88005

Requested Turnaround:  5-day  2-day  1-day  Other

Sampled Time

Customer Sample Identification

NEL ID

Remarks

Sampled Time	Customer Sample Identification	NEL ID	Remarks
01 9:25 6/27/02	MW-15	01 3 AQ AE X	
02 9:25 6/27/02	MW-15	02 2 AQ E X	
03 9:25 6/27/02	MW-15	03 1 AQ BE X	
04 10:15 6/27/02	MW-4	04 3 AQ AE X	
05 10:15 6/27/02	MW-4	05 2 AQ E X	
06 10:15 6/27/02	MW-4	06 1 AQ BE X	
07 10:15 6/27/02	D40	07 3 AQ AE X	
08 10:15 6/27/02	D40	08 2 AQ E X	
09 10:15 6/27/02	D40	09 1 AQ BE X	

Custody Seal intact?  N  Yes Temp. 14°C  
Condition when received  good

Box #1	DW - Drinking Water WW - Waste Water OL - Oil/Organic Liquid A - Air	SD - Solid AQ - Aqueous C - Chemical D - NaOH	E - Ice Only F - Other G - Not Preserved
--------	---	--	--

Relinquished by (Print)	(Signature)	Date/Time	Received by (Print)	(Signature)	Date/Time
1 Victoria Trujillo	Victoria Trujillo	6/28/02 5pm	June Annif	J. Annif	6/28/02, 10:30am
2					
3					

## NEL LABORATORIES

## CHAIN OF CUSTODY

## NEL Work Order:

Pg. 24

**Reno Laboratory**  
4750 Longley Ln. # 106  
Reno, NV 89502  
Phone: 775-348-2522  
Fax: 775-348-2546

Phone Number:  
**505.523.1100**

Billing Address

Expected Due Date:

**7/18/2002**

Customer Sample Identification

Requested Turnaround:  5-day  2-day  1-day  Other

Project Name: <b>Huntsman</b>	Project Number: <b>63997011</b>
Purchase Order Number:	Sampled By: <b>Victoria Trujillo (Fred Smc 11)</b>
Quote No.:	Sales Rep.:

Address:

**1630 Hickory Loop, Suite H**  
Phone Number:  
**505.523.1092**

**1630 Hickory Loop Suite H**  
**Los Cielos NM 87105**

Customer Sample Identification

Requested Turnaround:  5-day  2-day  1-day  Other

Sampled Time	Date	Customer Sample Identification	NEL ID	# of Containers	Matrix (Box #1)	Preservative (Box #2)	Analysis	Remarks
10 11:05	<b>6/27/02</b>	<b>MUJ-14</b>	10 3	AQ AE	X			
11 11:05	<b>6/27/02</b>	<b>MUJ-14</b>	11 2	AQ E	X			
12 11:05	<b>6/27/02</b>	<b>MUJ-14</b>	12 1	AQ BE	X			
13 11:35	<b>6/27/02</b>	<b>MUJ-7</b>	13 3	AQ AE	X			
14 11:35	<b>6/27/02</b>	<b>MUJ-7</b>	14 2	AQ E	X			
15 11:35	<b>6/27/02</b>	<b>MUJ-7</b>	15 1	AQ BE	Y			
16 11:50	<b>6/27/02</b>	<b>MUJ-9S</b>	16 3	AQ AE	X			
17 11:50	<b>6/28/02</b>	<b>MUJ-9S</b>	17 2	AQ E	X			
18 11:50	<b>6/28/02</b>	<b>MUJ-9S</b>	18 1	AQ BE	X			

Custody Seal intact?  N None Temp. **14°C**  
Condition when received **goody**

Box #1	DW - Drinking Water	SD - Solid	A. HCl	E. Ice Only
	WW - Waste Water	AO - Aqueous	B. HNO <sub>3</sub>	F. Other
	OL - Oil/Organic Liquid	A. Air	C. H <sub>2</sub> SO <sub>4</sub>	G. Not Preserved
			D. NaOH	

Box #2	A. HCl
	B. HNO <sub>3</sub>
	C. H <sub>2</sub> SO <sub>4</sub>
	D. NaOH

Relinquished by (Print)	(Signature)	Date/Time	Received by (Print)	(Signature)	Date/Time
<b>Victoria Trujillo</b>			<b>Bruce Lunn</b>	<b>6/29/02</b>	<b>10:30 AM</b>
<b>2</b>					
<b>3</b>					

## NEL LABORATORIES

## CHAIN OF CUSTODY

## NEL Work Order:

Pg. 3/4

## Reno Laboratory

4750 Longley Ln, # 106  
Reno, NV 89502  
Phone: 775-348-2522  
Fax: 775-348-2546

## Las Vegas Laboratory

4208 Arcata Way, Ste. A  
N Las Vegas, NV 89030  
Phone: 702-657-1010  
Fax: 702-657-1577

Project Name: Huntsman

Purchase Order Number:

Project Number: 63997ell

Sampled By:

Victoria Trujillo / Fred Small

Sales Rep:

## NEL LABORATORIES

## CHAIN OF CUSTODY

## NEL Work Order: 10206504

Pg. 4/4

**Reno Laboratory**  
4750 Longley Ln, # 106  
Reno, NV 89502  
Phone: 775-348-2522  
Fax: 775-348-2546

**Albuquerque**      **Boise**      **Las Vegas**      **Phoenix**      **Reno**      **Sacramento**  
866-360-5726    800-200-2952    888-368-3282    888-238-2514    800-368-5221    800-368-5221

Company: **TERACON**

Address:

1630 Hickory Loop Suite H  
Phone Number: 527.1700  
Billing Address: 1630 Hickory Loop Suite H  
Las Cruces NM 88005

**Las Vegas Laboratory**  
4208 Arcata Way, Ste. A  
N Las Vegas, NV 89030  
Phone: 702-657-1010  
Fax: 702-657-1577

Project Name: **Huntzman**  
Purchase Order Number:  
Quote No.:  
Sales Rep: **Victoria Trujillo /FRED SMALL**

Sampled Time	Date	Customer Sample Identification	NEL ID	# of Containers	Matrix (Box #1)	Preservative (Box #2)	Analysis	Remarks
12:08	4/28/02	MW - 3S	293	1Q AE	X			
12:08	4/28/02	MW - 3S	292	1Q E	X			
12:08	4/28/02	MW - 3S	301	1Q BE	X			
12:30	4/28/02	River - Up	313	1Q AE	X			
12:30	4/28/02	River - Up	322	1Q E	X			Received one liter broken
12:30	4/28/02	River - Up	331	1Q BE	X			None received
12:45	4/28/02	River - Up Down	343	1Q AE	X			
12:45	4/28/02	River - Down	352	1Q AE	X			
12:45	4/28/02	River - Down	361	1Q BE	X			
12:45	4/28/02	River - Down	373	1Q AE	X			None received
		TRIP BLANK	373	1Q AE	X			
Custody Seal intact? <input checked="" type="checkbox"/> N <input type="checkbox"/> Yes		Temp. <u>14°C</u>						
Condition when received		(good)						
Relinquished by (Print)	(Signature)	Date/Time	Received by (Print)	(Signature)	Date/Time			
1 Victoria Trujillo	Victoria Trujillo	5pm 4/28/02	Steve Lanning	L. L.	10:30 ~			
2								
3								

Box #1 DW - Drinking Water  
WW - Waste Water  
OL - Oil/Organic Liquid

SD - Solid  
AQ - Aqueous  
A - Air

Box #2 A. HCl  
B. HNO<sub>3</sub>  
C. H<sub>2</sub>SO<sub>4</sub>  
D. NaOH

E. Ice Only  
F. Other  
G. Not Preserved



2002 Annual Groundwater Monitoring Report  
Former Brickland Refinery Site  
Sunland Park, New Mexico  
Terracon Project No.: 68997611

Terracon

**GROUNDWATER SAMPLING DATA SHEETS**

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Wilmotman
Job Location:	Brockland Refinery
Job No.	68997611
Test Date:	6/27/02
Weather:	
MW #	15 Sampled By: WT / FVS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6/26/2002
Measuring Method:	Time: 11:19 Casing Diameter (d): 4 Volume of Water in Well: 45 gal. (.041 x dxd x h)
Measuring Point:	TOC Evacuation Method: pump.
Static Water Level:	13.21 Decontamination Procedure:
Total Well Depth:	35.20 Alconox + Tensol
Height of Water Column (h):	21.99

<b>EVACUATION RECORD</b>					
Time:	8:52	9:03	9:13	9:25	
Vol. Purged (gal):	Initial	15	15	15	
Water Temperature (F):	81.1	79.3	79.3	79.5	
pH (standard units):	7.13	7.00	6.97	7.02	
Specific Conductivity (uS):	3.92	5.00	4.85	4.79	
Turbidity (subjective):	yellow	yellow	clear	clear	
Odor (subjective):	yes	yes	yes	yes	
Dissolved Oxygen:					

<b>SAMPLING DATA</b>		
Date: 6/27/2002	Time: 9:25	Samples Filtered: 10.
No. of Sample Containers Collected:	6	Method:
Analysis Requested:; 8021, 8270, 19 Priority Pollutants		Samples Preserved: 100.
Laboratory: NEL		Method: HNO <sub>3</sub> , HCl, Ac.

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Hinman
Job Location:	Buckland Refinery
Job No.	68997611
Test Date:	6/27/2002
Weather:	
MW #	4 Sampled By: WT/PVS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6/26/2002
Measuring Method:	Casing Diameter (d): 4
Measuring Point:	TOC (.041 x dxd x h)
Static Water Level:	2.97
Total Well Depth:	18.00
Height of Water Column (h):	15.03
Time:	12:51
Evacuation Method:	Pump
Decontamination Procedure:	Alconox + 2 rinses

<b>EVACUATION RECORD</b>				
Time:	9:48	9:54	10:03	10:07
Vol. Purged (gal):	Initial	10	10	10
Water Temperature (F):	77.6	76.5	77.8	76.2
pH (standard units):	6.74	7.16	6.77	7.14
Specific Conductivity (uS):	6.30	6.88	7.09	7.15
Turbidity (subjective):	1.4/1	clear	clear	clear
Odor (subjective):	yes	yes	no	no
Dissolved Oxygen:				

<b>SAMPLING DATA</b>				
Date: 6/27/2002	Time: 10:15	Samples Filtered:	10	
No. of Sample Containers Collected:	6	Method:		
Analysis Requested:	8021 8270			
Priority Pollutants		Samples Preserved:	4	
Laboratory: NE		Method:	HNO <sub>3</sub> , HCl, ice	

\* Note: Duplicate samples taken from this well. Total 6.

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntsman
Job Location:	Brinkland Refinery
Job No.	68997611
Test Date:	6/26/2002
Weather:	
MW #	14      Sampled By: WT/PVS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6/26/2002
Measuring Method:	Time: 1:0x Casing Diameter (d): 4 Volume of Water in Well: 45 gal (.041 x dxd x h)
Measuring Point:	TOC Evacuation Method: pump
Static Water Level:	4.57 Decontamination Procedure:
Total Well Depth:	26.10 11 pumps + 2 rinses
Height of Water Column (h):	21.53

<b>EVACUATION RECORD</b>				
Time:	10:34	10:43	10:52	11:05
Vol. Purged (gal):	Initial	15	15	15
Water Temperature (F):	76.6	78.3	78.5	78.4
pH (standard units):	6.79	7.16	6.81	6.78
Specific Conductivity (uS):	6.26	6.80	6.76	6.68
Turbidity (subjective):	clear	clear	clear	clear
Odor (subjective):	yes	no	no	no
Dissolved Oxygen:				

<b>SAMPLING DATA</b>		
Date: 6/27/2002	Time: 11:05	Samples Filtered: 10
No. of Sample Containers Collected:	10	Method:
Analysis Requested:	8021, 8270	
Priority Pollutants		Samples Preserved: yes
Laboratory: NE		Method: HNO <sub>3</sub> , TIC, ice

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntzman
Job Location:	Buckland Refinery
Job No.	68997611
Test Date:	4/27/2002
Weather:	
MW #	7 Sampled By: WT/PVS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	4/26/2002
Measuring Method:	Time: 12:33 Casing Diameter (d): 4 Volume of Water in Well: 25 gal (.041 x dxd x h)
Measuring Point:	TOC Evacuation Method: pump
Static Water Level:	3.68 Decontamination Procedure:
Total Well Depth:	15.50 All conn + 2 rinses
Height of Water Column (h):	11.82

<b>EVACUATION RECORD</b>				
Time:	11:18	11:24	11:30	11:35
Vol. Purged (gal):	Initial	10	10	5
Water Temperature (F):	85.0	79.5	78.8	78.8
pH (standard units):	7.16	6.93	7.07	7.10
Specific Conductivity (uS):	216	2.59	4.18	4.14
Turbidity (subjective):	yellow	light	clear	clear
Odor (subjective):	yes	yes	yes	no
Dissolved Oxygen:				

<b>SAMPLING DATA</b>		
Date:	4/27/2002	Time: 11:35
No. of Sample Containers Collected:	6	Samples Filtered: No Method:
Analysis Requested:	8021, 8270, Priority Pollutants	
Laboratory:	NET	Samples Preserved: Yes Method: HNO <sub>3</sub> , HCl, Ice

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntsman
Job Location:	Breckland Refinery
Job No.	68997611
Test Date:	6/27/2002
Weather:	
MW #	9S Sampled By: WT/PVS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6/27/2002
Measuring Method:	Time: 2:51 Casing Diameter (d): 4 Volume of Water in Well: 20 gal (.041 x dxd x h)
Measuring Point:	TOC Evacuation Method: pump
Static Water Level:	4.96 Decontamination Procedure:
Total Well Depth:	15.50 Allanay + 2 rinses
Height of Water Column (h):	10.60

<b>EVACUATION RECORD</b>				
Time:	1:41	1:44	1:46	1:50
Vol. Purged (gal):	Initial	10	5	5
Water Temperature (F):	86.6	80.4	77.5	75.6
pH (standard units):	7.02	7.05	7.00	7.01
Specific Conductivity (uS):	4.21	4.66	4.61	4.91
Turbidity (subjective):				
Odor (subjective):	yes	yes	yes	
Dissolved Oxygen:				

<b>SAMPLING DATA</b>		
Date: 6/27/2002	Time: 11:50	Samples Filtered: 12
No. of Sample Containers Collected:	6	Method:
Analysis Requested:	8021, 8070	
Principal Pollutants		Samples Preserved: yes
Laboratory:	AEI	Method: $\text{HNO}_3, \text{HCl}, 1\%$

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntsman
Job Location:	Brockland Refinery
Job No.	68997611
Test Date:	6/28/2002
Weather:	
MW # (eD)	Sampled By: WFT/PVS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6/28/2002
Measuring Method:	Time: 2:55 Casing Diameter (d): 4 Volume of Water in Well: (65 gal .041 x dxd x h)
Measuring Point:	TMC Evacuation Method: pump
Static Water Level:	5.22 Decontamination Procedure:
Total Well Depth:	38.00 (1100 ft + 2 min)
Height of Water Column (h):	32.78

<b>EVACUATION RECORD</b>				
Time:	9:15	9:26	9:51	10:15
Vol. Purged (gal):	Initial	25	20	20
Water Temperature (F):	72.6	71.7	72.8	73.0
pH (standard units):	6.70	7.12	7.24	7.41
Specific Conductivity (uS):	8.29	9.36	9.27	9.40
Turbidity (subjective):	clear	clear	clear	clear
Odor (subjective):	no	yes	no	no
Dissolved Oxygen:				

<b>SAMPLING DATA</b>			
Date:	6/28/2002	Time:	10:5
No. of Sample Containers Collected:	6	Samples Filtered:	10
Analysis Requested:	8021, 8270 Pronely Polychloro	Method:	
Laboratory:	127	Samples Preserved:	4
		Method:	HNO <sub>3</sub> , HCl, ice

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntzman
Job Location:	Brieland Refinery
Job No.	68997611
Test Date:	6/28/2002
Weather:	
MW #	6S Sampled By: WR/PMS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6/26/2002
Measuring Method:	Time: 2:51 Casing Diameter (d): 4 Volume of Water in Well: 40 gal (.041 x dxd x h)
Measuring Point:	70C
Static Water Level:	5.43
Total Well Depth:	17.00
Height of Water Column (h):	21.43

<b>EVACUATION RECORD</b>			
Time:	10:22	10:25	10:30
Vol. Purged (gal):	Initial	5	5
Water Temperature (F):	75.2	73.5	73.4
pH (standard units):	7.06	7.15	6.98
Specific Conductivity (uS):	6.69	6.93	7.04
Turbidity (subjective):	yellow	yellow	yellow
Odor (subjective):	yes	yes	yes
Dissolved Oxygen:			

<b>SAMPLING DATA</b>			
Date:	6/28/2002	Time:	10:52
No. of Sample Containers Collected:	6	Samples Filtered:	1
Analysis Requested:	8021 8070	Method:	
Prominent Pollutants		Samples Preserved:	(p)
Laboratory:	8 LDF	Method:	HNO3, HCl, Ice

Note: Well ran dry  
after 10 gal  
12 gal purged.

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Hintonman
Job Location:	Breckland Refinery
Job No.	68997611
Test Date:	6/28/2002
Weather:	
MW # 30	Sampled By: WT/PUS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6/28/2002
Measuring Method:	Time: 3:23 Casing Diameter (d): 4 Volume of Water in Well: 65 gal (.041 x dxd x h)
Measuring Point:	TTC
Static Water Level:	4.37
Total Well Depth:	37.50
Height of Water Column (h):	33.13
Evacuation Method:	pump
Decontamination Procedure:	Alconox + 5 rinses

<b>EVACUATION RECORD</b>				
Time:	11:44	11:25	11:36	11:44
Vol. Purged (gal):	Initial	25	20	20
Water Temperature (F):	76.5	76.5	74.6	74.8
pH (standard units):	7.17	7.20	7.42	7.64
Specific Conductivity (uS):	8.81	8.11	8.66	8.93
Turbidity (subjective):	clear	clear	clear	clear
Odor (subjective):	none	no	no	no
Dissolved Oxygen:				

<b>SAMPLING DATA</b>				
Date:	6/28/2002	Time:	11:45	Samples Filtered: 16
No. of Sample Containers Collected:	6			Method:
Analysis Requested:	8051 8270			
Primary Pollutants				Samples Preserved: yes
Laboratory:	LDF			Method: HNO3, HCl, Ice

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntzman
Job Location:	Breckin Refinery
Job No.	68997611
Test Date:	6/23/2002
Weather:	
MW #	35 Sampled By: WWT/PWS

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	10/26/2002
Measuring Method:	Time: 3:27 Casing Diameter (d): 4 Volume of Water in Well: 30gal (.041 x dxd x h)
Measuring Point:	TOC Evacuation Method: pump
Static Water Level:	4.81 Decontamination Procedure:
Total Well Depth:	16.50 Alkalinity + D lenses
Height of Water Column (h):	11.609

<b>EVACUATION RECORD</b>			
Time:	11:53	12:03	12:08
Vol. Purged (gal):	Initial	10	10
Water Temperature (F):	77.5	75.8	73.4
pH (standard units):	7.36	7.26	7.43
Specific Conductivity (uS):	6.22	6.08	6.41
Turbidity (subjective):	clear	clear	clear
Odor (subjective):	no	no	no
Dissolved Oxygen:			

<b>SAMPLING DATA</b>			
Date: 6/23/2002	Time: 12:08	Samples Filtered:	10
No. of Sample Containers Collected:	6	Method:	
Analysis Requested:	8021 8270 fruity, petroleum		
Laboratory:	NG	Samples Preserved:	(yes) HNO <sub>3</sub> , HCl, ice

\* Note Well purged dry.  
~17 gal.

## GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name:	<i>Hunziker</i>
Job Location:	<i>Buckland Refinery</i>
Job No.	<b>68997611</b>
Test Date:	
Weather:	
MW #	Sampled By: <i>VVT / PLS</i>

WATER LEVEL DATA / EVACUATION DATA	
Date:	Time:
Measuring Method:	Casing Diameter (d):
	Volume of Water in Well:
Measuring Point:	(.041 x dxd x h)
	Evacuation Method:
Static Water Level:	Decontamination Procedure:
Total Well Depth:	
Height of Water Column (h):	

EVACUATION RECORD						
Time:						
Vol. Purged (gal):	<b>Initial</b>					
Water Temperature (F):						
pH (standard units):						
Specific Conductivity (uS):						
Turbidity (subjective):						
Odor (subjective):						
Dissolved Oxygen:						

SAMPLING DATA		
Date:	Time:	Samples Filtered:
No. of Sample Containers Collected:		Method:
Analysis Requested:		
		Samples Preserved:
Laboratory:		Method:

- \* 4 samples: filter-up (trace bottles used)
- \* 6 samples: filter-down

Huntsman Bi-annual Field Notes 6/26/2003					
Well/ Well Point	Time	Depth to Product	Depth to Water	Product Thickness	Comments
MW-090	2:55	-	-	-	Dry
MW-095	2:51	-	4.96		
MW-060	2:55	-	5.22		
MW-065	3:20	-	5.43		
MW-030	3:23	-	4.37		
MW-135	3:27	-	4.81		
MW-01	3:31	-	4.03		
MW-12	3:38	-	3.48		
MW-05	12:40	-	3.74		
MW-04	12:51	-	2.97		
MW-14	1:01	-	4.57		
MW-08	12:37	-	3.84		
MW-07	12:33	-	3.68		
MW-17	12:16	-	6.27		
MW-11	12:45	-	5.85		
MW-10	12:08/2002	-	6.87		
MW-16					
MW-15	11:19	-	13.22		
WP-32	-	-	-	-	Dry
WP-270	11:31	11.84	11.83	0.01	
WP-275	11:27	-	11.68		
WP-25	-	-	Dry	-	Dry
WP-31	-	-	-0	-	Dry
WP-07	11:00	-	11.58	-	Dry
WP-01	<del>2:51</del>				
WP-02	12:04	-	6.05		
WP-03	12:00		5.62		
WP-260	11:50	7.69	7.68	0.01	
WP-265	9:00	8.69	6.89	1.80	
WP-30	12:27	-	10.66	-	
WP-14	4:01	-	3.89	-	The pit
WP-33	12:43		9.89		
WP-210S	12:08/2002	7.56	7.14	0.42	After pump + 3 deep.

45  
 30  
 45  
 25  
 20  
 65  
 40 12  
 65  
 30 17  
 324

CEDEC 2002

Huntsman Bi-annual Field Notes

Well/ Well Point	Time	Depth to Product	Depth to Water	Product Thickness	Comments
MW-15	10:15 am	-	15.24	-	NP
WP-32	10:19 am	-	-	-	Dry.
WP-27D	10:21	13.64	14.00	0.46	Stinks! product.
WP-07S	10:34	-	13.66	-	NP
WP-25	10:38	-	-	-	Dry.
MW-16	10:45	-	13.25	-	NP
WP-31	10:51	-	-	-	Dry.
WP-7	10:53	--	10.53	-	NP (green)
WP-01	10:58	-	10.10	-	NP
WP-02	11:03	-	8.27	-	NP
WP-26D	11:06	-	9.87	-	NP
WP-20S	11:09	8.93	9.11	0.13	product pumped out 7pm 02
MW-10	12:30	9.43	9.14	0.01	sheen
MW-11	11:24	-	7.894	-	NP
WP-30	11:20	-	10.96	-	NP (sheen)
WP-33	11:27	-	9.25	-	NP
MW-03	11:31	-	-	-	Dry.
MW-17	11:40	-	8.44	-	NP
MW-07	11:48	-	5.33	-	NP
MW-14	11:55	-	6.75	-	NP
MW-08	11:52	-	5.62	-	NP
MW-04	12:00 pm	-	5.09	-	NP
MW-05	12:06	-	5.95	-	NP
WP-14	12:13	5.7	-	-	TAR
MW-09D	12:22	6.07	6.97	-	NP
MW-09D	12:23	-	-	-	Dry!
MW-06D	12:28	-	7.138	-	NP!
MW-06S	12:31	-	7.37	-	NP
MW-03S	12:38	-	6.43	-	NP
MW-03D	12:41	-	6.51	-	NP
MW-01	12:45	-	6.11	-	NP
MW-12	12:53	-	5.56	-	NP

9  
60  
7  
60  
13  
149

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntsman Polymers Corporation
Job Location:	Sunland Park, NM
Job No.	68997611
Test Date:	6 DEC 2002
Weather:	cool
MW #	95 Sampled By: FVS/ VVT

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6 Dec 2002
Measuring Method:	Time: 12:22 Casing Diameter (d): 4
Measuring Point:	TOC Volume of Water in Well: 107.17 (.041 x dxd x h) 13 gal
Static Water Level:	6.97 Evacuation Method: Pump
Total Well Depth:	13.6 Decontamination Procedure: alconox + 2 rinses
Height of Water Column (h):	6.63

<b>EVACUATION RECORD</b>					
Time:	12:45	5	5	5	
Vol. Purged (gal):	Initial	250	253	255	
Water Temperature (F):	63.6	67.5	68.5	67.7	
pH (standard units):	6.72	6.82	6.93	7.02	
Specific Conductivity (uS):	8.89	8.36	7.97	7.83	
Turbidity (subjective):	yellow	yellow	yellow	clear	
Odor (subjective):	yes	yes	yes	no	
Dissolved Oxygen:	-	-	-	-	

<b>SAMPLING DATA</b>					
Date:	6 Dec 2002	Time:	2:58 pm	Samples Filtered:	No
No. of Sample Containers Collected:	3			Method:	N/A
Analysis Requested:	802				
Laboratory:	NEL			Samples Preserved:	Yes
				Method:	HCl

2:58 pm

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntsman Polymers Corporation
Job Location:	Sunland Park, NM
Job No.	68997611
Test Date:	6 Dec 02
Weather:	Cool
MW #	D6D Sampled By: FVS/ VVT

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6 Dec. 02
Measuring Method:	Time: 12:28 Casing Diameter (d): 4 Volume of Water in Well: 60 gal (.041 x dxd x h)
Measuring Point:	TOC Evacuation Method: pump
Static Water Level:	7.38 Decontamination Procedure:
Total Well Depth:	38.00 Alconox + 2 rinses
Height of Water Column (h):	30.62

<b>EVACUATION RECORD</b>				
Time:	3:16	3:26	3:40	3:51
Vol. Purged (gal):	Initial	20	20	20
Water Temperature (F):	64.2	61.9	63.7	63.1
pH (standard units):	7.54	7.59	7.42	7.43
Specific Conductivity (uS):	9.88	10.87	11.11	11.11
Turbidity (subjective):	Clear	C	C	C
Odor (subjective):	NO	N	N	N
Dissolved Oxygen:	-	-	-	-

<b>SAMPLING DATA</b>				
Date:	6 Dec 2002	Time:	3:35 pm	Samples Filtered: No
No. of Sample Containers Collected:	3			Method: N/A
Analysis Requested:	BOZI			Samples Preserved: Yes
Laboratory:	TEL			Method: HCl

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntsman Polymers Corporation
Job Location:	Sunland Park, NM
Job No.	68997611
Test Date:	6 Dec 2002
Weather:	cool
MW #	808 Sampled By: FVS/ VVT

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6 Dec 2002
Measuring Method:	Time: 12:31
Measuring Point:	Casing Diameter (d): 4
Static Water Level:	Volume of Water in Well: (.041 x dxd x h) 9 gal
Total Well Depth:	Evacuation Method: pump
Height of Water Column (h):	Decontamination Procedure: Alconox + 2 rinses

<b>EVACUATION RECORD</b>				
Time:	4:00	4:04	4:10	
Vol. Purged (gal):	Initial	5	32	5
Water Temperature (F):	63.0	65.5	63.4	
pH (standard units):	7.22	7.30	7.23	
Specific Conductivity (uS):	8.06	7.49	8.10 <sup>8</sup>	
Turbidity (subjective):	yel.	yel	black	
Odor (subjective):	sp	slight	slight	
Dissolved Oxygen:	—	—	—	—

dry  
7 gal

<b>SAMPLING DATA</b>	
Date:	6 Dec 2002 Time: 4:45pm
No. of Sample Containers Collected:	3 Samples Filtered: No
Analysis Requested:	N/A
Laboratory:	NEC Samples Preserved: Yes
	Method: HCl

## GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name:	Huntsman Polymers Corporation
Job Location:	Sunland Park, NM
Job No.	68997611
Test Date:	6 Dec 2002
Weather:	COOL
MW #	03D Sampled By: FVS/ VVT

WATER LEVEL DATA / EVACUATION DATA	
Date:	6 Dec 2002
Measuring Method:	Casing Diameter (d): 4
Measuring Point:	Volume of Water in Well: $\pi$ (.041 x dxd x h) 60 gal
Static Water Level:	4.51
Total Well Depth:	Decontamination Procedure: all over + 2 rinses
Height of Water Column (h):	37.5
	30.99

EVACUATION RECORD				
Time:	10:40	11:49	11:01	11:13
Vol. Purged (gal):	Initial	20	20	20
Water Temperature (F):	60.5	62.3	62.2	62.5
pH (standard units):	6.67	7.08	7.18	7.21
Specific Conductivity (uS):	9.87	10.06	9.98	9.94
Turbidity (subjective):	N	N	N	N
Odor (subjective):	N	N	N	N
Dissolved Oxygen:	-	-	-	-

SAMPLING DATA	
Date: 6 Dec 2002	Time: 11:30 am
No. of Sample Containers Collected:	3
Analysis Requested:	8021
Laboratory:	NSL
	Samples Filtered: No
	Method: N/A
	Samples Preserved: Yes
	Method: HCl

## GROUNDWATER SAMPLING DATA SUMMARY

<b>GENERAL DATA</b>	
Job Name:	Huntsman Polymers Corporation
Job Location:	Sunland Park, NM
Job No.	68997611
Test Date:	6 Dec 2002
Weather:	cool
MW #	035 Sampled By: FVS/ VWT

<b>WATER LEVEL DATA / EVACUATION DATA</b>	
Date:	6 Dec 2002
Measuring Method:	Time: 12:38 Casing Diameter (d): 4 Volume of Water in Well: 20 gal (.041 x dxd x h)
Measuring Point:	TDC Evacuation Method: pump
Static Water Level:	6.43 Decontamination Procedure:
Total Well Depth:	14.5 alcohol + 2 rinses
Height of Water Column (h):	10.07

<b>EVACUATION RECORD</b>				
Time:	11:25	11:36	11:38	
Vol. Purged (gal):	Initial	5	5	5
Water Temperature (F):	64.3	64.5	64.1	
pH (standard units):	7.30	7.83	7.43	
Specific Conductivity (uS):	7.09	4.85	4.70	
Turbidity (subjective):	N	N	N	
Odor (subjective):	N	P	Y.	
Dissolved Oxygen:	—	—	—	

9gals  
well  
went  
dry

<b>SAMPLING DATA</b>	
Date: 6 Dec 2002	Time: 12:00
No. of Sample Containers Collected:	3
Analysis Requested:	8021
Laboratory:	NET
	Samples Filtered: No
	Method: N/A
	Samples Preserved: Yes
	Method: HCL

River Up - 12:10  
River Down - 12:15

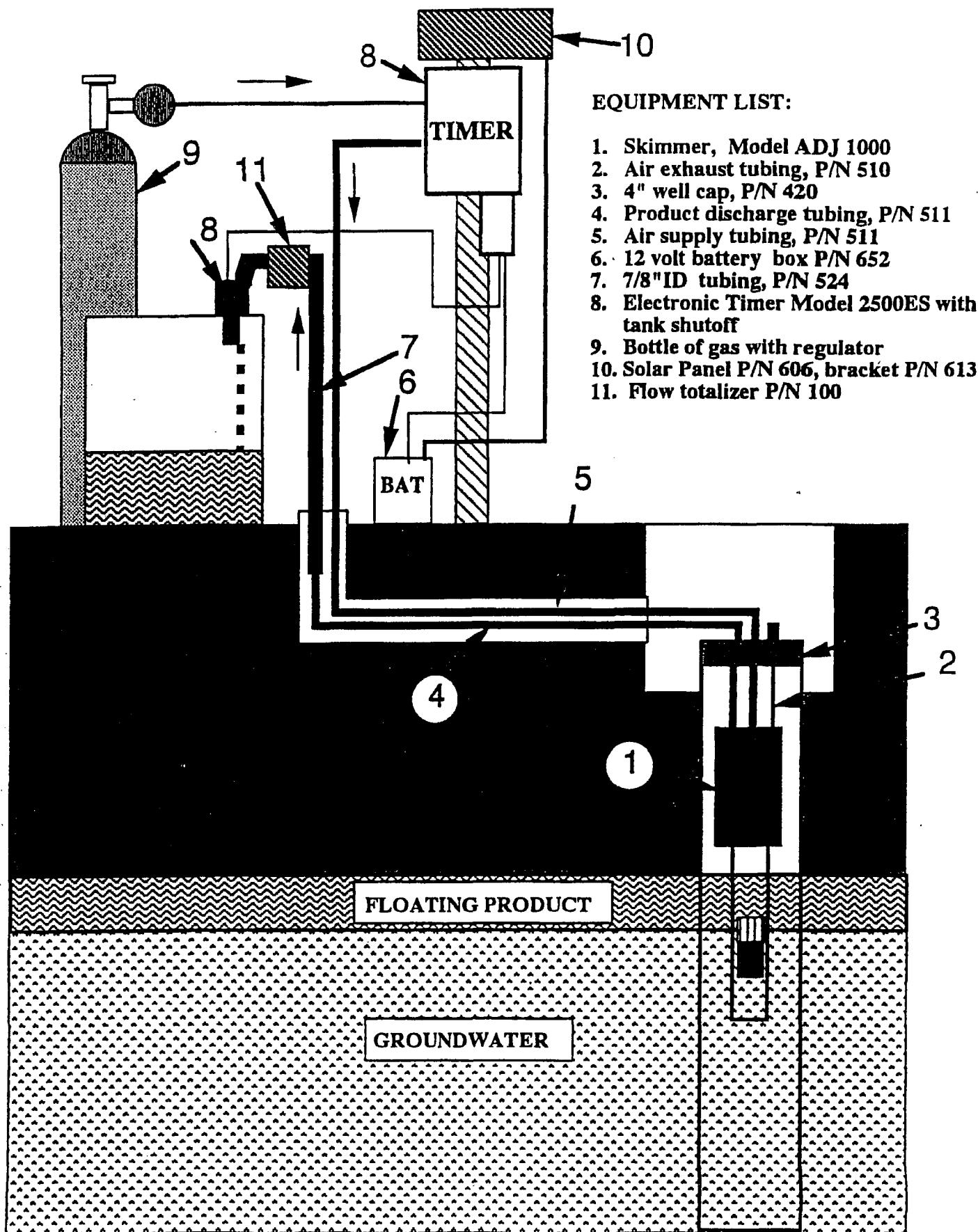
**2002 Annual Groundwater Monitoring Report  
Former Brickland Refinery Site  
Sunland Park, New Mexico  
Terracon Project No.: 68997611**

Terracon

**XITECH PRODUCT RECOVERY SYSTEM DRAWING AND SPECIFICATIONS**

# XITECH LNAPL RECOVERY SYSTEM

## Without the use of AC Power

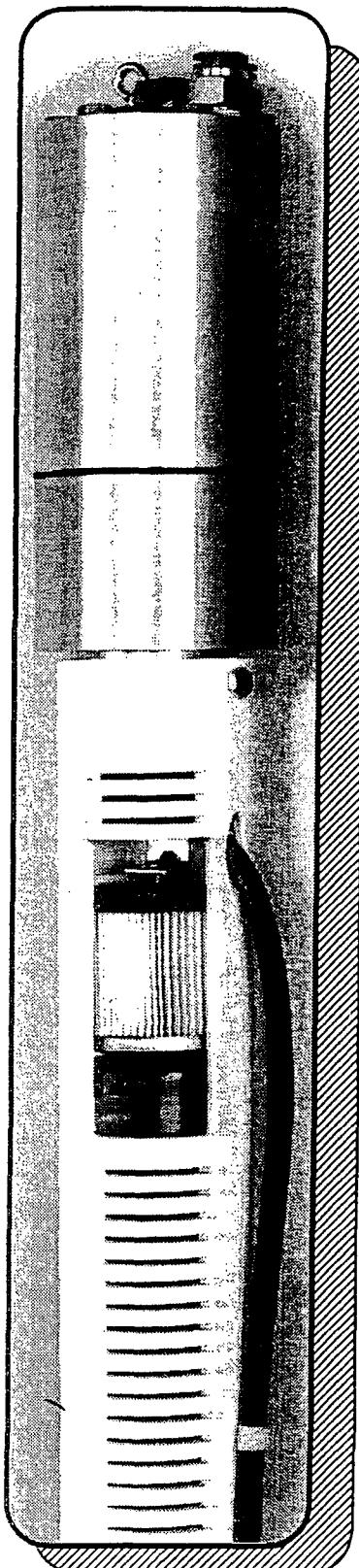


# 4" LNAPL Recovery Skimmer

The ADJ1000 Skimmer removes product ONLY down to a sheen, operates on bottled gas, is intrinsically safe, and can be installed in less than 1 hour. The ADJ1000 requires no above ground controls to operate, Requires a 4" well diameter, has 30 inches of float travel, uses a dual entry hydrophobic filter, pumps over 25 GPH, and consumes less than .5 CFM of air. The Optional Xitech Programmable Site Managers provide intermittent pumping control for the ADJ1000 Skimmer, continuous electronic monitoring of the high level tank shutoff sensor, displays total run time of system, and operate on a 12DC/120AC/220AC power sources.

## Specifications

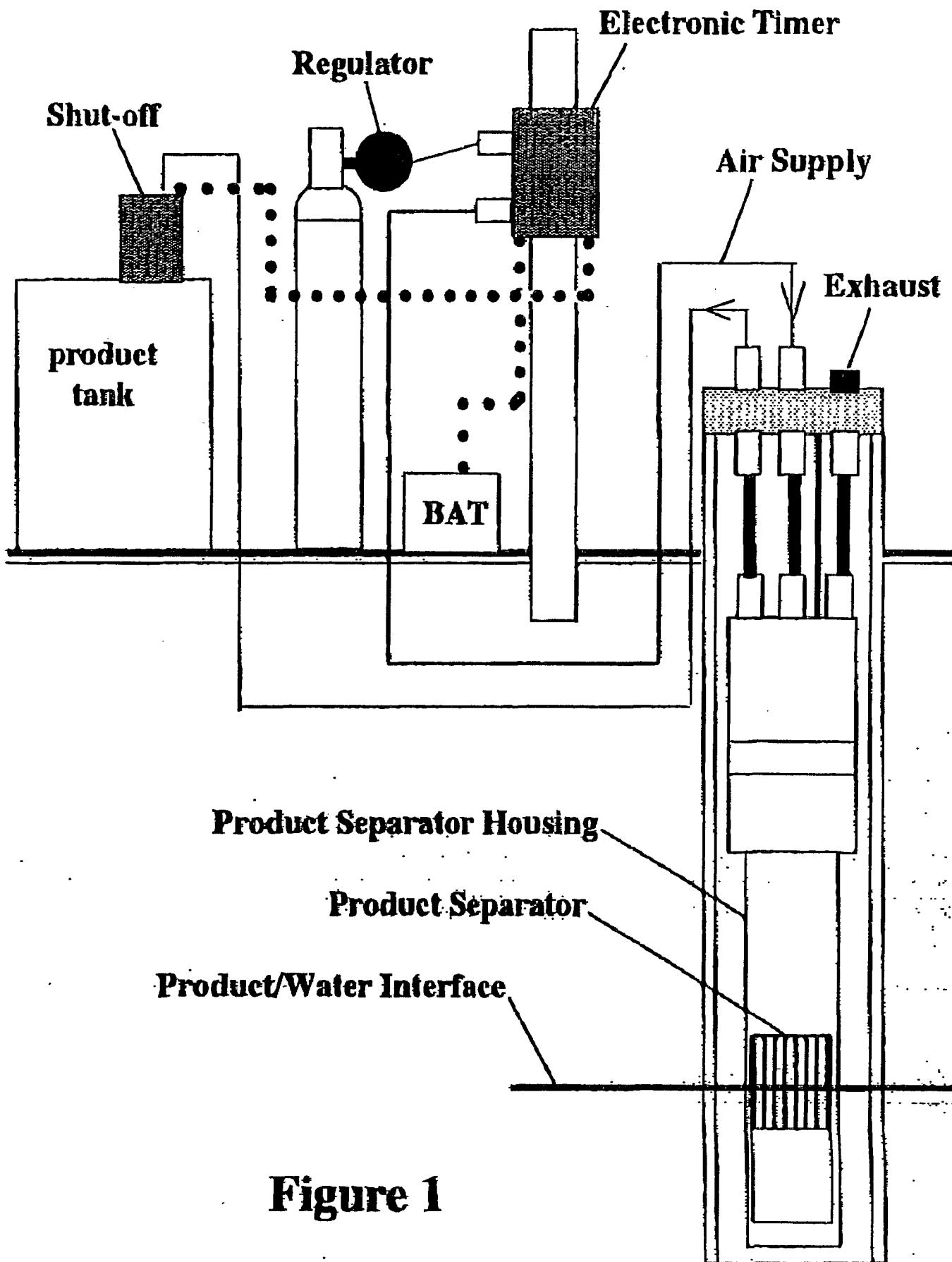
Pumping range from 5-25 GPH  
Skimmer float travel: 30 inches  
Operating pressure range: 35-125 PSIG  
Maximum operating well depth: 200 feet  
Max air requirements: .5 CFM@125 PSIG  
Air quality requirements: 5-10 Microns  
Size: 3-1/2" DIA. X 48" L  
Weight: 11 LBS  
Materials : PVC, SST, Viton, Buna, Al  
Order No. ADJ1000



U.S. Patent# 5,326,458

# 2500ES Electronic Timer with Tank Shut-off

## Without the use of AC power



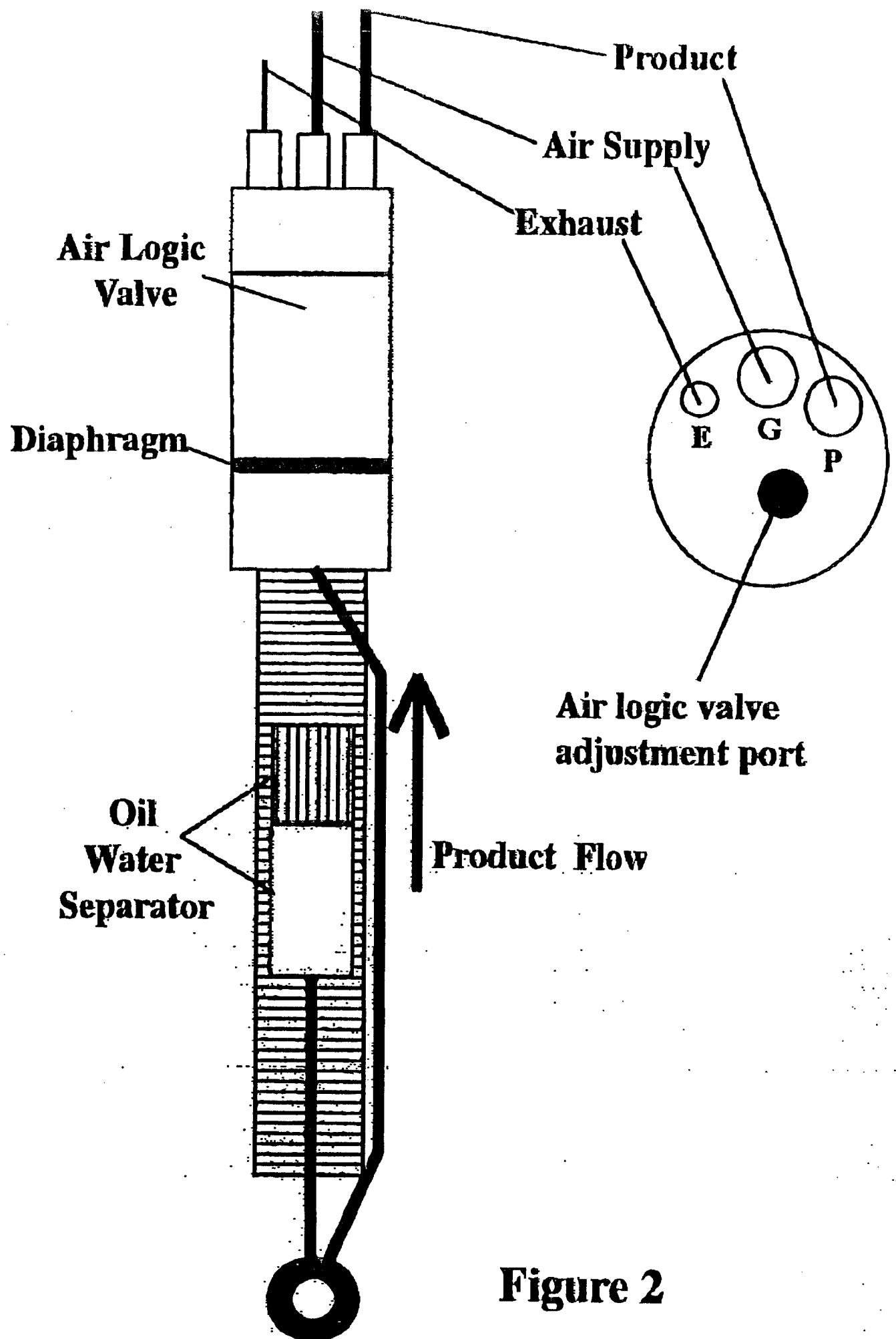


Figure 2

# 2500ES Electronic Timer

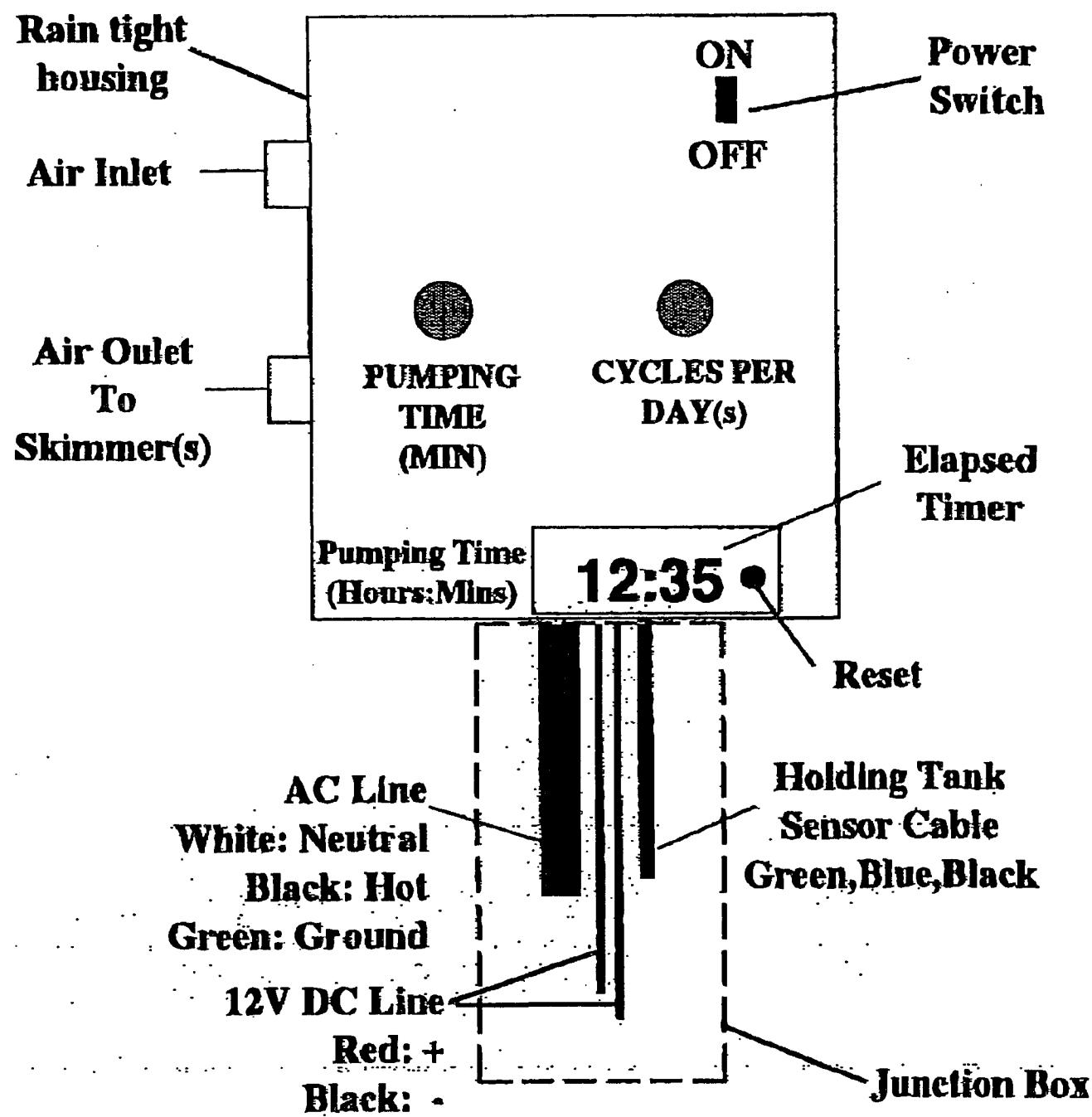


Figure 3

**2002 Annual Groundwater Monitoring Report  
Former Brickland Refinery Site  
Sunland Park, New Mexico  
Terracon Project No.: 68997611**

Terracon

**DISPOSAL MANIFEST**

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <i>N/A</i>	Manifest Doc. No. <i>12-09-01</i>	2. Page 1 of / <i>1</i>	
<b>GENERATOR</b>	3. Generator's Name and Mailing Address <i>HUNTSMAN POLYMER CORPORATION 2400 S. GRANDVIEW AVE., ODESSA, TX</i>	4. Generator's Phone (915) 640-8354	79760	Former BRICKLAND REFINERY SUNLAND PARK, NM	
	5. Transporter 1 Company Name <i>TERRACON</i>	6. US EPA ID Number <i>N/A</i>	A. Transporter's Phone <i>(505) 507-1700</i>		
	7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
	9. Designated Facility Name and Site Address <i>RHINO ENVIRONMENTAL 1.7. N OF NEWMAN OTERO COUNTY NM 88051</i>	10. US EPA ID Number <i>N/A</i>	C. Facility's Phone <i>(915) 842-9911</i>		
	11. Waste Shipping Name and Description <i>EHS</i>	12. Containers No.   Type	13. Total Quantity	14. Unit Wt/Vol	
	a. HYDROCARBON CONTAMINATED WATER	1 TANK	155 gal		
	b.				
	c.				
	d.				
<b>TRANSPORTER</b>	D. Additional Descriptions for Materials Listed Above <i>Oil - Non Hazardous</i>	E. Handling Codes for Wastes Listed Above			
	15. Special Handling Instructions and Additional Information <i>1. NOT FOR DRINKING OR ANY FORM OF USE 2. PREVENT CONTACT WITH POTABLE WATER</i>				
<b>FACILITY</b>	16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
	Printed/Typed Name <i>FREDERICK V. SMALL</i>	Signature <i>FD Small</i>	Month <i>12</i>	Day <i>9</i>	Year <i>02</i>
	17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <i>FREDERICK V. SMALL</i>	Signature <i>FD Small</i>	Month <i>12</i>	Day <i>9</i>	Year <i>02</i>
	18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name	Signature	Month	Day	Year
	19. Discrepancy Indication Space <i>ADDRESS LINE #5: 1630 HICKORY LOOP, SUITE H LAS CRUCES, NM 88005</i>				
	20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. Printed/Typed Name <i>Jenny Rivera</i>	Signature <i>Jenny R.</i>	Month <i>12</i>	Day <i>9</i>	Year <i>02</i>

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <i>NA</i>	Manifest Doc. No.	2. Page 1 of		
<b>GENERATOR</b>	3. Generator's Name and Mailing Address <i>HUNTSMAN POLYMERS CORPORATION 2400 S. GRANDVIEW AVE, ODESSA, TX 79760</i>	4. Generator's Phone (915) 640-8354			Former BRICKLAND REFINERY SUNNYSIDE PARK, NM	
	5. Transporter 1 Company Name <i>TERRACON</i>	6. US EPA ID Number <i>NA</i>	A. Transporter's Phone <i>(505) 527-1700</i>			
	7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone			
	9. Designated Facility Name and Site Address <i>RHINO ENVIRONMENTAL 17 MILES NTH OF NEWMAN OTERO COUNTY, NM DP 1051</i>	10. US EPA ID Number <i>NA</i>	C. Facility's Phone			
11. Waste Shipping Name and Description <i>HYDROCARBON CONTAMINATED WATER</i>				12. Containers No. <i>1.</i>	13. Total Quantity <i>330.</i>	14. Unit Wt/Vol <i>CAL</i>
a.						
b.						
c.						
d.						
D. Additional Descriptions for Materials Listed Above <i>OIL - NON HAZARDOUS</i>				E. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information <i>(a) NOT FOR DRINKING OR ANY FORM OF USE. (b) PREVENT CONTACT WITH POTABLE WATER</i>						
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste. Printed/Typed Name <i>Victoria Trujillo</i> Signature <i>Victoria Trujillo</i> Month Day Year <i>10/01/02</i>						
<b>TRANSPORTER</b>	17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <i>FRED V. SMALL</i> Signature <i>Fred V. Small</i> Month Day Year <i>10/01/02</i>					
	18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name <i>GEOARDO RIVERO</i> Signature <i>GEOARDO RIVERO</i> Month Day Year <i>10/01/02</i>					
	19. Discrepancy Indication Space					
<b>Facility</b>	20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. Printed/Typed Name <i>GEOARDO RIVERO</i> Signature <i>GEOARDO RIVERO</i> Month Day Year <i>10/01/02</i>					