AP - 001

ANNUAL MONITORING REPORT

YEAR(S):

2004

AP-1

HUNTSMAN

February 16, 2005

Mr. Roger Anderson
New Mexico Oil Conservation Division
1220 So. St. Francis Dr.
Santa Fe, NM 87505

RE: **Submission of the 2004 Annual Groundwater Report for the Former Brickland Refinery Site**
Sunland Park, New Mexico
Huntsman Polymers Corporation

Dear Mr. Anderson:

Enclosed is a copy of the 2004 Annual Groundwater Report for the Former Brickland Refinery Site. As agreed upon on February 11, 2003, the report will be submitted on or before April 1 for the previous year.

Please do not hesitate to contact me at 432-640-8354 any time you have questions or need additional information.

A copy of this report is also being sent to the District 2 Office in Artesia.

Sincerely,

Glen Rhodes

Glen Rhodes
Environmental Engineer - Groundwater
Huntsman Polymers Corporation

cc: NMOCD District 2, 1301 W. Grand Ave., Artesia NM 88210

cc w/o enclosures:
Mary Wells / Fred Small, Terracon
Steve Melton
Roger Martin
File 415.2

2004 ANNUAL GROUNDWATER MONITORING REPORT

FORMER BRICKLAND REFINERY SITE
SUNLAND PARK, NEW MEXICO

TERRACON PROJECT NO. 68997611
February 1, 2005

Prepared for:

HUNTSMAN POLYMERS CORPORATION
Odessa, Texas

Prepared by:

TERRACON
Las Cruces, New Mexico

Terracon

Terracon
Consulting Engineers & Scientists

1630 Hickory Loop, Suite H
Las Cruces, New Mexico 88005
Phone 505.527.1700
Fax 505.527.1092
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February 1, 2005

Mr. Roger Martin
Huntsman Polymers Corporation
P.O. Box 3986
Odessa, Texas 79760

Re: 2004 Annual Groundwater Monitoring Report
Former Brickland Refinery Site
Sunland Park, New Mexico
Terracon Project No. 68997611

Dear Mr. Martin:

Terracon has completed the two 2004 semi-annual monitoring events for the above-referenced site. The two monitoring events were completed in general compliance with the services outlined in Terracon's Task Order No. 2 (Terracon Proposal No. P99-033E) dated April 27, 1999, authorized by Mr. Roger Martin on April 30, 1999 and with the follow-up letter dated September 23, 2002.

This 2004 Annual Groundwater Monitoring Report is based on results of field activities conducted by Terracon in June and December 2004, and contains monitoring methods, observations, conclusions and recommendations made relative to the site. Please read the report carefully for details.

We appreciate the opportunity to be of service to you on this project and look forward to working with you in the future. If there are questions concerning the report or if we may be of further assistance, please call.

Sincerely,
TERRACON

Prepared by:

Frederick V. Small
Senior Scientist

Reviewed by;

Mary E. Wells, P.E.
Las Cruces Manager

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APPENDICES

1.0 EXECUTIVE SUMMARY

This 2004 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 2004. 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.

Since 2004 is an even year, sample collection and testing was conducted on five (5) off-site wells, MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S, in addition to the four (4) on-site wells, MW-4, MW-7, MW-14, and MW-15. Conclusions relevant to groundwater conditions and the remediation performance at the old Brickland Refinery are presented below.

- Results of the June 2004 sampling event indicate that benzene, toluene, ethylbenzene, and xylene were not detected in samples collected from the five (5) off-site wells and two of the three on-site wells (off-site wells: MW-9S, MW-6D, MW-6S, MW-3D, and MW-3S; on-site wells: MW-7 and MW-15). See Table 3. Benzene was detected in two on-site wells, MW-4 and MW-14 with concentrations of 45 µg/L and 230 µg/L, respectively. Toluene, ethylbenzene, or xylenes were not detected in MW-4 or MW-14.

- Benzene, toluene, ethylbenzene and total xylenes (BTEX) were not detected in the samples collected from the river.

- Results of the December 2004 sampling event indicate BTEX were not detected in any of the samples collected from the five off-site monitoring wells listed above or from the river.

- Polynuclear aromatic hydrocarbons (PAH) levels were not detected (ND) in the samples collected from the nine monitoring wells (five off-site and four on-site) or the river during the June 2004 sampling event (see Table 4).

- The results for the analyses of the priority pollutant metals for the June 2004 monitoring event indicate that concentrations of boron in the groundwater samples collected from the nine monitor wells exceeded the New Mexico Water Quality Control Commission (NMWQCC) levels. Boron was detected in the two river samples, but the concentrations were below NMWQCC levels. Iron levels exceeded NMWQCC standards in eleven of

the twelve samples (including the duplicate) collected from the wells and the river (the MW-6D sample was below the NMWQCC standard of 1.0 mg/L). Manganese exceeded NMWQCC standards in all twelve samples collected from the monitoring wells and the river. Antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium and zinc were not detected in the groundwater and river samples. Minor concentrations of barium were detected in the twelve samples collected from the wells and the river but were below NMWQCC standards. Aluminum was detected in ten of the twelve samples (including the duplicate) collected from the wells and the river (aluminum was not detected in the MW-6D and MW-15 samples). The two river samples were above NMWQCC standards (see Table 5).

- Free-phase product was detected in the product recovery/monitoring well, MW-10, during the June 2004 monitoring event. Two well points (WP-26S and WP-27D) had measurable thickness of 0.63 foot and 0.06 foot, respectively, during the June 2004 monitoring event.

- The product recovery well, MW-10 had a measurable free-phase product thickness of 0.05 foot when checked during the December 2004 monitoring event. Free-phase product thickness in two well points (WP-26S and WP-27D) were 0.66 foot and 0.11 foot, respectively during the December 2004 monitoring event (see Table 6).

- Since the installation of the Xitech product recovery system in December 1998, an approximate total of 90 gallons of free-phase product has been extracted from recovery well MW-10. A significant amount of product was extracted during the 2004 period but was not removed from the site during the period due to transportation scheduling conflicts and site conditions.

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). Huntsman (formerly Rexene Corporation) currently owns the site. From 1933 to 1958, the site was operated as a petroleum refinery and was producing both gasoline and jet fuel. The site 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 operation 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 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).

Terracon has maintained a stand-alone free-phase product recovery system on the site as part of the Stage 2 Abatement Plan. 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 semi-annual groundwater monitoring at the subject site in June and December 2004. The monitoring program was conducted in accordance with the Groundwater Monitoring Plan and Stage 2 Abatement Plan, approved by Mr. Bill Olsen of the NMOCD in his letter dated December 23, 1998. Tasks were conducted in general accordance with applicable NMOCD, New Mexico Environment Department (NMED) and Environmental Protection Agency (EPA) regulations, procedures and guidelines.

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

- Measured depth to groundwater in 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 provided a summary of the free-phase recovery system performance.

- Submitted groundwater samples collected from five (5) off-site monitoring wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S) and four (4) on-site monitoring wells (MW-4, MW-7, MW-14, and MW-15) in June 2004, and groundwater samples collected from five (5) off-site monitoring wells (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S) in December 2004. Since 2004 is an even year, samples were collected from both the on-site and off-site monitoring wells during the June monitoring event and only the five off-

site monitoring wells during the December monitoring event as per the approved Groundwater Monitoring Plan.

- 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.

- Analytical testing for the June monitoring event included BTEX, PAH, and twenty priority pollutant metals. Samples were analyzed for BTEX only for the December monitoring event.

- Coordinated purge-water waste disposal with Rhino Environmental Services (Rhino) of El Paso, Texas.

- Prepared 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 off-site groundwater monitoring wells MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S.

    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 2004 semi-annual monitoring events based on groundwater elevations obtained from the monitoring wells.

    7. BTEX concentration maps for the two 2004 semi-annual monitoring events.

    8. Free-phase hydrocarbon thickness maps for the two 2004 semi-annual monitoring events.

3.0 GROUNDWATER ELEVATION, HYDRAULIC GRADIENT AND FLOW DIRECTION

The hydraulic gradient beneath the former Brickland Refinery in June 2004 was approximately 0.0018 foot/foot and groundwater flow direction was estimated to be S 53° E. The hydraulic gradient in December 2004 was calculated to be approximately 0.0015 foot/foot and the flow direction was approximately S 62° 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 screened intervals do not correlate with the monitoring well screens. Groundwater elevation contour maps for the June 2004 and December 2004 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 2004 correlate well with the higher levels measured during the summer months of previous years. Similarly, the groundwater elevations in December 2004 correlate well with the lower levels measured during the winter months of previous years. A groundwater elevation versus time graph for all wells is presented in Figure 3c.

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. June 1995 had the highest stage of approximately six (6) feet since 1993. The graphical plot of gage heights versus time is presented on Figure 3d included in Appendix A.

4.0 FREE-PHASE PRODUCT REMOVAL

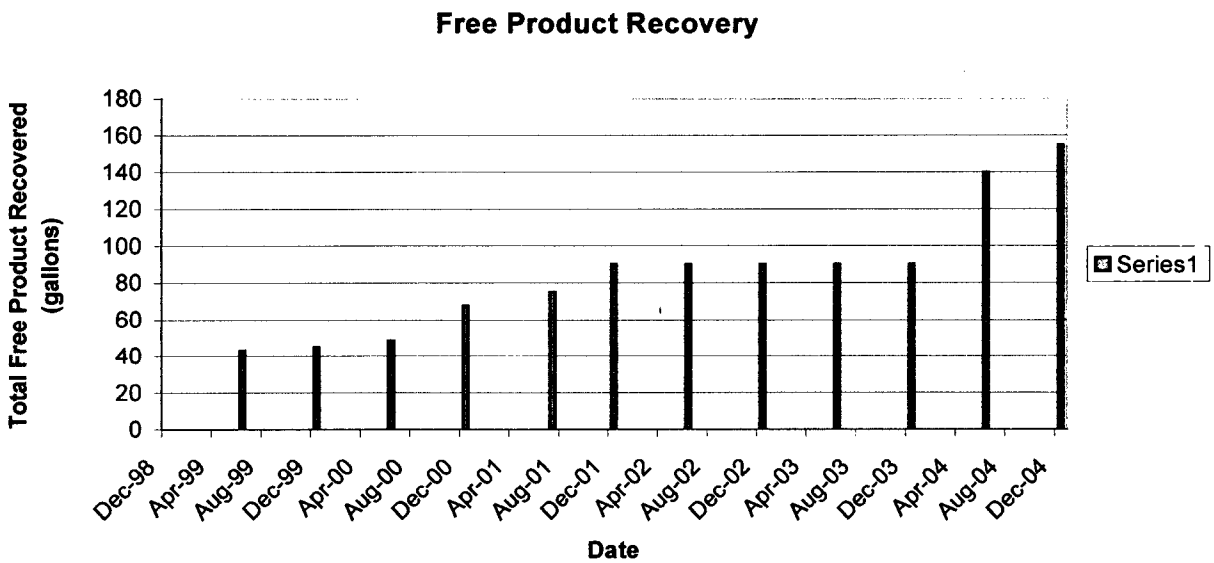
4.1 Free-Phase Product Thickness

Free-phase product thickness in each monitoring well and well point was measured with a KECK oil/water interface meter. The June and December 2004 and historical product thickness measurements for each monitoring point are listed in Table 6. Free-Phase Hydrocarbon Thickness maps for the June and December 2004 monitoring events are

depicted in Figures 4a and 4b, respectively. 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 16, 2004, a total of approximately 155 gallons of free-phase product had been removed from recovery well MW-10 (see chart below). Although free-phase product was extracted from the well, no free-phase product was removed from the site during the year 2004 due to transportation conflicts and site conditions.



Additionally, a total of 275 gallons and 150 gallons of water were purged from the sampled monitoring wells during the June and December 2004 monitoring events, respectively. Terracon coordinated and subcontracted with Rhino for the off-site disposal 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 disposal via landfarming and bioremediation. No free-phase product from recovery well MW-10 was disposed in 2004. At the time of this report, the free-phase product tank was more than one-half full, but due to transportation scheduling conflicts and site conditions the disposal contractor has not yet collected the free-phase product for off-site destruction.

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 2004 sampling event. 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 2004 monitoring event.

The five wells off-site (MW-3S, MW-3D, MW-6S, MW-6D and MW-9S) were sampled during the December monitoring event and monitoring wells, MW-6S and MW-3S again purged dry in the December 2004 event. Of the estimated three well casing volumes, only twelve and seven gallons (nineteen gallons total) were able to be purged from MW-3S during the June and December 2004 monitoring events, respectively. Of the estimated thirty-eight gallons that would normally be purged from monitoring well MW-6S during the two monitoring events, only eight gallons could be purged (sixteen gallons total) during the June and December 2004 monitoring events. The Groundwater Sampling Data Sheets are provided in the Appendix C.

A total of 275 gallons and 150 gallons of water were purged from the sampled monitoring wells during the June and December 2004 monitoring events, respectively. The purged water was disposed of by Rhino Environmental Services of El Paso, Texas, a licensed waste disposal contractor. Disposal manifests are enclosed in Appendix D.

Groundwater samples were collected from each well after purging. A duplicate sample was collected from MW-6S during the June monitoring event. For the December 2004 event, the duplicate sample was also 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 2004 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 also collected during the June 2004 sampling event, in 500ml bottles containing nitric acid (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) are summarized in Table 3. This table lists BTEX concentrations for the period from June 2000 to December 2004. BTEX concentrations for sampling events prior to June 2000 are included in previously submitted reports.

6.1.1 Analyses

Laboratory results from the June 2004 sampling event indicate that benzene was detected only in two monitoring wells, MW-4 and MW-14 with 45 µg/L and 230 µg/L, respectively. Toluene, ethylbenzene, and xylenes were not detected in any of the wells.

Laboratory results for the December 2004 sampling event indicate that hydrocarbons were not detected in the samples collected.

Hydrocarbon concentration maps displaying the benzene concentrations for the two 2004 sampling events are presented in Figure 4a (June 16-17, 2004) and Figure 4b (December 16, 2004). The relationship between benzene concentrations and static water level for MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S are depicted in Figures 5a through 5e, respectively.

The laboratory reports and Chain-of-Custody (C-O-C) documentation are included in Appendix C.

6.1.2Comparison to Prior Data

The five off-site wells located on the eastern perimeter of the site (MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S), no longer appear to exhibit hydrocarbon concentration above detection levels.

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 PAH has not been detected since 1999. Based on the results of the PAH analyses in the June 2004 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. Historical sample analytical results for PAHs are listed in Table 4. PAH concentrations for sampling events prior to June 2000 are included in previously submitted reports.

6.3 Priority Pollutant Metals

Historical (2000 through 2004) 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 2004 are highlighted in boldface type. Analytical results for years prior to 2000 are included in previously submitted reports. The results of the analyses for metals for the 2004 semi-annual monitoring event indicate that boron concentrations exceeded NMWQCC standards in the ten groundwater samples. Boron was also detected in the two river samples but the concentrations were below NMWQCC standards. Iron concentrations exceeded NMWQCC standards in eleven of the twelve samples (including the duplicate) collected from the wells and the river. The iron concentration in the sample collected from MW-6D was below the NMWQCC standard. Manganese levels exceeded NMWQCC standards in all twelve samples collected from the monitoring wells and the river. Antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium and zinc were not detected in the groundwater and river samples collected. Minor concentrations of barium were detected in the twelve samples collected from the wells and the river but were below NMWQCC standards. Aluminum was detected in ten of the twelve samples collected from the wells

and the river (aluminum was not detected in the MW-6D and MW-15 samples). However, the two river samples exhibited aluminum concentrations above NMWQCC standards (see Table 5).

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 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 monthly intervals to monitor system performance, adjust pump depth or cycle if deemed appropriate, replace the bottled nitrogen supply when necessary, perform maintenance to system components, and to check for any vandalism.

CONCLUSIONS

Since 2004 is an even year, sample collection and testing was conducted on five (5) off-site wells, MW-3S, MW-3D, MW-6S, MW-6D, and MW-9S, in addition to the four (4) on-site wells, MW-4, MW-7, MW-14, and MW-15. Conclusions relevant to groundwater conditions and the remediation performance at the old Brickland Refinery are presented below.

- Results of the June 2004 sampling event indicate that benzene, toluene, and ethylbenzene were not detected in samples collected from the five (5) off-site wells and two of the three on-site wells (off-site wells: MW-9S, MW-6D, MW-6S, MW-3D, and MW-3S; on-site wells: MW-7 and MW-15). See Table 3. Benzene was detected in two

on-site wells, MW-4 and MW-14 with concentrations of 45 µg/L and 230 µg/L, respectively. Toluene, ethylbenzene, or xylenes were not detected in MW-4 or MW-14.

- Benzene, toluene, ethylbenzene and total xylenes (BTEX) were not detected in the samples collected from the river.

- Results of the December 2004 sampling event indicate BTEX were not detected in any of the samples collected from the five off-site monitoring wells listed above or from the river.

- Polynuclear aromatic hydrocarbons (PAH) levels were not detected (ND) in the samples collected from the nine monitoring wells (five off-site and four on-site) or the river during the June 2004 sampling event (see Table 4).

- The results for the analyses of the priority pollutant metals for the June 2004 monitoring event indicate that concentrations of boron in the groundwater samples collected from the nine monitor wells exceeded the New Mexico Water Quality Control Commission (NMWQCC) levels. Boron was detected in the two river samples, but the concentrations were below NMWQCC levels. Iron levels exceeded NMWQCC standards in eleven of the twelve samples (including the duplicate) collected from the wells and the river (the MW-6D sample was below the NMWQCC standard of 1.0 mg/L). Manganese exceeded NMWQCC standards in all twelve samples collected from the monitoring wells and the river. Antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium and zinc were not detected in the groundwater and river samples. Minor concentrations of barium were detected in the twelve samples collected from the wells and the river but were below NMWQCC standards. Aluminum was detected in ten of the twelve samples (including the duplicate) collected from the wells and the river (aluminum was not detected in the MW-6D and MW-15 samples). The two river samples were above NMWQCC standards (see Table 5).

- Free-phase product was detected in the product recovery/monitoring well, MW-10, during the June 2004 monitoring event. However, two well points (WP-26S and WP-27D) had measurable thickness of 0.63 foot and 0.06 foot, respectively, during the June 2004 monitoring event.

- The product recovery well, MW-10 had a measurable free-phase product thickness of 0.05 foot when checked during the December 2004 monitoring event. Free-phase product levels in two well points (WP-26S and WP-27D) were 0.66 foot and 0.11 foot, respectively during the December 2004 monitoring event (see Table 6).

- Since the installation of the Xitech product recovery system in December 1998, an approximate total of 155 gallons of free-phase product has been extracted from

recovery well MW-10. A significant amount of product was extracted during the 2004 period but was not removed from the site during the period due to transportation scheduling conflicts and site conditions.

8.0 RECOMMENDATIONS

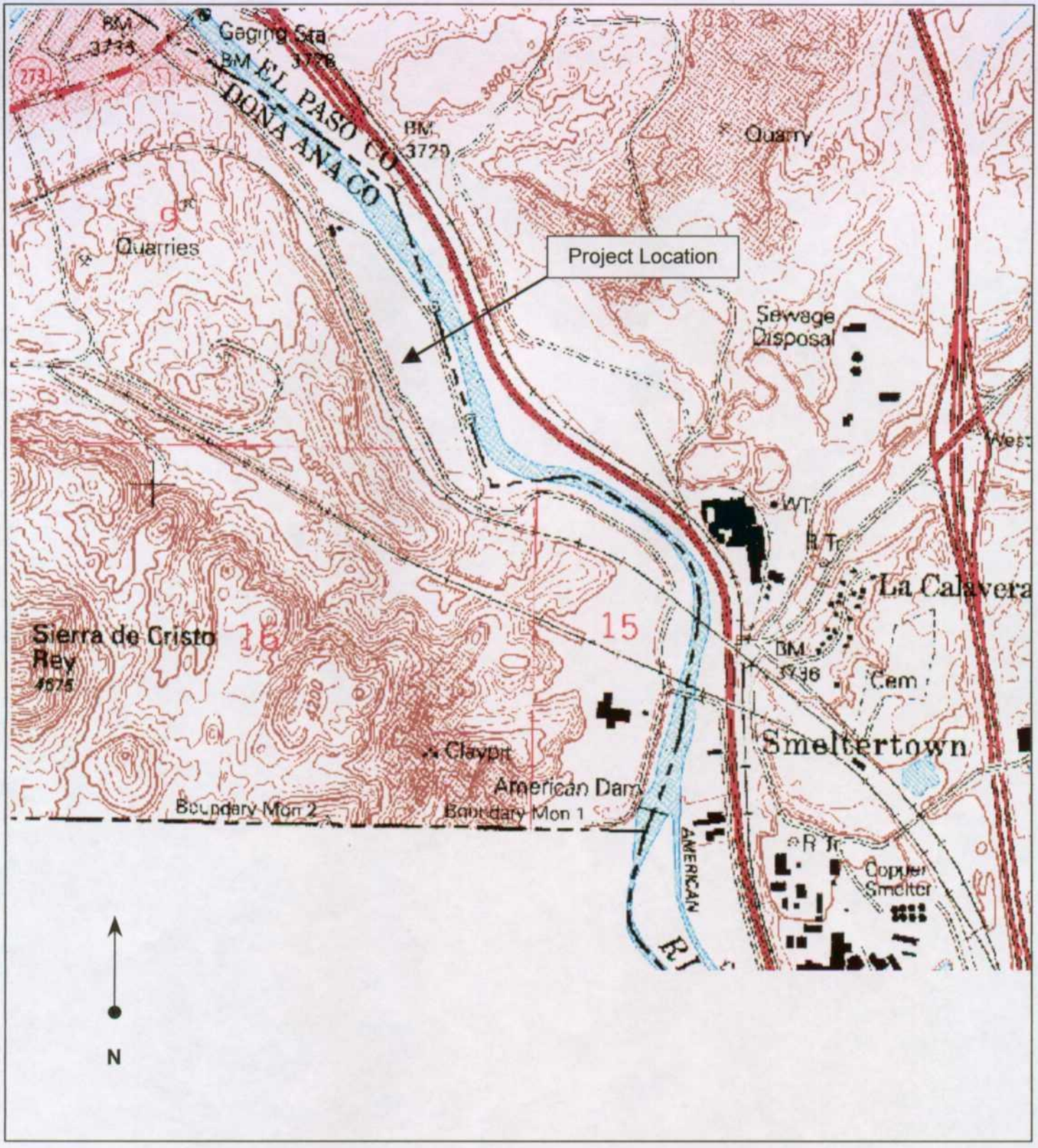
The following recommendations are proposed for the remediation system and monitoring operations at the Brickland Refinery.

- Continue free product recovery operations.

- Continue with the existing sampling and monitoring program on a semi-annual basis. The next sampling event is scheduled for June 2005. Since there was measurable free-phase product in MW-10, continue to monitor MW-10.

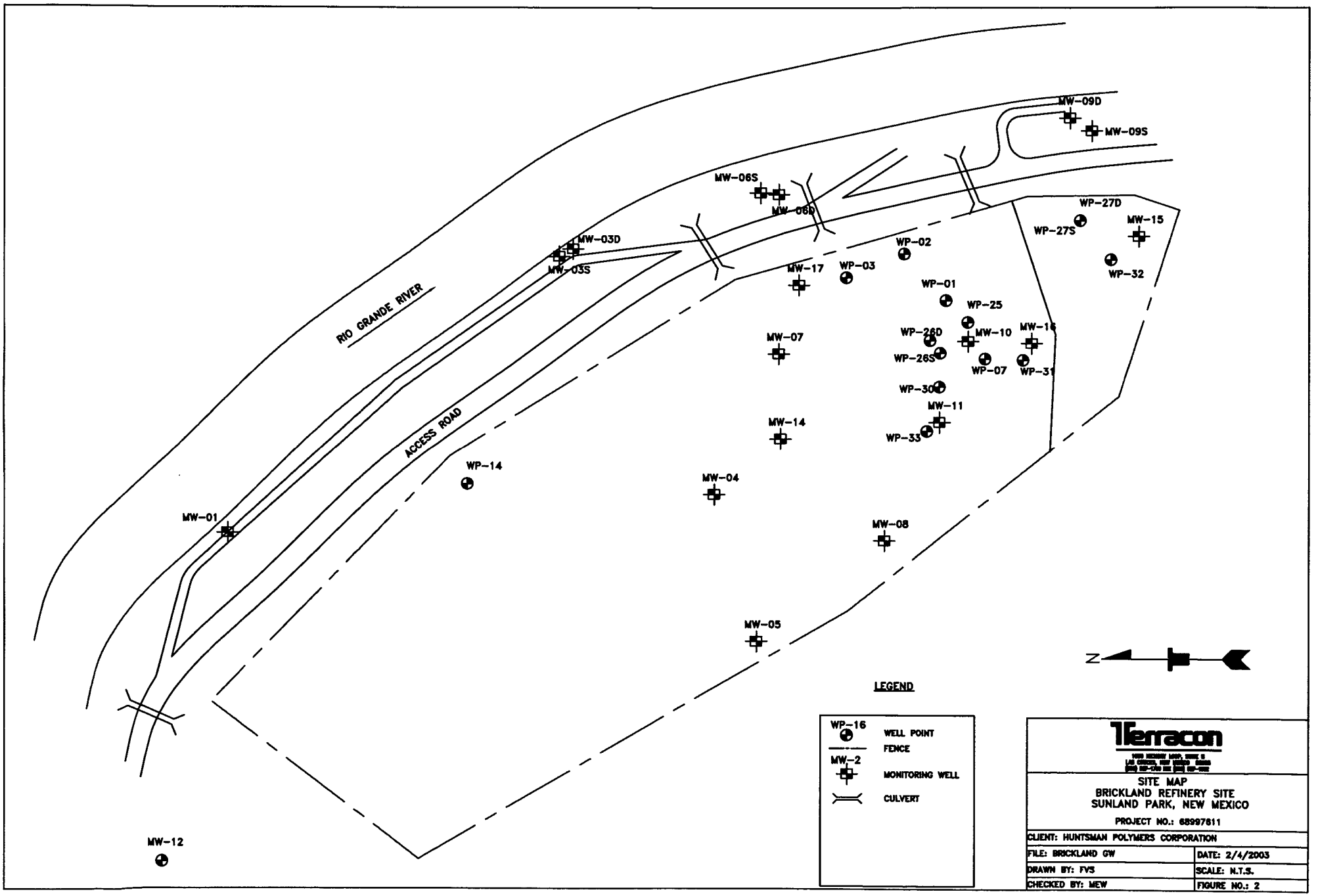
- Since the groundwater does not appear to be adversely impacted by PAH, as evidenced throughout eight years of monitoring, analysis of PAH may be an unnecessary expense.

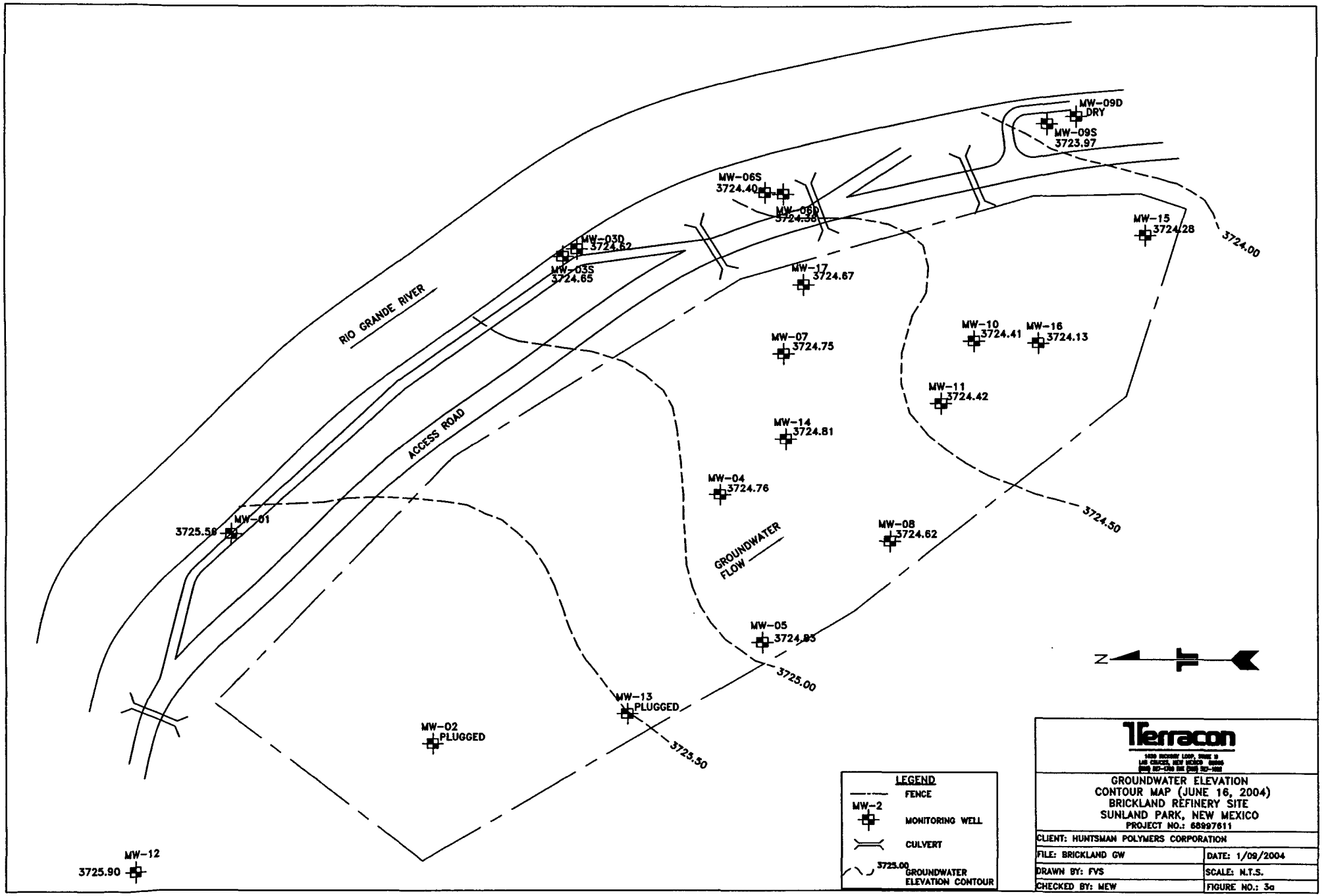
- Well points that are dry or have never contained measurable or trace amounts of free-phase product could be removed from the monitoring plan. These well points include the following: WP-3, WP-30, WP-31 and WP-32. The other well points should be maintained for semi-annual monitoring.



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

Terracon 1630 Hickory Loop, Suite H Las Cruces, New Mexico 88005 505.527.1700 Fax: 505.527.1092	**SITE LOCATION MAP** Brickland Refinery Site Sunland Park, New Mexico	Project No. 68997611 Date: February 2005 Scale: 1 in. = 1000 ft. (approx.) **FIGURE 1**


MW-09D
MW-09S
MW-06S
MW-06D
WP-27D
WP-27S
MW-15
WP-32
MW-03D
MW-03S
WP-02
MW-17
WP-03
WP-01
WP-25
RIO GRANDE RIVER
WP-26D
MW-10
MW-16
MW-07
WP-26S
WP-07
WP-31
WP-30
MW-11
ACCESS ROAD
MW-14
WP-33
WP-14
MW-04
MW-01
MW-08
MW-05
MW-12
N
LEGEND
WP-16
WELL POINT
FENCE
MW-2
MONITORING WELL
CULVERT
Terracon
SITE MAP
BRICKLAND REFINERY SITE
SUNLAND PARK, NEW MEXICO
PROJECT NO.: 68997611
CLIENT: HUNTSMAN POLYMERS CORPORATION
FILE: BRICKLAND GW
DATE: 2/4/2003
DRAWN BY: FVS
SCALE: N.T.S.
CHECKED BY: MEW
FIGURE NO.: 2



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GROUNDWATER ELEVATION
CONTOUR MAP (JUNE 16, 2004)
BRICKLAND REFINERY SITE
SUNLAND PARK, NEW MEXICO
PROJECT NO.: 68997611

CLIENT: HUNTSMAN POLYMERS CORPORATION	
FILE: BRICKLAND GW	DATE: 1/09/2004
DRAWN BY: FVS	SCALE: N.T.S.
CHECKED BY: MEW	FIGURE NO.: 3a

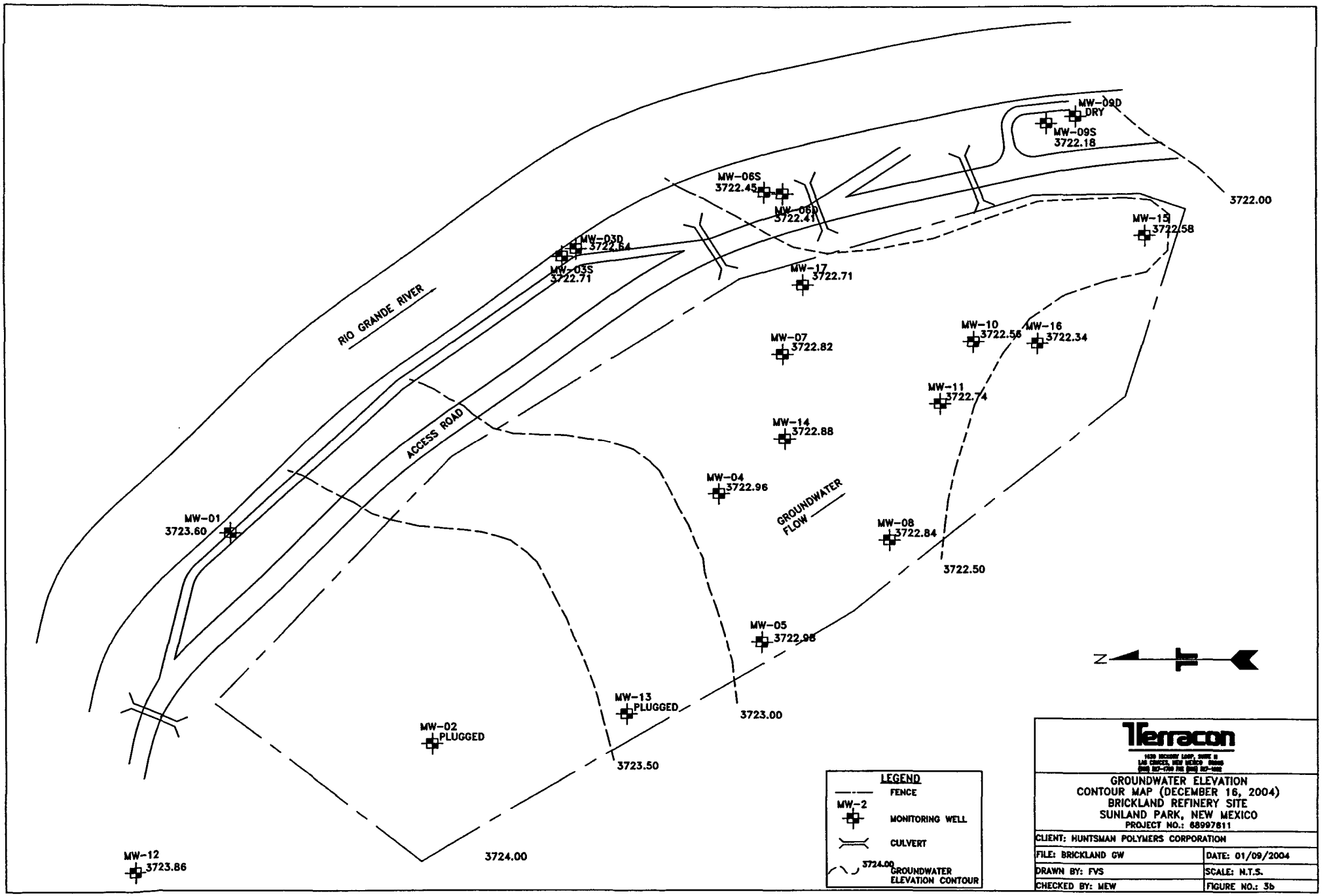

MW-09D
DRY
MW-09S
3722.18
3722.00
MW-06S
3722.45
MW-06D
3722.41
MW-15
3722.58
MW-03D
3722.64
MW-03S
3722.71
MW-17
3722.71
RIO GRANDE RIVER
MW-10
3722.56
MW-16
3722.34
MW-07
3722.82
MW-11
3722.74
ACCESS ROAD
MW-14
3722.88
MW-04
3722.96
GROUNDWATER FLOW
MW-01
3723.60
MW-08
3722.84
3722.50
MW-05
3722.98
MW-13
PLUGGED
3723.00
MW-02
PLUGGED
3723.50
MW-12
3723.86
3724.00
LEGEND
FENCE
MW-2
MONITORING WELL
CULVERT
3724.00
GROUNDWATER ELEVATION CONTOUR
Terracon
GROUNDWATER ELEVATION
CONTOUR MAP (DECEMBER 16, 2004)
BRICKLAND REFINERY SITE
SUNLAND PARK, NEW MEXICO
PROJECT NO.: 68997811
CLIENT: HUNTSMAN POLYMERS CORPORATION
FILE: BRICKLAND GW
DATE: 01/09/2004
DRAWN BY: FVS
SCALE: N.T.S.
CHECKED BY: MEW
FIGURE NO.: 3b

Figure 3c. Brickland Refinery
Groundwater Elevations Versus Time (All wells)

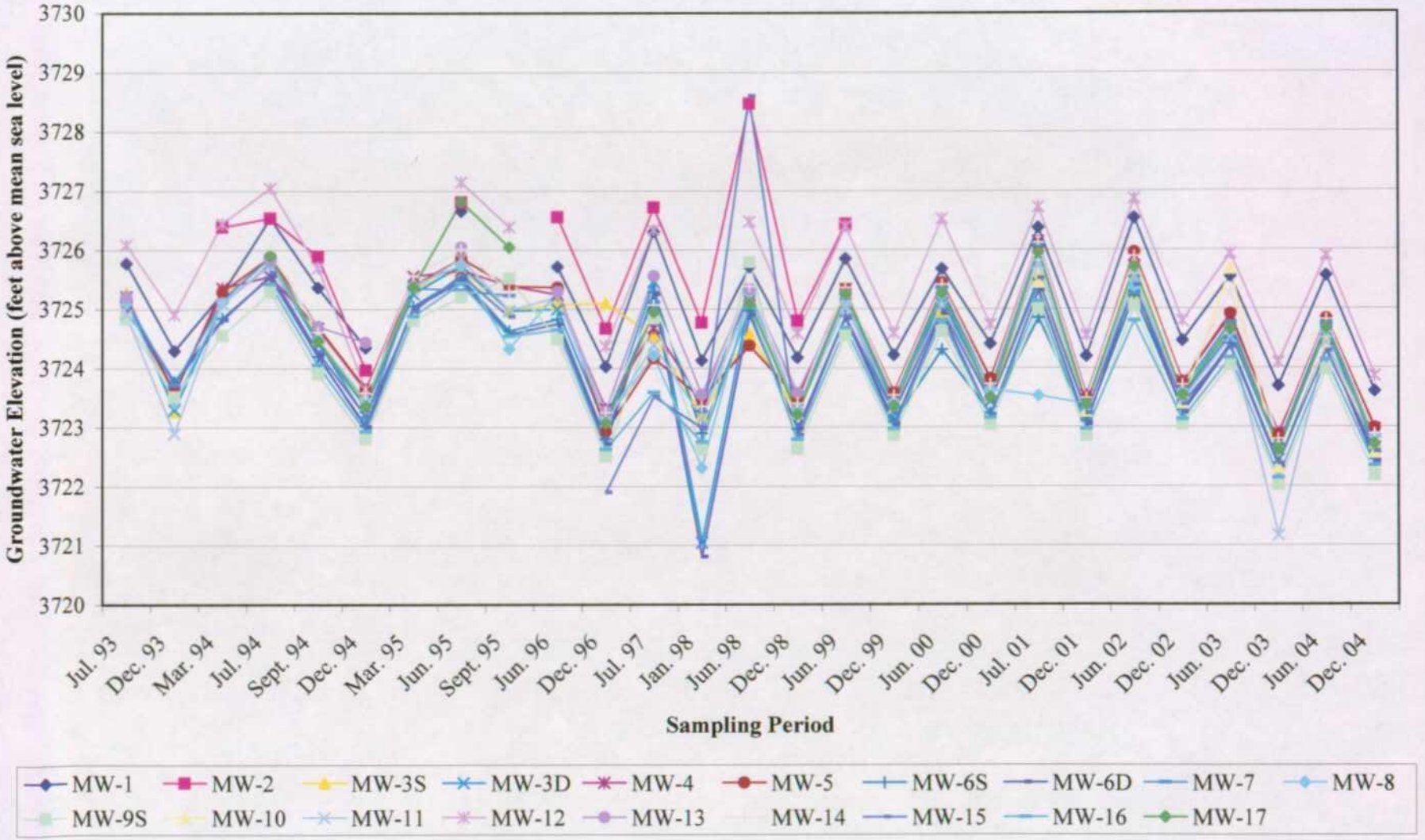
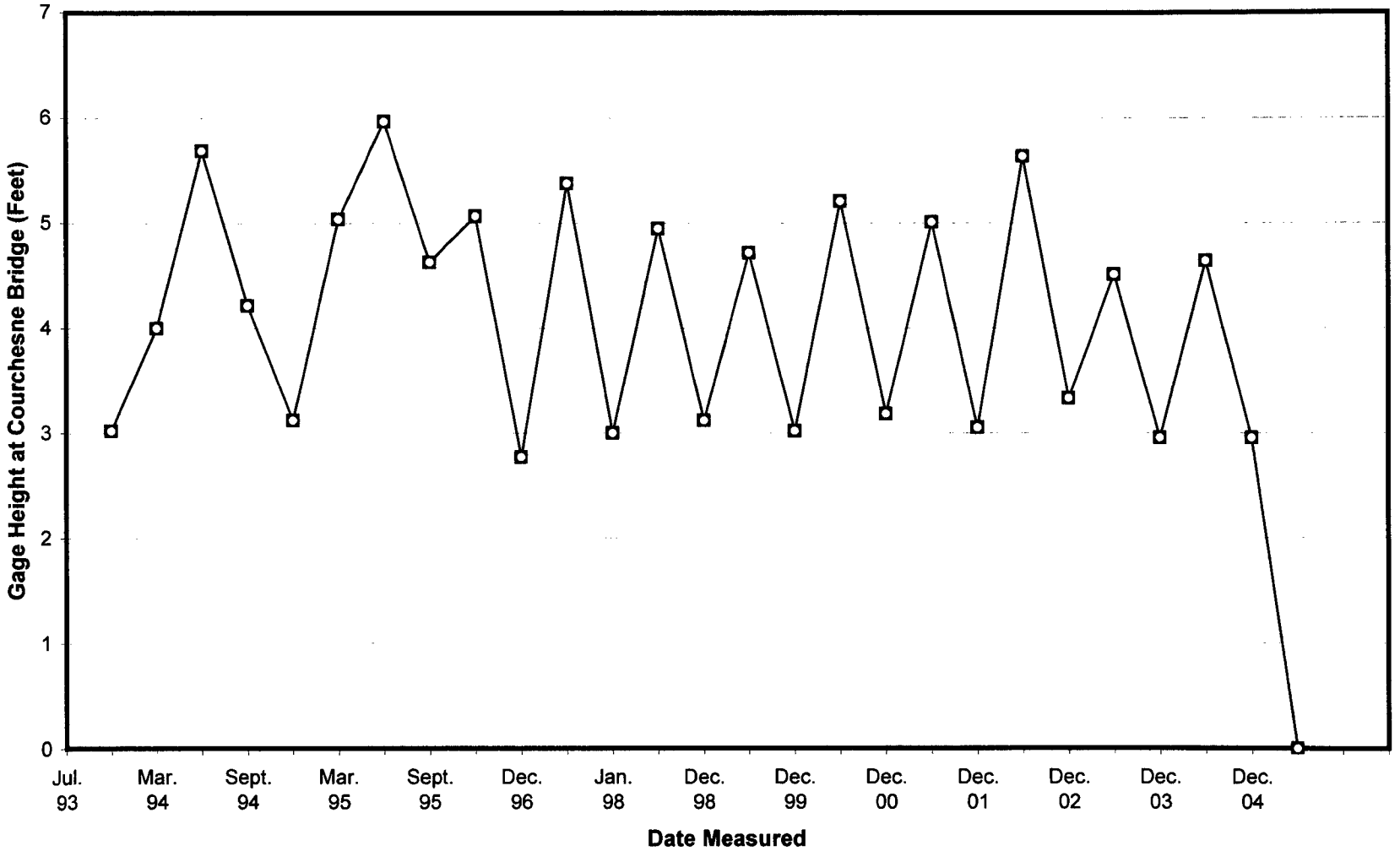
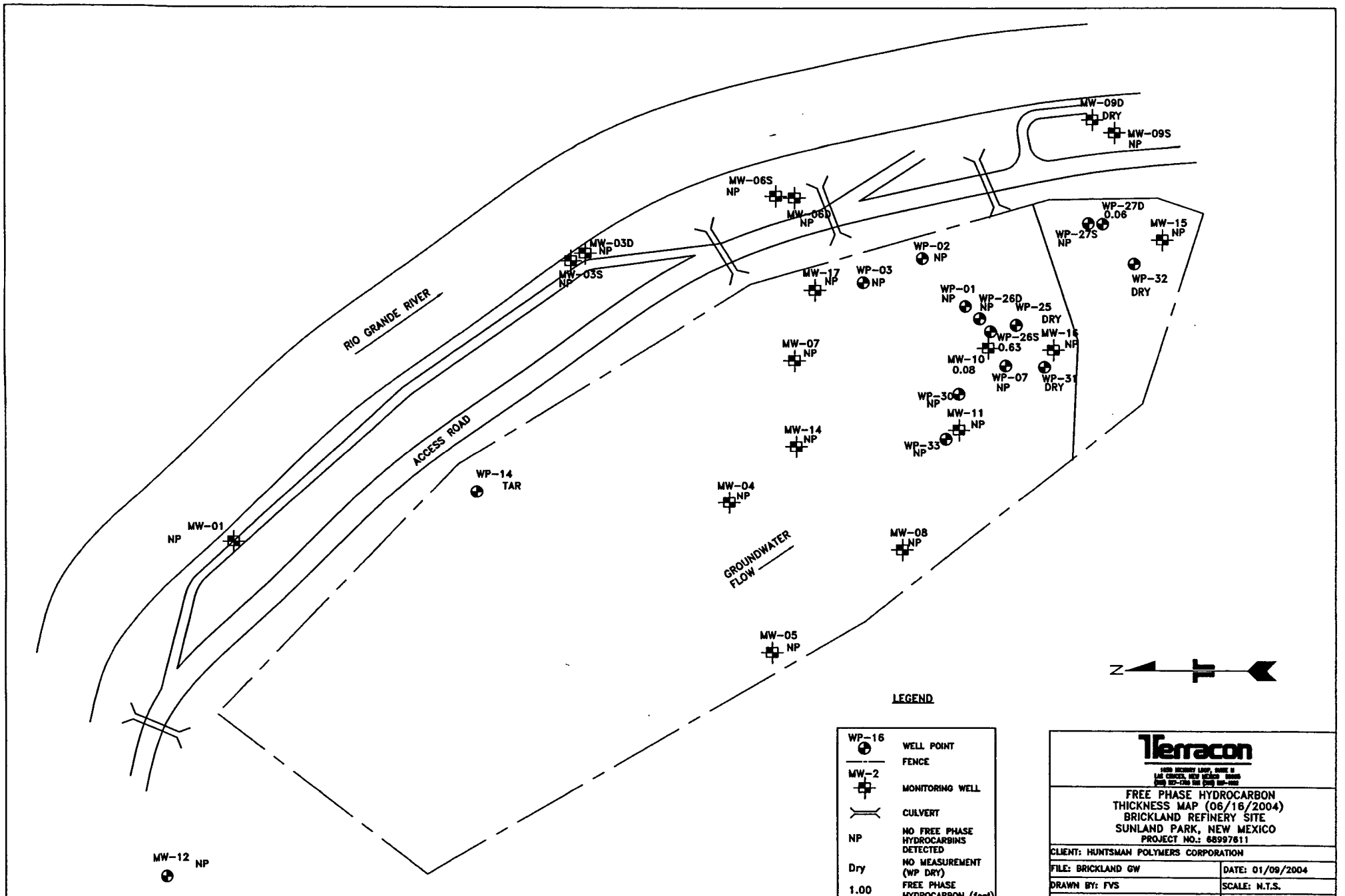


Figure 3d
Brickland Refinery
Rio Grande Stage Versus Time

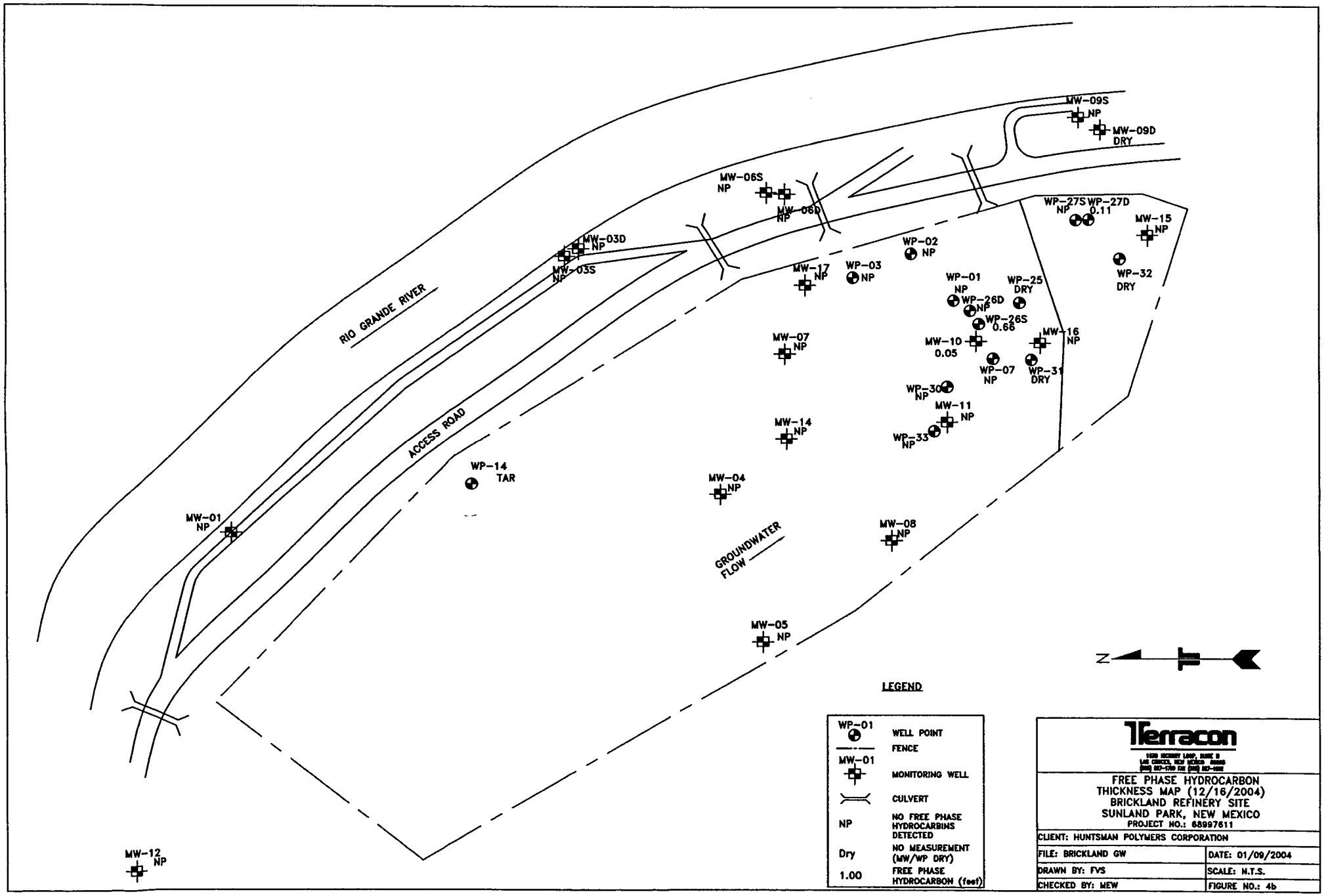




Terracon

FREE PHASE HYDROCARBON
THICKNESS MAP (06/16/2004)
BRICKLAND REFINERY SITE
SUNLAND PARK, NEW MEXICO
PROJECT NO.: 68997611

CLIENT: HUNTSMAN POLYMERS CORPORATION	
FILE: BRICKLAND GW	DATE: 01/09/2004
DRAWN BY: FVS	SCALE: N.T.S.
CHECKED BY: MEW	FIGURE NO.: 4a



Terracon

FREE PHASE HYDROCARBON
THICKNESS MAP (12/16/2004)
BRICKLAND REFINERY SITE
SUNLAND PARK, NEW MEXICO
PROJECT NO.: 68997611

CLIENT: HUNTSMAN POLYMERS CORPORATION	
FILE: BRICKLAND GW	DATE: 01/09/2004
DRAWN BY: FVS	SCALE: N.T.S.
CHECKED BY: MEW	FIGURE NO.: 4b

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

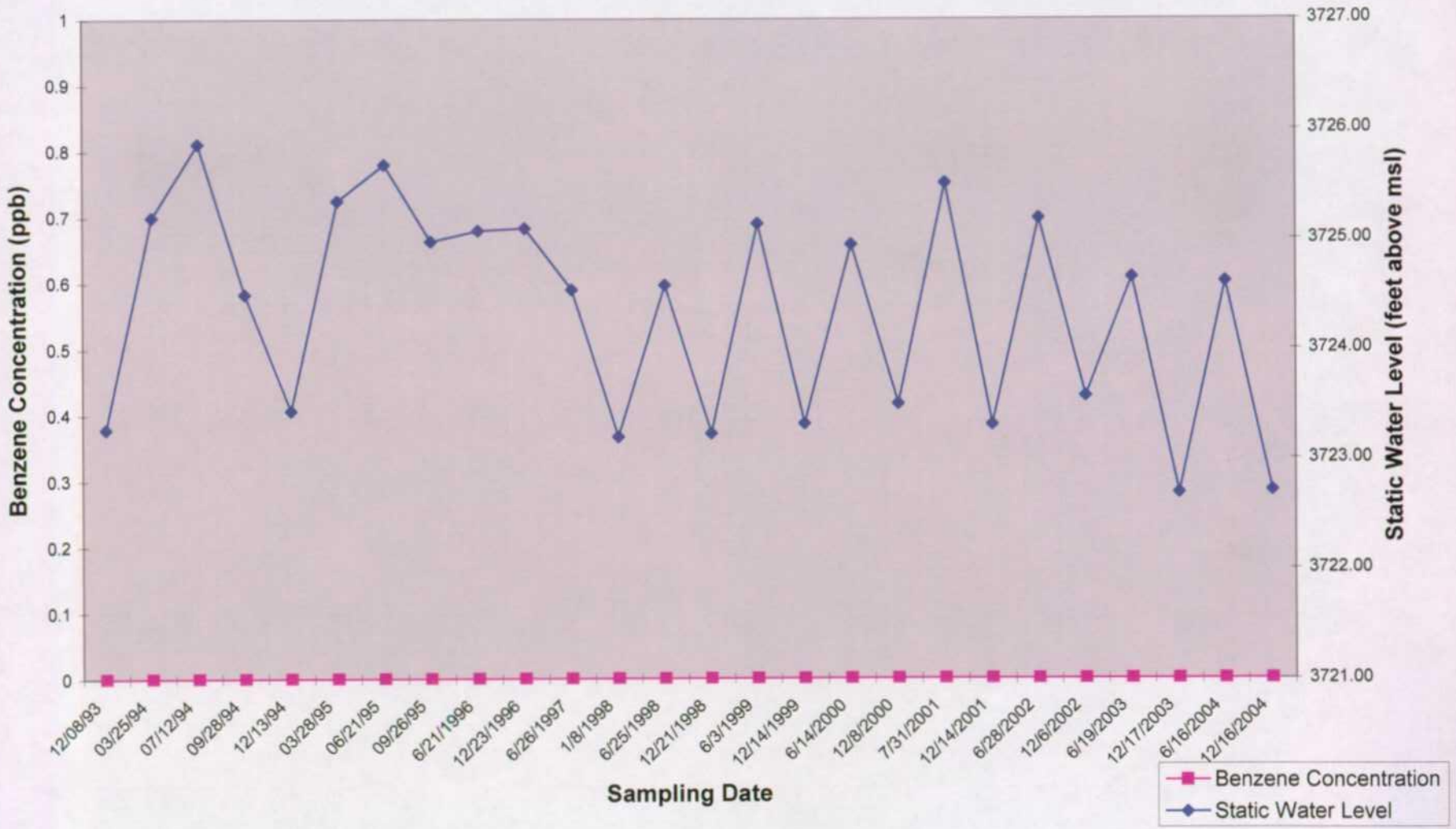


Figure 5-b
Brickland Refinery
Relationship between Benzene Concentration and Static Water Level: MW-3D

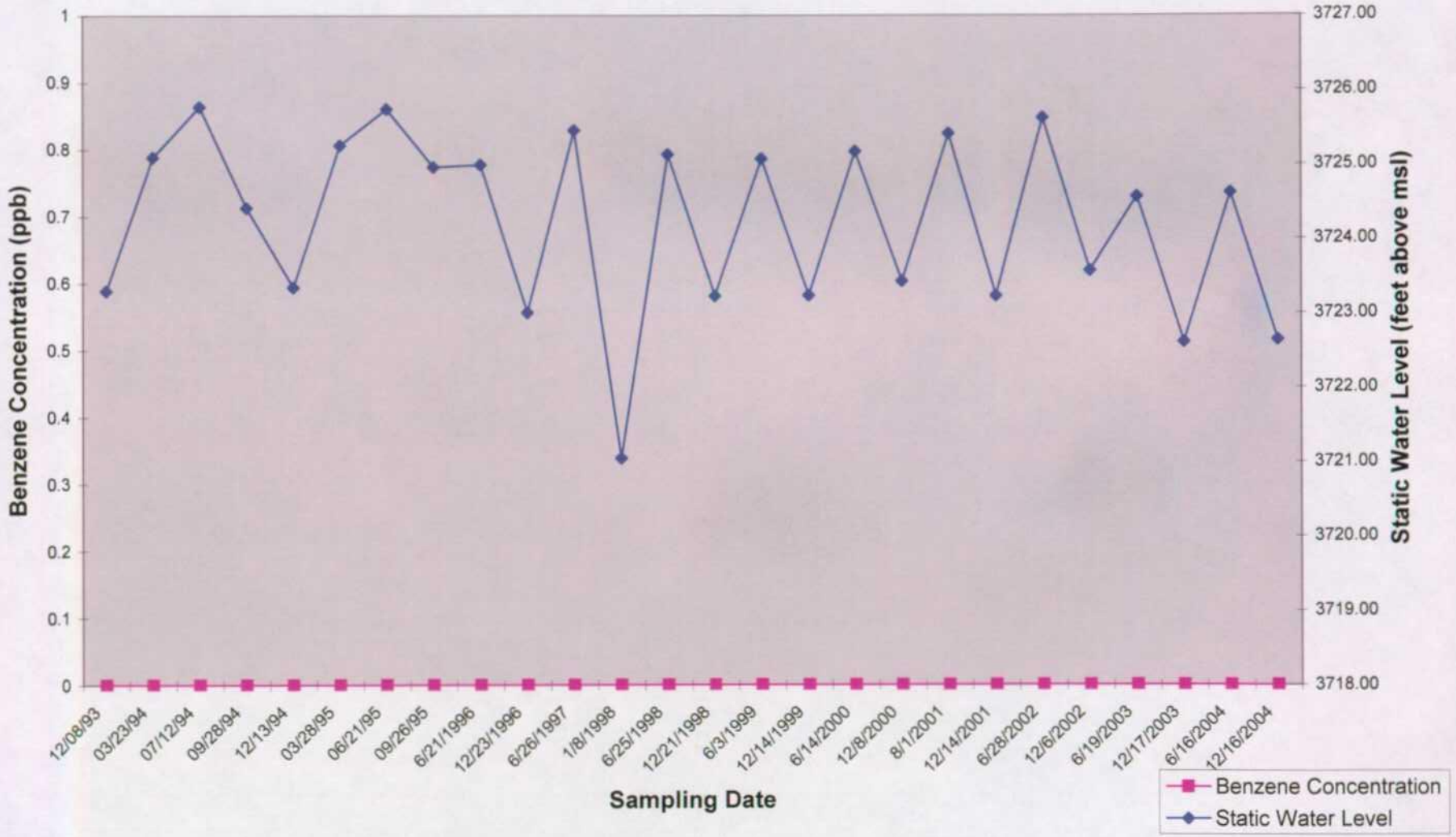


Figure 5-c
Brickland Refinery
Relationship between Benzene Concentration and Static Water Level: MW-6S

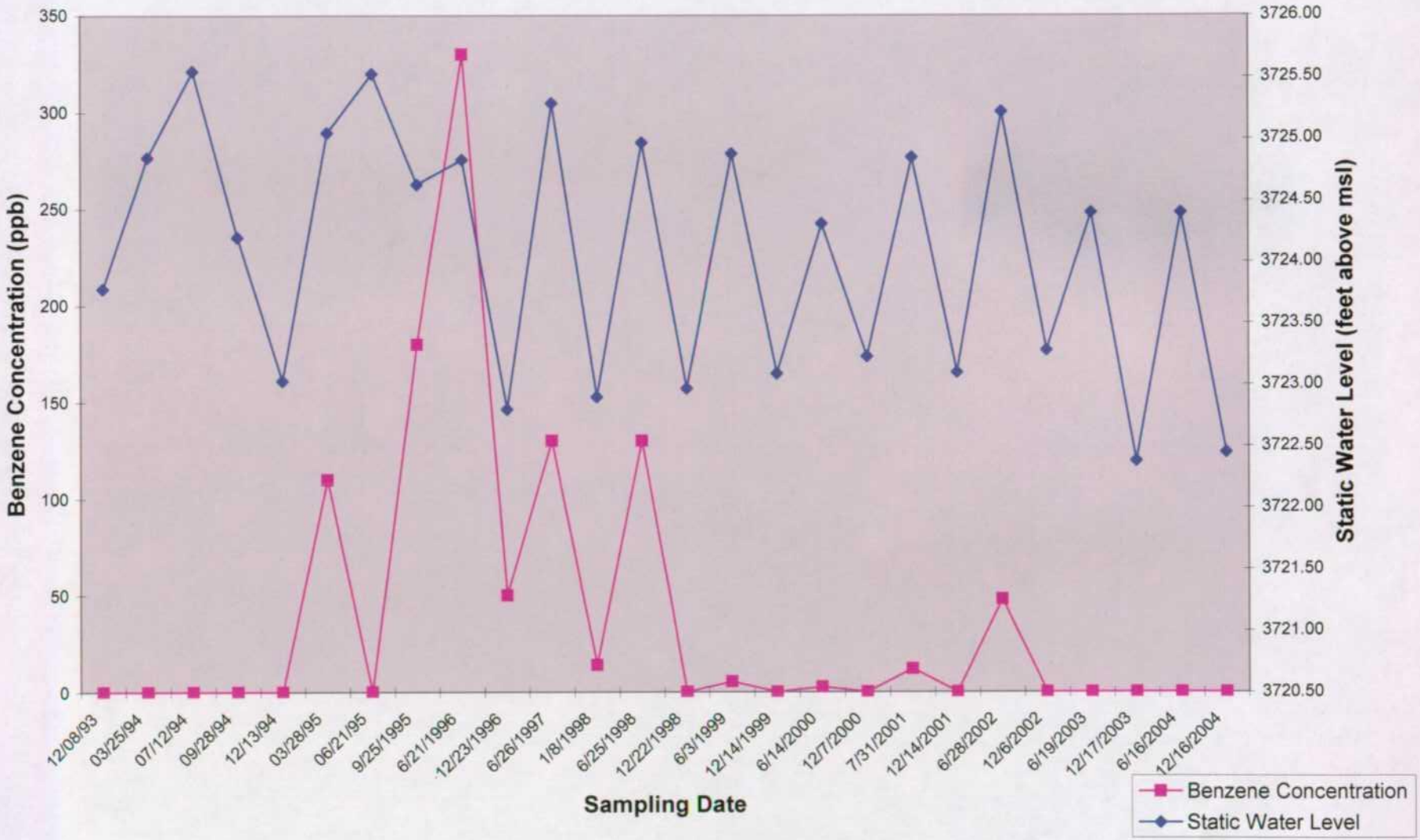


Figure 5-d
Brickland Refinery
Relationship between Benzene Concentration and Static Water Level: MW-6D

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

Table 1
Brickland Refinery
Well Sampling and Purging Methods

Well No.	2004 Sample Date	Purge Method	Sampling Method	Purge Volume	Laboratory Analytes
MW-3S	6/16/04	Pump	Purge Pump	12 gallons*	BTEX, Semi-Vols, and Metals
	12/16/04	Pump	Purge Pump	7 gallons*	BTEX only
MW-3D	6/16/04	Pump	Purge Pump	65 gallons	BTEX, Semi-Vols, and Metals
	12/16/04	Pump	Purge Pump	60 gallons	BTEX only
MW-4	6/16/04	Pump	Purge Pump	30 gallons	BTEX, Semi-Vols, and Metals
	NS	NS	NS	NS	NS
MW-6S	6/17/04	Pump	Purge Pump	8 gallons*	BTEX, Semi-Vols, and Metals
	12/16/04	Pump	Purge Pump	8 gallons*	BTEX only
MW-6D	6/17/04	Pump	Purge Pump	65 gallons	BTEX, Semi-Vols, and Metals
	12/16/04	Pump	Purge Pump	60 gallons	BTEX only
MW-7	6/16/04	Pump	Purge Pump	25 gallons	BTEX, Semi-Vols, and Metals
	NS	NS	NS	NS	NS
MW-9S	6/16/04	Pump	Purge Pump	15 gallons	BTEX, Semi-Vols, and Metals
	12/16/04	Pump	Purge Pump	15 gallons	BTEX only
MW-14	6/16/04	Pump	Purge Pump	20 gallons	BTEX, Semi-Vols, and Metals
	NS	NS	NS	NS	NS
MW-15	6/16/04	Pump	Purge Pump	35 gallons	BTEX, Semi-Vols, and Metals
	NS	NS	NS	NS	NS
River Upstream	6/17/04	NA	Teflon Dipper	NA	BTEX, Semi-Vols, and Metals
	12/16/04	NA	Teflon Dipper	NA	BTEX only
River Downstream	6/17/04	NA	Teflon Dipper	NA	BTEX, Semi-Vols, and Metals
	12/16/04	NA	Teflon Dipper	NA	BTEX only
Total volume purged during semi-annual monitoring event in June 2004:					275 gallons
Total volume purged during annual monitoring event in December 2004:					150 gallons
Total volume purged during semi-annual and annual monitoring events:					425 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)

Well ID	6/12/00	12/5/00	7/24/01	12/12/01	6/26/02	12/6/02	6/18/03	12/16/03	6/16/04	12/16/04
MW-1	3725.68	3724.41	3726.38	3724.2	3726.54	3724.46	3725.55	3723.69	3725.56	3723.60
MW-2	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99
MW-3S	3724.95	3723.5	3725.51	3723.31	3725.19	3723.57	3724.65	3722.69	3724.61	3722.71
MW-3D	3725.18	3723.43	3725.42	3723.23	3725.63	3723.57	3724.57	3722.61	3724.62	3722.64
MW-4	3725.27	3723.79	3726.14	3723.53	3725.89	3723.77	3724.87	3722.88	3724.76	3722.96
MW-5	3725.44	3723.82	3726.08	3723.49	3725.96	3723.75	3724.91	3722.85	3724.83	3722.98
MW-6S	3724.31	3723.23	3724.85	3723.1	3725.22	3723.28	3724.40	3722.38	3724.40	3722.45
MW-6D	3724.92	3723.17	3725.21	3723.05	3725.40	3723.24	3724.36	3722.33	3724.38	3722.41
MW-7	3725.35	3723.63	3726.08	3723.43	3725.28	3723.63	3724.76	3722.69	3724.75	3722.82
MW-8	3725.22	3723.64	3725.53	3723.39	3725.38	3723.60	3724.67	3722.63	3724.62	3722.84
MW-9S	3724.62	3723.04	3725.01	3722.85	3725.05	3723.04	3724.04	3722.02	3723.97	3722.18
MW-10	P	P	3725.45	3723.26	3725.67	3723.40	3725.67	3722.31	3724.41	3722.56
MW-11	3725.04	3723.52	3725.76	3723.34	3725.55	3723.46	3724.51	3721.17	3724.42	3722.74
MW-12	3726.53	3724.73	3726.73	3724.55	3726.87	3724.79	3725.93	3724.09	3725.90	3723.86
MW-13	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99	Plugged 6/99

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

Well ID	6/12/00	12/5/00	7/24/01	12/12/01	6/26/02	12/6/02	6/18/03	12/16/03	6/16/04	12/16/04
MW-14	3725.41	3723.73	3726.12	3723.49	3725.89	3723.71	3725.30	3722.79	3724.81	3722.88
MW-15	3724.98	3723.42	3725.52	3723.23	3725.40	3723.38	3724.35	3722.38	3724.28	3722.58
MW-16	3724.80	3723.16	3725.13	3722.97	3724.80	3723.13	3724.17	3722.14	3724.13	3722.34
MW-17	3725.27	3723.5	3725.96	3723.38	3725.71	3723.54	3724.67	3722.61	3724.67	3722.71

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 (µg/L) in Monitoring Wells and River Surface Water Samples
June 2000 through December 2004

MW-3S										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND

MW-3D										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	ND	ND	<1	<1	ND	ND	ND	ND,ND	ND	ND
Toluene	ND	ND	<1	<1	ND	ND	ND	ND,ND	ND	ND
Ethyl Benzene	ND	ND	<1	<1	ND	ND	ND	ND,ND	ND	ND
Xylenes	2	ND	<1	<1	ND	ND	ND	ND,ND	ND	ND

MW-4										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	400	1120,1050	196	54.6	100, 87	NS	**NS	**NS	45	NS
Toluene	ND	ND, ND	<5*	1.8	ND, ND	NS	**NS	**NS	ND	NS
Ethyl Benzene	1.8	ND, ND	<5*	<1*	ND, ND	NS	**NS	**NS	ND	NS
Xylenes	5.1	34, ND	<5*	<1*	ND, ND	NS	**NS	**NS	ND	NS

Parameter	Detection Limits
Benzene	1.0 µg/L
Toluene	1.0 µg/L
Ethyl Benzene	1.0 µg/L
Xylenes	1.0 µg/L

Notes:

ND = Not detected
NS = Not sampled
µg/L = Micrograms per liter
**NS = Not sampled during the odd years.

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

Table 3 (Continued)
Brickland Refinery
BTEX Concentrations (µg/L) in Monitoring Wells and River Surface Water Samples
June 2000 through December 2004

MW-6S										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	2.6	ND	12	<5	48	ND, ND	ND	ND	ND,ND	ND,ND
Toluene	ND, 2.2	ND	14	<5	3.3	ND, ND	ND	ND	ND,ND	ND,ND
Ethyl Benzene	2.1	ND	15	<5	5.8	ND, ND	ND	ND	ND,ND	ND,ND
Xylenes	4.1	ND	<5	<5	17	ND, ND	8.7	ND	ND,ND	ND,ND

MW-6D										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	ND	ND	<1	1.1	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Xylenes	1.7	ND	<1	<1	ND	ND	ND	ND	ND	ND

MW-7										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	74, 76	ND	<5	<1	ND	NS	**NS	**NS	ND	NS
Toluene	ND,ND	ND	14	<1	ND	NS	**NS	**NS	ND	NS
Ethyl Benzene	ND, ND	ND	<5	<1	ND	NS	**NS	**NS	ND	NS
Xylenes	2.5, 1.6	ND	<5	<1	ND	NS	**NS	**NS	ND	NS

Parameter	Detection Limits
Benzene	1.0 µg/L
Toluene	1.0 µg/L
Ethyl Benzene	1.0 µg/L
Xylenes	1.0 µg/L

Notes:

ND = Not detected
NS = Not sampled
µg/L = Micrograms per liter
**NS = Not sampled during the odd years

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

Table 3 (Continued)
Brickland Refinery
BTEX Concentrations (µg/L) in Monitoring Wells and River Surface Water Samples
June 2000 through December 2004

MW-9S										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	ND	ND	35	2.9	ND	ND	ND,ND	ND	ND	ND
Toluene	14	ND	<5	2	ND	ND	ND,ND	ND	ND	ND
Ethyl Benzene	6.2	ND	<5	<1	ND	ND	ND,ND	ND	ND	ND
Xylenes	43	ND	<5	1.9	ND	ND	ND,ND	ND	ND	ND

MW-14										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	250	2630	7,7	1.1,2.0	11	NS	**NS	**NS	230	NS
Toluene	ND	ND	3,3	<1,<1	ND	NS	**NS	**NS	ND	NS
Ethyl Benzene	2.9	ND	<1,<1	<1,<1	ND	NS	**NS	**NS	ND	NS
Xylenes	5	ND	<1,<1	<1,<1	ND	NS	**NS	**NS	ND	NS

MW-15										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/16/04	12/16/04
Benzene	1.9	ND	<5	<5	ND	NS	**NS	**NS	ND	NS
Toluene	ND	ND	<5	<5	ND	NS	**NS	**NS	ND	NS
Ethyl Benzene	ND	ND	<5	<5	ND	NS	**NS	**NS	ND	NS
Xylenes	2.7	ND	<5	<5	ND	NS	**NS	**NS	ND	NS

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

Table 3 (Continued)
Brickland Refinery
BTEX Concentrations (µg/L) in Monitoring Wells and River Surface Water Samples
June 2000 through December 2004

River Upstream										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/17/04	12/16/04
Benzene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	3	<1	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	3	<1	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND

River-Downstream										
Parameter	6/14/00	12/8/00	7/31/01	12/14/01	6/28/02	12/6/02	6/19/03	12/17/03	6/17/04	12/16/04
Benzene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	3	<1	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	<1	<1	ND	ND	ND	ND	ND	ND

Parameter	Detection Limits
Benzene	1.0 µg/L
Toluene	1.0 µg/L
Ethyl Benzene	1.0 µg/L
Xylenes	1.0 µg/L

Notes:

ND = Not detected
NS = Not sampled
µg/L = Micrograms per liter
**NS = Not sampled during the odd years

* 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	6/14/00	7/27/01	6/27/02	6/19/03	6/16/04
MW-3S	ND	ND	ND	ND	ND
MW-3D	ND	ND	ND	ND	ND
MW-4	ND	ND	ND,ND	*NS	ND
MW-6S	ND	ND	ND	ND	ND,ND
MW-6D	ND	ND	ND	ND	ND
MW-7	ND,ND	ND	ND	*NS	ND
MW-9S	ND	ND	ND	ND,ND	ND
MW-14	ND	ND,ND	ND	*NS	ND
MW-15	ND	ND	ND	*NS	ND
River-Upstream	ND	ND	ND	ND	ND
River-Down	ND	ND	ND	ND	ND

Notes:
All Results in Micrograms per Liter (µg/L)
ND indicates constituent was not detected
NS indicates well was not sampled. *NS Not sampled in odd years

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

MW-3S							
Parameter	NMWQCC Std.	Reference	6/14/00	7/31/01	6/28/02	6/19/03	6/16/04
Aluminum	5	C	NS	0.733	ND	ND	0.130
Antimony	NA	NA	ND	<0.025	ND	ND	ND
Arsenic	0.1	A	ND	<0.05	0.008	ND	ND
Barium	1.0	A	NS	<0.100	0.081	0.083	0.085
Beryllium	NA	NA	ND	<0.0025	ND	ND	ND
Boron	0.8	C	NS	0.653	**0.880**	**0.940**	**1.000**
Cadmium	0.0100	A	ND	<0.025	ND	ND	ND
Chromium	0.050	A	ND	<0.01	ND	ND	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	ND	ND
Copper	1.0	B	ND	0.047	ND	ND	0.013
Iron	1.0	B	NS	**2.080**	**1.500**	**1.700**	**3.900**
Lead	0.05	A	ND	0.012	ND	ND	ND
Manganese	0.20	B	NS	**1.310**	**1.700**	**1.700**	**1.800**
Mercury	0.0020	A	ND	<0.0002	NS	ND	ND
Molybdenum	1.0000	C	NS	<0.050	ND	ND	ND
Nickel	0.2	C	ND	<0.025	ND	ND	ND
Selenium	0.05	A	ND	<0.050	0.021	ND	ND
Silver	0.05	A	ND	<0.0125	ND	ND	ND
Thallium	NA	NA	ND	<0.050	ND	ND	ND
Zinc	10.0	B	ND	<0.025	ND	ND	ND

MW-3D							
Parameter	NMWQCC Std.	Reference	6/14/00	7/31/01	6/28/02	6/19/03	6/16/04
Aluminum	5	C	NS	0.102	ND	ND	0.070
Antimony	NA	NA	ND	<0.025	ND	ND	ND
Arsenic	0.1	A	ND	<0.05	ND	ND	ND
Barium	1.0	A	NS	<0.100	0.060	0.063	0.071
Beryllium	NA	NA	ND	<0.0025	ND	ND	ND
Boron	0.8	C	NS	**0.941**	**1.500**	**1.500**	**1.800**
Cadmium	0.0100	A	ND	<0.025	ND	ND	ND
Chromium	0.050	A	ND	<0.01	ND	ND	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	ND	ND
Copper	1.0	B	ND	<0.0125	ND	ND	ND
Iron	1.0	B	NS	**2.690**	**2.300**	**2.100**	**2.300**
Lead	0.05	A	ND	<0.01	ND	ND	ND
Manganese	0.20	B	NS	**3.600**	**3.800**	**3.300**	**3.700**
Mercury	0.0020	A	ND	<0.0002	NS	ND	ND
Molybdenum	1.0000	C	NS	<0.050	ND	ND	ND
Nickel	0.2	C	ND	<0.025	ND	ND	ND
Selenium	0.05	A	ND	<0.050	0.024	ND	ND
Silver	0.05	A	ND	<0.0125	ND	ND	ND
Thallium	NA	NA	ND	<0.050	ND	ND	ND
Zinc	10.0	B	ND	<0.025	ND	ND	ND

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

MW-4							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/16/04
Aluminum	5	C	NS	0.271	0.36.0.23	*NS	0.12
Antimony	NA	NA	ND	<0.025	ND,ND	*NS	ND
Arsenic	0.1	A	ND	<0.05	0.007,ND	*NS	ND
Barium	1.0	A	NS	0.617	0.083, 0.059	*NS	0.087
Beryllium	NA	NA	ND	<0.0025	0.005, 0.005	*NS	ND
Boron	0.8	C	NS	**0.932**	**1.400, 1.400**	*NS	**1.3**
Cadmium	0.0100	A	ND	<0.025	ND,ND	*NS	ND
Chromium	0.050	A	ND	<0.01	0.014,ND	*NS	ND
Cobalt	0.050	Cobalt	NS	<0.025	0.014,ND	*NS	ND
Copper	1.0	B	ND	<0.0125	0.021,ND	*NS	ND
Iron	1.0	B	NS	**3.170**	**2.900, 3.100**	*NS	**3.70**
Lead	0.05	A	ND	0.018	ND,ND	*NS	ND
Manganese	0.20	B	NS	**4.310**	**5.800, 5.800**	*NS	**5.5**
Mercury	0.0020	A	ND	<0.0002	NS	*NS	ND
Molybdenum	1.0000	C	NS	<0.050	ND,ND	*NS	ND
Nickel	0.2	C	ND	<0.025	ND,ND	*NS	ND
Selenium	0.05	A	ND	<0.050	0.032, 0.032	*NS	ND
Silver	0.05	A	ND	<0.0125	0.036, ND	*NS	ND
Thallium	NA	NA	ND	<0.050	ND,ND	*NS	ND
Zinc	10.0	B	ND	<0.025	ND,ND	*NS	ND

MW-6S							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/17/04
Aluminum	5	C	NS	0.604	0.21	ND	0.14,0.11
Antimony	NA	NA	ND	<0.025	ND	ND	ND,ND
Arsenic	0.1	A	ND	0.066	0.053	ND	ND,ND
Barium	1.0	A	NS	0.763	0.490	0.780	0.65,0.60
Beryllium	NA	NA	ND	<0.0025	ND	ND	ND,ND
Boron	0.8	C	NS	**1.000**	**1.300**	**1.300**	**1.10,1.10**
Cadmium	0.0100	A	ND	<0.025	ND	ND	ND,ND
Chromium	0.050	A	ND	<0.01	ND	ND	ND,ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	ND	ND,ND
Copper	1.0	B	ND	0.089	0.044	ND	0.057,0.014
Iron	1.0	B	NS	**5.530**	**3.900**	**2.100**	**7.70,3.80**
Lead	0.05	A	ND	0.017	ND	ND	ND,ND
Manganese	0.20	B	NS	**1.340**	**1.700**	**3.400**	**1.40,1.50**
Mercury	0.0020	A	ND	<0.0002	NS	ND	ND,ND
Molybdenum	1.0000	C	NS	<0.050	ND	ND	ND,ND
Nickel	0.2	C	ND	<0.025	ND	ND	ND,ND
Selenium	0.05	A	ND	<0.050	**0.099**	ND	ND,ND
Silver	0.05	A	ND	<0.0125	ND	ND	ND,ND
Thallium	NA	NA	ND	<0.050	ND	ND	ND,ND
Zinc	10.0	B	ND	<0.025	ND	ND	ND,ND

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

MW-6D							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/17/04
Aluminum	5	C	NS	<0.200	0.18	ND	ND
Antimony	NA	NA	ND	<0.025	ND	ND	ND
Arsenic	0.1	A	ND	<0.05	ND	ND	ND
Barium	1.0	A	NS	<0.100	0.050	0.053	0.052
Beryllium	NA	NA	ND	<0.0025	ND	ND	ND
Boron	0.8	C	NS	0.807	**1.400**	**1.400**	**1.500**
Cadmium	0.0100	A	ND	<0.025	ND	ND	ND
Chromium	0.050	A	ND	<0.01	ND	ND	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	ND	ND
Copper	1.0	B	ND	0.231	ND	ND	ND
Iron	1.0	B	NS	0.920	**1.000**	0.900	0.910
Lead	0.05	A	ND	<0.017	ND	ND	ND
Manganese	0.20	B	NS	5.360	**5.700**	**5.300**	**5.500**
Mercury	0.0020	A	ND	<0.0002	NS	ND	ND
Molybdenum	1.0000	C	NS	<0.050	ND	ND	ND
Nickel	0.2	C	ND	<0.025	ND	ND	ND
Selenium	0.05	A	ND	<0.050	0.015	ND	ND
Silver	0.05	A	ND	<0.0125	ND	ND	ND
Thallium	NA	NA	ND	<0.050	ND	ND	ND
Zinc	10.0	B	ND	<0.025	ND	ND	ND

MW-7							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/16/04
Aluminum	5	C	NS,NS	<0.200	0.200	*NS	0.66
Antimony	NA	NA	ND,ND	<0.025	ND	*NS	ND
Arsenic	0.1	A	ND,ND	<0.05	0.047	*NS	ND
Barium	1.0	A	NS	0.211	0.210	*NS	0.24
Beryllium	NA	NA	ND,ND	<0.0025	ND	*NS	ND
Boron	0.8	C	NS	0.618	**0.750**	*NS	**0.920**
Cadmium	0.0100	A	ND,ND	<0.025	ND	*NS	ND
Chromium	0.050	A	ND,ND	<0.01	ND	*NS	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	*NS	ND
Copper	1.0	B	ND,ND	<0.0125	ND	*NS	0.31
Iron	1.0	B	NS	**3.020**	**2.700**	*NS	**4.90**
Lead	0.05	A	ND,ND	0.022	ND	*NS	**0.190**
Manganese	0.20	B	NS	**1.690**	**1.400**	*NS	**2.00**
Mercury	0.0020	A	ND,ND	<0.0002	NS	*NS	0.00045
Molybdenum	1.0000	C	NS	<0.050	0.011	*NS	0.017
Nickel	0.2	C	ND,ND	<0.025	ND	*NS	ND
Selenium	0.05	A	ND,ND	<0.05	**0.090**	*NS	ND
Silver	0.05	A	ND,ND	<0.0125	ND	*NS	ND
Thallium	NA	NA	ND,ND	<0.05	ND	*NS	ND
Zinc	10.0	B	ND,ND	0.026	ND	*NS	0.110

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

MW-9S							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/16/04
Aluminum	5	C	NS	8.58	ND	ND	0.061
Antimony	NA	NA	ND	<0.025	ND	ND	ND
Arsenic	0.1	A	ND	<0.05	0.024	ND	ND
Barium	1.0	A	NS	0.304	0.130	0.130	0.13
Beryllium	NA	NA	ND	<0.0025	ND	ND	ND
Boron	0.8	C	NS	1.000	**1.200**	**1.100**	**1.100**
Cadmium	0.0100	A	ND	<0.025	ND	ND	ND
Chromium	0.050	A	ND	0.080	ND	ND	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	ND	ND
Copper	1.0	B	ND	0.067	ND	ND	ND
Iron	1.0	B	NS	31.700	**6.400**	**6.400**	**8.00**
Lead	0.05	A	ND	0.033	ND	ND	ND
Manganese	0.20	B	NS	3.190	**2.600**	**2.400**	**3.00**
Mercury	0.0020	A	ND	<0.0002	NS	ND	ND
Molybdenum	1.0000	C	NS	<0.050	ND	ND	ND
Nickel	0.2	C	ND	<0.025	ND	ND	ND
Selenium	0.05	A	ND	<0.050	0.036	ND	ND
Silver	0.05	A	ND	<0.0125	ND	ND	ND
Thallium	NA	NA	ND	<0.050	ND	ND	ND
Zinc	10.0	B	ND	0.088	ND	ND	ND

MW-14							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/16/04
Aluminum	5	C	NS	3.040	0.200	*NS	0.056
Antimony	NA	NA	ND	<0.025	ND	*NS	ND
Arsenic	0.1	A	ND	<0.05	0.010	*NS	ND
Barium	1.0	A	NS	0.780	0.110	*NS	0.14
Beryllium	NA	NA	ND	<0.0025	ND	*NS	ND
Boron	0.8	C	NS	1.260	**1.700**	*NS	**1.80**
Cadmium	0.0100	A	ND	<0.025	ND	*NS	ND
Chromium	0.050	A	ND	<0.01	ND	*NS	ND
Cobalt	0.050	Cobalt	NS	0.110	ND	*NS	ND
Copper	1.0	B	ND	<0.0125	ND	*NS	ND
Iron	1.0	B	NS	10.500	**7.300**	*NS	**8.30**
Lead	0.05	A	ND	0.015	ND	*NS	ND
Manganese	0.20	B	NS	<0.0002	**7.200**	*NS	**7.10**
Mercury	0.0020	A	ND	<0.002	NS	*NS	ND
Molybdenum	1.0000	C	NS	<0.050	ND	*NS	0.011
Nickel	0.2	C	ND	<0.025	ND	*NS	ND
Selenium	0.05	A	ND	<0.05	0.041	*NS	ND
Silver	0.05	A	ND	<0.0125	ND	*NS	ND
Thallium	NA	NA	ND	<0.05	ND	*NS	0.17
Zinc	10.0	B	ND	<0.025	ND	*NS	ND

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

MW-15							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/16/04
Aluminum	5	C	NS	<0.200	0.24	*NS	ND
Antimony	NA	NA	ND	<0.025	ND	*NS	ND
Arsenic	0.1	A	ND	<0.05	0.014	*NS	ND
Barium	1.0	A	NS	0.158	0.170	*NS	0.14
Beryllium	NA	NA	ND	<0.0025	0.006	*NS	ND
Boron	0.8	C	NS	**1.000**	**1.500**	*NS	**1.500**
Cadmium	0.0100	A	ND	<0.025	ND	*NS	ND
Chromium	0.050	A	ND	<0.01	ND	*NS	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	*NS	ND
Copper	1.0	B	ND	0.020	ND	*NS	ND
Iron	1.0	B	NS	1.860	**2.000**	*NS	**2.300**
Lead	0.05	A	ND	0.012	ND	*NS	ND
Manganese	0.20	B	NS	2.100	**2.300**	*NS	**2.300**
Mercury	0.0020	A	ND	<0.0002	NS	*NS	ND
Molybdenum	1.0000	C	NS	<0.050	ND	*NS	ND
Nickel	0.2	C	ND	<0.025	ND	*NS	ND
Selenium	0.05	A	ND	<0.050	0.038	*NS	ND
Silver	0.05	A	ND	<0.0125	ND	*NS	ND
Thallium	NA	NA	ND	<0.050	ND	*NS	ND
Zinc	10.0	B	ND	<0.025	ND	*NS	ND

River-Upstream							
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/17/04
Aluminum	5	C	NS	**17.5**	1.2	3.2	**5.20**
Antimony	NA	NA	ND	<0.025	ND	ND	ND
Arsenic	0.1	A	ND	<0.05	0.005	ND	ND
Barium	1.0	A	NS	0.155	0.083	0.110	0.14
Beryllium	NA	NA	ND	<0.0025	ND	ND	ND
Boron	0.8	C	NS	0.252	0.190	0.200	0.220
Cadmium	0.0100	A	ND	<0.025	ND	ND	ND
Chromium	0.050	A	ND	<0.01	ND	ND	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	ND	ND
Copper	1.0	B	ND	0.019	0.015	ND	ND
Iron	1.0	B	NS	9.790	0.850	**2.100**	**3.500**
Lead	0.05	A	ND	0.011	ND	ND	ND
Manganese	0.20	B	NS	0.416	0.180	**0.180**	**0.240**
Mercury	0.0020	A	ND	<0.0002	NS	ND	ND
Molybdenum	1.0000	C	NS	<0.050	0.010	0.012	ND
Nickel	0.2	C	ND	<0.025	ND	ND	ND
Selenium	0.05	A	ND	<0.050	ND	ND	ND
Silver	0.05	A	ND	<0.0125	ND	ND	ND
Thallium	NA	NA	ND	<0.050	ND	ND	ND
Zinc	10.0	B	ND	0.050	ND	ND	ND

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

			River-Downstream				
Parameter	NMWQCC Std.	Reference	6/13/00	8/2/01	6/28/02	6/19/03	6/17/04
Aluminum	5	C	NS	**7.8**	2.1	3.000	**5.50**
Antimony	NA	NA	ND	<0.025	ND	ND	ND
Arsenic	0.1	A	ND	<0.05	0.006	ND	ND
Barium	1.0	A	NS	0.125	0.094	0.110	0.14
Beryllium	NA	NA	ND	<0.0025	ND	ND	ND
Boron	0.8	C	NS	0.190	0.200	0.210	0.220
Cadmium	0.0100	A	ND	<0.025	ND	ND	ND
Chromium	0.050	A	ND	<0.01	ND	ND	ND
Cobalt	0.050	Cobalt	NS	<0.025	ND	ND	ND
Copper	1.0	B	ND	0.019	ND	ND	ND
Iron	1.0	B	NS	**4.710**	**1.800**	**2.100**	**3.600**
Lead	0.05	A	ND	0.012	ND	ND	ND
Manganese	0.20	B	NS	**0.261**	**0.220**	**0.200**	**0.240**
Mercury	0.0020	A	ND	<0.0002	NS	ND	ND
Molybdenum	1.0000	C	NS	<0.050	ND	0.010	ND
Nickel	0.2	C	ND	<0.025	ND	ND	ND
Selenium	0.05	A	ND	<0.050	ND	ND	ND
Silver	0.05	A	ND	<0.0125	ND	ND	ND
Thallium	NA	NA	ND	<0.050	ND	ND	ND
Zinc	10.0	B	ND	0.050	ND	ND	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 (*NS) indicates sample was not collected/analyzed for this constituent (not collected in odd years).

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	Dec. 99	Jun. 00	Dec. 00	Jul. 01	Dec. 01	Jun. 02	Dec. 02	Jun. 03	Dec. 03	Jun. 04	Dec. 04
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	A	A	A	A	A	A	A	A	A	A	A
MW-3S	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-6D	0.00	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	0.00	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.13	0.08	0.05
MW-11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-13	A	A	A	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-17	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP-1	0.00	0.00	0.00	0.00	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	Tar	Tar	Tar	Tar	Tar	Tar	Tar	Tar	Tar	Tar
WP-25	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
WP-26S	1.55	1.70	1.19	1.91	1.45	1.80	0.13	0.35	0.60	0.63	0.66
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	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
WP-27D	0.35	0.29	0.45	0.00	0.44	0.01	0.46	0.12	0.26	0.06	0.11
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	Dry	Dry	Dry	Dry	0.00	0.00	0.00	0.00	0.00	0.00
WP-32	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	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

Notes:

A = Plugged and Abandoned
Dry = Monitoring point was dry
Tar = Thickness measurement not obtainable because of presence of thick tar-like substance in well point.

NEL LABORATORIES

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

Tuesday, September 14, 2004

Mary Wells, P.E.
Terracon
1630 Hickory Loop, Suite H
Las Cruces, NM 88005

TEL: 505-527-1700
FAX: 505-527-1092

RE Project: **Huntsman-Brickland Refinery** Order No.: **L0406278**

Dear Mary Wells, P.E.:

NEL Laboratories, Las Vegas received 12 samples on 6/22/2004 10:30:00 AM for the analyses presented in the following report.

The case narrative for the project listed above specifies all quality assurance deficiencies associated with the data. Data that is not qualified in the case narrative has met or exceeded the US-EPA or laboratory specifications for the analytical method.

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

Wes Harvey
Laboratory Manager

9-15-04
Date

Certifications:

Idaho	NV052
Nevada	NV052
California	2002

NEL LABORATORIES

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

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

CASE NARRATIVE

Date: *14-Sep-04*

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:

8270C: S6: Surrogate recovery did not meet laboratory acceptance criteria. The data was accepted based on the valid recovery of the remaining surrogate(s).

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-001
Client Sample ID: MW-4
Collection Date: 6/16/2004 10:05:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.12	0.050		mg/L	1	6/29/2004 5:23:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 5:23:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 5:23:00 PM
Barium	0.087	0.0050		mg/L	1	6/29/2004 5:23:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 5:23:00 PM
Boron	1.3	0.020		mg/L	1	6/29/2004 5:23:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 5:23:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 5:23:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 5:23:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 5:23:00 PM
Iron	3.7	0.10		mg/L	1	6/29/2004 5:23:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 5:23:00 PM
Manganese	5.5	0.0050		mg/L	1	6/29/2004 5:23:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 5:23:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 5:23:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 5:23:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 5:23:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 5:23:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 5:23:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Acenaphthylene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Aniline	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Anthracene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Azobenzene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Benz(a)anthracene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Benzo(b)fluoranthene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Benzo(k)fluoranthene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Benzoic acid	ND	27		µg/L	1	6/25/2004 2:12:00 PM
Benzo(g,h,i)perylene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Benzo(a)pyrene	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Benzyl alcohol	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Bis(2-chloroethoxy)methane	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Bis(2-chloroethyl)ether	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Bis(2-chloroisopropyl)ether	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM
4-Bromophenyl phenyl ether	ND	5.3		µg/L	1	6/25/2004 2:12:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Carbazole	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
4-Chloroaniline	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
4-Chloro-3-methylphenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2-Chloronaphthalene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2-Chlorophenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
4-Chlorophenyl phenyl ether	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Chrysene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Dibenz(a,h)anthracene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Dibenzofuran	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Di-n-butyl phthalate	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
1,2-Dichlorobenzene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
1,3-Dichlorobenzene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
1,4-Dichlorobenzene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2,4-Dichlorophenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
3,3'-Dichlorobenzidine	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Diethyl phthalate	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2,4-Dimethylphenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Dimethyl phthalate	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
4,6-Dinitro-2-methylphenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2,4-Dinitrotoluene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2,6-Dinitrotoluene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2,4-Dinitrophenol	ND	11	µg/L	1	6/25/2004 2:12:00 PM
Di-n-octyl phthalate	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Fluoranthene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Fluorene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Hexachlorobenzene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Hexachlorobutadiene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Hexachlorocyclopentadiene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Hexachloroethane	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Isophorone	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2-Methylnaphthalene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2-Methylphenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
3&4-Methylphenols, Total	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Naphthalene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2-Nitroaniline	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
3-Nitroaniline	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
4-Nitroaniline	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Nitrobenzene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2-Nitrophenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
4-Nitrophenol	ND	11	µg/L	1	6/25/2004 2:12:00 PM
N-Nitrosodimethylamine	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
N-Nitrosodi-n-propylamine	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
N-Nitrosodiphenylamine	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Pentachlorophenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Phenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Phenanthrene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Pyrene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Pyridine	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
1,2,4-Trichlorobenzene	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2,4,5-Trichlorophenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
2,4,6-Trichlorophenol	ND	5.3	µg/L	1	6/25/2004 2:12:00 PM
Surr: 2-Fluorophenol	23.1	10-88	%REC	1	6/25/2004 2:12:00 PM
Surr: Phenol-d6	20.7	10-63	%REC	1	6/25/2004 2:12:00 PM
Surr: 2,4,6-Tribromophenol	55.2	10-161	%REC	1	6/25/2004 2:12:00 PM
Surr: Nitrobenzene-d5	75.1	9-132	%REC	1	6/25/2004 2:12:00 PM
Surr: 2-Fluorobiphenyl	57.1	16-127	%REC	1	6/25/2004 2:12:00 PM
Surr: 4-Terphenyl-d14	57.2	16-163	%REC	1	6/25/2004 2:12:00 PM
VOLATILES BY GC/MS		**SW8260B**			Analyst: GHP-L
Benzene	45	5.0	µg/L	1	6/22/2004 2:45:00 PM
Ethylbenzene	ND	5.0	µg/L	1	6/22/2004 2:45:00 PM
Toluene	ND	5.0	µg/L	1	6/22/2004 2:45:00 PM
Total Xylenes	ND	10	µg/L	1	6/22/2004 2:45:00 PM
Surr: Dibromofluoromethane	98.6	80-114	%REC	1	6/22/2004 2:45:00 PM
Surr: Toluene-d8	96.0	84-113	%REC	1	6/22/2004 2:45:00 PM
Surr: 4-Bromofluorobenzene	95.5	72-114	%REC	1	6/22/2004 2:45:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-002
Client Sample ID: MW-14
Collection Date: 6/16/2004 10:27:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.056	0.050		mg/L	1	6/29/2004 5:27:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 5:27:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 5:27:00 PM
Barium	0.14	0.0050		mg/L	1	6/29/2004 5:27:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 5:27:00 PM
Boron	1.8	0.020		mg/L	1	6/29/2004 5:27:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 5:27:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 5:27:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 5:27:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 5:27:00 PM
Iron	8.3	0.10		mg/L	1	6/29/2004 5:27:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 5:27:00 PM
Manganese	7.1	0.0050		mg/L	1	6/29/2004 5:27:00 PM
Molybdenum	0.011	0.010		mg/L	1	6/29/2004 5:27:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 5:27:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 5:27:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 5:27:00 PM
Thallium	0.17	0.10		mg/L	1	6/29/2004 5:27:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 5:27:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 3:35:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 3:35:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 3:35:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 3:35:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Pentachlorophenol	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Phenol	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Phenanthrene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Pyrene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Pyridine	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 3:35:00 PM
Surr: 2-Fluorophenol	4.78	10-88	S6	%REC	1	6/25/2004 3:35:00 PM
Surr: Phenol-d6	10.6	10-63		%REC	1	6/25/2004 3:35:00 PM
Surr: 2,4,6-Tribromophenol	5.58	10-161	S6	%REC	1	6/25/2004 3:35:00 PM
Surr: Nitrobenzene-d5	69.7	9-132		%REC	1	6/25/2004 3:35:00 PM
Surr: 2-Fluorobiphenyl	64.6	16-127		%REC	1	6/25/2004 3:35:00 PM
Surr: 4-Terphenyl-d14	72.8	16-163		%REC	1	6/25/2004 3:35:00 PM
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	230	25		µg/L	5	6/23/2004 11:41:00 AM
Ethylbenzene	ND	5.0		µg/L	1	6/22/2004 3:22:00 PM
Toluene	ND	5.0		µg/L	1	6/22/2004 3:22:00 PM
Total Xylenes	ND	10		µg/L	1	6/22/2004 3:22:00 PM
Surr: 4-Bromofluorobenzene	92.9	72-114		%REC	1	6/22/2004 3:22:00 PM
Surr: Dibromofluoromethane	96.3	80-114		%REC	1	6/22/2004 3:22:00 PM
Surr: Toluene-d8	93.2	84-113		%REC	1	6/22/2004 3:22:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-003
Client Sample ID: MW-7
Collection Date: 6/16/2004 10:55:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.66	0.050		mg/L	1	6/29/2004 5:41:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 5:41:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 5:41:00 PM
Barium	0.24	0.0050		mg/L	1	6/29/2004 5:41:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 5:41:00 PM
Boron	0.92	0.020		mg/L	1	6/29/2004 5:41:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 5:41:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 5:41:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 5:41:00 PM
Copper	0.31	0.010		mg/L	1	6/29/2004 5:41:00 PM
Iron	4.9	0.10		mg/L	1	6/29/2004 5:41:00 PM
Lead	0.19	0.050		mg/L	1	6/29/2004 5:41:00 PM
Manganese	2.0	0.0050		mg/L	1	6/29/2004 5:41:00 PM
Molybdenum	0.017	0.010		mg/L	1	6/29/2004 5:41:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 5:41:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 5:41:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 5:41:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 5:41:00 PM
Zinc	0.11	0.10		mg/L	1	6/29/2004 5:41:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	0.00045	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 4:17:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 4:17:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
4,6-Dinitro-2-methylphenol	6.0	5.0	µg/L	1	6/25/2004 4:17:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 4:17:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 4:17:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Pentachlorophenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Phenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Phenanthrene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Pyrene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Pyridine	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2,4,5-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
2,4,6-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 4:17:00 PM
Surr: 2-Fluorophenol	14.5	10-88	%REC	1	6/25/2004 4:17:00 PM
Surr: Phenol-d6	20.1	10-63	%REC	1	6/25/2004 4:17:00 PM
Surr: 2,4,6-Tribromophenol	17.7	10-161	%REC	1	6/25/2004 4:17:00 PM
Surr: Nitrobenzene-d5	73.5	9-132	%REC	1	6/25/2004 4:17:00 PM
Surr: 2-Fluorobiphenyl	68.6	16-127	%REC	1	6/25/2004 4:17:00 PM
Surr: 4-Terphenyl-d14	74.2	16-163	%REC	1	6/25/2004 4:17:00 PM
VOLATILES BY GC/MS		**SW8260B**			Analyst: GHP-L
Benzene	ND	5.0	µg/L	1	6/22/2004 3:59:00 PM
Ethylbenzene	ND	5.0	µg/L	1	6/22/2004 3:59:00 PM
Toluene	ND	5.0	µg/L	1	6/22/2004 3:59:00 PM
Total Xylenes	ND	10	µg/L	1	6/22/2004 3:59:00 PM
Surr: 4-Bromofluorobenzene	95.5	72-114	%REC	1	6/22/2004 3:59:00 PM
Surr: Dibromofluoromethane	98.4	80-114	%REC	1	6/22/2004 3:59:00 PM
Surr: Toluene-d8	97.7	84-113	%REC	1	6/22/2004 3:59:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-004
Client Sample ID: MW-15
Collection Date: 6/16/2004 11:30:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	ND	0.050		mg/L	1	6/29/2004 5:45:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 5:45:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 5:45:00 PM
Barium	0.14	0.0050		mg/L	1	6/29/2004 5:45:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 5:45:00 PM
Boron	1.5	0.020		mg/L	1	6/29/2004 5:45:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 5:45:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 5:45:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 5:45:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 5:45:00 PM
Iron	2.3	0.10		mg/L	1	6/29/2004 5:45:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 5:45:00 PM
Manganese	2.3	0.0050		mg/L	1	6/29/2004 5:45:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 5:45:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 5:45:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 5:45:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 5:45:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 5:45:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 5:45:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 4:59:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 4:59:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 4:59:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 4:59:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Pentachlorophenol	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Phenol	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Phenanthrene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Pyrene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Pyridine	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 4:59:00 PM
Surr: 2-Fluorophenol	5.62	10-88	S6	%REC	1	6/25/2004 4:59:00 PM
Surr: Phenol-d6	14.6	10-63		%REC	1	6/25/2004 4:59:00 PM
Surr: 2,4,6-Tribromophenol	5.12	10-161	S6	%REC	1	6/25/2004 4:59:00 PM
Surr: Nitrobenzene-d5	79.5	9-132		%REC	1	6/25/2004 4:59:00 PM
Surr: 2-Fluorobiphenyl	70.1	16-127		%REC	1	6/25/2004 4:59:00 PM
Surr: 4-Terphenyl-d14	71.6	16-163		%REC	1	6/25/2004 4:59:00 PM
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	6/22/2004 4:36:00 PM
Ethylbenzene	ND	5.0		µg/L	1	6/22/2004 4:36:00 PM
Toluene	ND	5.0		µg/L	1	6/22/2004 4:36:00 PM
Total Xylenes	ND	10		µg/L	1	6/22/2004 4:36:00 PM
Surr: 4-Bromofluorobenzene	91.7	72-114		%REC	1	6/22/2004 4:36:00 PM
Surr: Dibromofluoromethane	94.8	80-114		%REC	1	6/22/2004 4:36:00 PM
Surr: Toluene-d8	93.3	84-113		%REC	1	6/22/2004 4:36:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-005
Client Sample ID: MW-9S
Collection Date: 6/16/2004 12:15:00 PM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.061	0.050		mg/L	1	6/29/2004 5:49:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 5:49:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 5:49:00 PM
Barium	0.13	0.0050		mg/L	1	6/29/2004 5:49:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 5:49:00 PM
Boron	1.1	0.020		mg/L	1	6/29/2004 5:49:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 5:49:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 5:49:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 5:49:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 5:49:00 PM
Iron	8.0	0.10		mg/L	1	6/29/2004 5:49:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 5:49:00 PM
Manganese	3.0	0.0050		mg/L	1	6/29/2004 5:49:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 5:49:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 5:49:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 5:49:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 5:49:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 5:49:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 5:49:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 5:41:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 5:41:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 5:41:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 5:41:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Pentachlorophenol	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Phenol	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Phenanthrene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Pyrene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Pyridine	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 5:41:00 PM
Surr: 2-Fluorophenol	3.72	10-88	S6	%REC	1	6/25/2004 5:41:00 PM
Surr: Phenol-d6	10.8	10-63		%REC	1	6/25/2004 5:41:00 PM
Surr: 2,4,6-Tribromophenol	3.44	10-161	S6	%REC	1	6/25/2004 5:41:00 PM
Surr: Nitrobenzene-d5	70.4	9-132		%REC	1	6/25/2004 5:41:00 PM
Surr: 2-Fluorobiphenyl	63.8	16-127		%REC	1	6/25/2004 5:41:00 PM
Surr: 4-Terphenyl-d14	58.8	16-163		%REC	1	6/25/2004 5:41:00 PM
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	6/22/2004 5:13:00 PM
Ethylbenzene	ND	5.0		µg/L	1	6/22/2004 5:13:00 PM
Toluene	ND	5.0		µg/L	1	6/22/2004 5:13:00 PM
Total Xylenes	ND	10		µg/L	1	6/22/2004 5:13:00 PM
Surr: 4-Bromofluorobenzene	97.1	72-114		%REC	1	6/22/2004 5:13:00 PM
Surr: Dibromofluoromethane	97.3	80-114		%REC	1	6/22/2004 5:13:00 PM
Surr: Toluene-d8	96.0	84-113		%REC	1	6/22/2004 5:13:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-006
Client Sample ID: MW-03D
Collection Date: 6/16/2004 3:20:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.070	0.050		mg/L	1	6/29/2004 5:53:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 5:53:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 5:53:00 PM
Barium	0.071	0.0050		mg/L	1	6/29/2004 5:53:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 5:53:00 PM
Boron	1.8	0.020		mg/L	1	6/29/2004 5:53:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 5:53:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 5:53:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 5:53:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 5:53:00 PM
Iron	2.3	0.10		mg/L	1	6/29/2004 5:53:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 5:53:00 PM
Manganese	3.7	0.0050		mg/L	1	6/29/2004 5:53:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 5:53:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 5:53:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 5:53:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 5:53:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 5:53:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 5:53:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 6:23:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 6:23:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 6:23:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 6:23:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**			Analyst: **JRW-L**
Pentachlorophenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Phenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Phenanthrene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Pyrene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Pyridine	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2,4,5-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
2,4,6-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 6:23:00 PM
Surr: 2-Fluorophenol	13.5	10-88	%REC	1	6/25/2004 6:23:00 PM
Surr: Phenol-d6	17.5	10-63	%REC	1	6/25/2004 6:23:00 PM
Surr: 2,4,6-Tribromophenol	26.1	10-161	%REC	1	6/25/2004 6:23:00 PM
Surr: Nitrobenzene-d5	78.8	9-132	%REC	1	6/25/2004 6:23:00 PM
Surr: 2-Fluorobiphenyl	65.4	16-127	%REC	1	6/25/2004 6:23:00 PM
Surr: 4-Terphenyl-d14	74.2	16-163	%REC	1	6/25/2004 6:23:00 PM
VOLATILES BY GC/MS		**SW8260B**			Analyst: **GHP-L**
Benzene	ND	5.0	µg/L	1	6/22/2004 5:50:00 PM
Ethylbenzene	ND	5.0	µg/L	1	6/22/2004 5:50:00 PM
Toluene	ND	5.0	µg/L	1	6/22/2004 5:50:00 PM
Total Xylenes	ND	10	µg/L	1	6/22/2004 5:50:00 PM
Surr: 4-Bromofluorobenzene	96.4	72-114	%REC	1	6/22/2004 5:50:00 PM
Surr: Dibromofluoromethane	101	80-114	%REC	1	6/22/2004 5:50:00 PM
Surr: Toluene-d8	95.1	84-113	%REC	1	6/22/2004 5:50:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-007
Client Sample ID: MW-03S
Collection Date: 6/16/2004 3:35:00 AM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.13	0.050		mg/L	1	6/29/2004 5:57:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 5:57:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 5:57:00 PM
Barium	0.085	0.0050		mg/L	1	6/29/2004 5:57:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 5:57:00 PM
Boron	1.0	0.020		mg/L	1	6/29/2004 5:57:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 5:57:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 5:57:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 5:57:00 PM
Copper	0.013	0.010		mg/L	1	6/29/2004 5:57:00 PM
Iron	3.9	0.10		mg/L	1	6/29/2004 5:57:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 5:57:00 PM
Manganese	1.8	0.0050		mg/L	1	6/29/2004 5:57:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 5:57:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 5:57:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 5:57:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 5:57:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 5:57:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 5:57:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 7:05:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 7:05:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 7:05:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 7:05:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Pentachlorophenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Phenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Phenanthrene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Pyrene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Pyridine	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2,4,5-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
2,4,6-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 7:05:00 PM
Surr: 2-Fluorophenol	13.8	10-88	%REC	1	6/25/2004 7:05:00 PM
Surr: Phenol-d6	13.0	10-63	%REC	1	6/25/2004 7:05:00 PM
Surr: 2,4,6-Tribromophenol	46.6	10-161	%REC	1	6/25/2004 7:05:00 PM
Surr: Nitrobenzene-d5	64.5	9-132	%REC	1	6/25/2004 7:05:00 PM
Surr: 2-Fluorobiphenyl	52.0	16-127	%REC	1	6/25/2004 7:05:00 PM
Surr: 4-Terphenyl-d14	62.0	16-163	%REC	1	6/25/2004 7:05:00 PM
VOLATILES BY GC/MS		**SW8260B**			Analyst: GHP-L
Benzene	ND	5.0	µg/L	1	6/22/2004 6:27:00 PM
Ethylbenzene	ND	5.0	µg/L	1	6/22/2004 6:27:00 PM
Toluene	ND	5.0	µg/L	1	6/22/2004 6:27:00 PM
Total Xylenes	ND	10	µg/L	1	6/22/2004 6:27:00 PM
Surr: 4-Bromofluorobenzene	93.2	72-114	%REC	1	6/22/2004 6:27:00 PM
Surr: Dibromofluoromethane	99.7	80-114	%REC	1	6/22/2004 6:27:00 PM
Surr: Toluene-d8	95.7	84-113	%REC	1	6/22/2004 6:27:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

Lab ID: L0406278-008 **Collection Date:** 6/16/2004 11:30:00 AM
Client Sample ID: MW-06D **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	ND	0.050		mg/L	1	6/29/2004 6:01:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 6:01:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 6:01:00 PM
Barium	0.052	0.0050		mg/L	1	6/29/2004 6:01:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 6:01:00 PM
Boron	1.5	0.020		mg/L	1	6/29/2004 6:01:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 6:01:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 6:01:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 6:01:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 6:01:00 PM
Iron	0.91	0.10		mg/L	1	6/29/2004 6:01:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 6:01:00 PM
Manganese	5.5	0.0050		mg/L	1	6/29/2004 6:01:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 6:01:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 6:01:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 6:01:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 6:01:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 6:01:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 6:01:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 7:46:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 7:46:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 7:46:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 7:46:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C				Analyst: JRW-L
Pentachlorophenol	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Phenol	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Phenanthrene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Pyrene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Pyridine	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 7:46:00 PM
Surr: 2-Fluorophenol	4.02	10-88	S6	%REC	1	6/25/2004 7:46:00 PM
Surr: Phenol-d6	9.88	10-63	S6	%REC	1	6/25/2004 7:46:00 PM
Surr: 2,4,6-Tribromophenol	6.26	10-161	S6	%REC	1	6/25/2004 7:46:00 PM
Surr: Nitrobenzene-d5	77.7	9-132		%REC	1	6/25/2004 7:46:00 PM
Surr: 2-Fluorobiphenyl	60.2	16-127		%REC	1	6/25/2004 7:46:00 PM
Surr: 4-Terphenyl-d14	68.6	16-163		%REC	1	6/25/2004 7:46:00 PM
VOLATILES BY GC/MS		**SW8260B**				Analyst: GHP-L
Benzene	ND	5.0		µg/L	1	6/22/2004 7:03:00 PM
Ethylbenzene	ND	5.0		µg/L	1	6/22/2004 7:03:00 PM
Toluene	ND	5.0		µg/L	1	6/22/2004 7:03:00 PM
Total Xylenes	ND	10		µg/L	1	6/22/2004 7:03:00 PM
Surr: 4-Bromofluorobenzene	93.2	72-114		%REC	1	6/22/2004 7:03:00 PM
Surr: Dibromofluoromethane	98.2	80-114		%REC	1	6/22/2004 7:03:00 PM
Surr: Toluene-d8	94.0	84-113		%REC	1	6/22/2004 7:03:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-009
Client Sample ID: MW-06S
Collection Date: 6/16/2004 12:00:00 PM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.14	0.050		mg/L	1	6/29/2004 6:06:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 6:06:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 6:06:00 PM
Barium	0.65	0.0050		mg/L	1	6/29/2004 6:06:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 6:06:00 PM
Boron	1.1	0.020		mg/L	1	6/29/2004 6:06:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 6:06:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 6:06:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 6:06:00 PM
Copper	0.057	0.010		mg/L	1	6/29/2004 6:06:00 PM
Iron	7.7	0.10		mg/L	1	6/29/2004 6:06:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 6:06:00 PM
Manganese	1.4	0.0050		mg/L	1	6/29/2004 6:06:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 6:06:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 6:06:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 6:06:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 6:06:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 6:06:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 6:06:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 8:27:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 8:27:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 8:27:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 8:27:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Pentachlorophenol	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Phenol	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Phenanthrene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Pyrene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Pyridine	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	6/25/2004 8:27:00 PM
Surr: 2-Fluorophenol	6.50	10-88	S6	%REC	1	6/25/2004 8:27:00 PM
Surr: Phenol-d6	29.0	10-63		%REC	1	6/25/2004 8:27:00 PM
Surr: 2,4,6-Tribromophenol	7.18	10-161	S6	%REC	1	6/25/2004 8:27:00 PM
Surr: Nitrobenzene-d5	73.5	9-132		%REC	1	6/25/2004 8:27:00 PM
Surr: 2-Fluorobiphenyl	55.8	16-127		%REC	1	6/25/2004 8:27:00 PM
Surr: 4-Terphenyl-d14	63.0	16-163		%REC	1	6/25/2004 8:27:00 PM
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	6/22/2004 7:40:00 PM
Ethylbenzene	ND	5.0		µg/L	1	6/22/2004 7:40:00 PM
Toluene	ND	5.0		µg/L	1	6/22/2004 7:40:00 PM
Total Xylenes	ND	10		µg/L	1	6/22/2004 7:40:00 PM
Surr: 4-Bromofluorobenzene	96.5	72-114		%REC	1	6/22/2004 7:40:00 PM
Surr: Dibromofluoromethane	99.0	80-114		%REC	1	6/22/2004 7:40:00 PM
Surr: Toluene-d8	97.8	84-113		%REC	1	6/22/2004 7:40:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-010
Client Sample ID: DUP
Collection Date: 6/16/2004
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	0.11	0.050		mg/L	1	6/29/2004 6:10:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 6:10:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 6:10:00 PM
Barium	0.60	0.0050		mg/L	1	6/29/2004 6:10:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 6:10:00 PM
Boron	1.1	0.020		mg/L	1	6/29/2004 6:10:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 6:10:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 6:10:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 6:10:00 PM
Copper	0.014	0.010		mg/L	1	6/29/2004 6:10:00 PM
Iron	3.8	0.10		mg/L	1	6/29/2004 6:10:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 6:10:00 PM
Manganese	1.5	0.0050		mg/L	1	6/29/2004 6:10:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 6:10:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 6:10:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 6:10:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 6:10:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 6:10:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 6:10:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 9:09:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 9:09:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery

Lab Order: L0406278

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 9:09:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 9:09:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**			Analyst: **JRW-L**
Pentachlorophenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Phenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Phenanthrene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Pyrene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Pyridine	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2,4,5-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
2,4,6-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 9:09:00 PM
Surr: 2-Fluorophenol	19.0	10-88	%REC	1	6/25/2004 9:09:00 PM
Surr: Phenol-d6	29.9	10-63	%REC	1	6/25/2004 9:09:00 PM
Surr: 2,4,6-Tribromophenol	20.7	10-161	%REC	1	6/25/2004 9:09:00 PM
Surr: Nitrobenzene-d5	54.0	9-132	%REC	1	6/25/2004 9:09:00 PM
Surr: 2-Fluorobiphenyl	43.2	16-127	%REC	1	6/25/2004 9:09:00 PM
Surr: 4-Terphenyl-d14	64.2	16-163	%REC	1	6/25/2004 9:09:00 PM
VOLATILES BY GC/MS		**SW8260B**			Analyst: **GHP-L**
Benzene	ND	5.0	µg/L	1	6/22/2004 8:16:00 PM
Ethylbenzene	ND	5.0	µg/L	1	6/22/2004 8:16:00 PM
Toluene	ND	5.0	µg/L	1	6/22/2004 8:16:00 PM
Total Xylenes	ND	10	µg/L	1	6/22/2004 8:16:00 PM
Surr: 4-Bromofluorobenzene	97.6	72-114	%REC	1	6/22/2004 8:16:00 PM
Surr: Dibromofluoromethane	95.5	80-114	%REC	1	6/22/2004 8:16:00 PM
Surr: Toluene-d8	96.5	84-113	%REC	1	6/22/2004 8:16:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-011
Client Sample ID: River Up
Collection Date: 6/16/2004 12:15:00 PM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	5.2	0.050		mg/L	1	6/29/2004 6:14:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 6:14:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 6:14:00 PM
Barium	0.14	0.0050		mg/L	1	6/29/2004 6:14:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 6:14:00 PM
Boron	0.22	0.020		mg/L	1	6/29/2004 6:14:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 6:14:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 6:14:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 6:14:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 6:14:00 PM
Iron	3.5	0.10		mg/L	1	6/29/2004 6:14:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 6:14:00 PM
Manganese	0.24	0.0050		mg/L	1	6/29/2004 6:14:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 6:14:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 6:14:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 6:14:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 6:14:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 6:14:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 6:14:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 9:51:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 9:51:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 9:51:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 9:51:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**			Analyst: **JRW-L**
Pentachlorophenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Phenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Phenanthrene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Pyrene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Pyridine	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2,4,5-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
2,4,6-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 9:51:00 PM
Surr: 2-Fluorophenol	25.4	10-88	%REC	1	6/25/2004 9:51:00 PM
Surr: Phenol-d6	18.5	10-63	%REC	1	6/25/2004 9:51:00 PM
Surr: 2,4,6-Tribromophenol	57.7	10-161	%REC	1	6/25/2004 9:51:00 PM
Surr: Nitrobenzene-d5	53.6	9-132	%REC	1	6/25/2004 9:51:00 PM
Surr: 2-Fluorobiphenyl	37.9	16-127	%REC	1	6/25/2004 9:51:00 PM
Surr: 4-Terphenyl-d14	61.4	16-163	%REC	1	6/25/2004 9:51:00 PM
VOLATILES BY GC/MS		**SW8260B**			Analyst: **GHP-L**
Benzene	ND	5.0	µg/L	1	6/22/2004 9:28:00 PM
Ethylbenzene	ND	5.0	µg/L	1	6/22/2004 9:28:00 PM
Toluene	ND	5.0	µg/L	1	6/22/2004 9:28:00 PM
Total Xylenes	ND	10	µg/L	1	6/22/2004 9:28:00 PM
Surr: 4-Bromofluorobenzene	88.8	72-114	%REC	1	6/22/2004 9:28:00 PM
Surr: Dibromofluoromethane	95.1	80-114	%REC	1	6/22/2004 9:28:00 PM
Surr: Toluene-d8	95.4	84-113	%REC	1	6/22/2004 9:28:00 PM

NEL Laboratories, Las Vegas

Date: *14-Sep-04*

CLIENT: Terracon
Project: Huntsman-Brickland Refinery
Lab Order: L0406278

Lab ID: L0406278-012
Client Sample ID: River Down
Collection Date: 6/16/2004 12:30:00 PM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
TOTAL METALS BY EPA 6010 (AQ:ICP/OES)		**SW6010B**				Analyst: **VVG-L**
Aluminum	5.5	0.050		mg/L	1	6/29/2004 6:18:00 PM
Antimony	ND	0.050		mg/L	1	6/29/2004 6:18:00 PM
Arsenic	ND	0.050		mg/L	1	6/29/2004 6:18:00 PM
Barium	0.14	0.0050		mg/L	1	6/29/2004 6:18:00 PM
Beryllium	ND	0.0050		mg/L	1	6/29/2004 6:18:00 PM
Boron	0.22	0.020		mg/L	1	6/29/2004 6:18:00 PM
Cadmium	ND	0.0050		mg/L	1	6/29/2004 6:18:00 PM
Chromium	ND	0.010		mg/L	1	6/29/2004 6:18:00 PM
Cobalt	ND	0.010		mg/L	1	6/29/2004 6:18:00 PM
Copper	ND	0.010		mg/L	1	6/29/2004 6:18:00 PM
Iron	3.6	0.10		mg/L	1	6/29/2004 6:18:00 PM
Lead	ND	0.050		mg/L	1	6/29/2004 6:18:00 PM
Manganese	0.24	0.0050		mg/L	1	6/29/2004 6:18:00 PM
Molybdenum	ND	0.010		mg/L	1	6/29/2004 6:18:00 PM
Nickel	ND	0.040		mg/L	1	6/29/2004 6:18:00 PM
Selenium	ND	0.050		mg/L	1	6/29/2004 6:18:00 PM
Silver	ND	0.010		mg/L	1	6/29/2004 6:18:00 PM
Thallium	ND	0.10		mg/L	1	6/29/2004 6:18:00 PM
Zinc	ND	0.10		mg/L	1	6/29/2004 6:18:00 PM
MERCURY, TOTAL		**SW7470**				Analyst: **ATV-L**
Mercury	ND	0.00020		mg/L	1	6/30/2004 5:26:00 PM
SEMIVOLATILE ORGANICS		**SW8270C**				Analyst: **JRW-L**
Acenaphthene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Acenaphthylene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Aniline	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Anthracene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Azobenzene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Benz(a)anthracene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Benzo(b)fluoranthene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Benzo(k)fluoranthene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Benzoic acid	ND	25		µg/L	1	6/25/2004 10:32:00 PM
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Benzo(a)pyrene	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Benzyl alcohol	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
Bis(2-ethylhexyl)phthalate	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	6/25/2004 10:32:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		SW8270C			Analyst: JRW-L
Butyl benzyl phthalate	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Carbazole	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
4-Chloroaniline	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
4-Chloro-3-methylphenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2-Chloronaphthalene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2-Chlorophenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
4-Chlorophenyl phenyl ether	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Chrysene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Dibenz(a,h)anthracene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Dibenzofuran	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Di-n-butyl phthalate	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
1,2-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
1,3-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
1,4-Dichlorobenzene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2,4-Dichlorophenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
3,3'-Dichlorobenzidine	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Diethyl phthalate	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2,4-Dimethylphenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Dimethyl phthalate	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
4,6-Dinitro-2-methylphenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2,4-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2,6-Dinitrotoluene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2,4-Dinitrophenol	ND	10	µg/L	1	6/25/2004 10:32:00 PM
Di-n-octyl phthalate	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Fluoranthene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Fluorene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Hexachlorobenzene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Hexachlorobutadiene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Hexachlorocyclopentadiene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Hexachloroethane	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Isophorone	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2-Methylnaphthalene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2-Methylphenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
3&4-Methylphenols, Total	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Naphthalene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
3-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
4-Nitroaniline	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Nitrobenzene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2-Nitrophenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
4-Nitrophenol	ND	10	µg/L	1	6/25/2004 10:32:00 PM
N-Nitrosodimethylamine	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
N-Nitrosodi-n-propylamine	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
N-Nitrosodiphenylamine	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM

CLIENT: Terracon **Lab Order:** L0406278
Project: Huntsman-Brickland Refinery

SEMIVOLATILE ORGANICS		**SW8270C**			Analyst: **JRW-L**
Pentachlorophenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Phenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Phenanthrene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Pyrene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Pyridine	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2,4,5-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
2,4,6-Trichlorophenol	ND	5.0	µg/L	1	6/25/2004 10:32:00 PM
Surr: 2-Fluorophenol	19.9	10-88	%REC	1	6/25/2004 10:32:00 PM
Surr: Phenol-d6	16.1	10-63	%REC	1	6/25/2004 10:32:00 PM
Surr: 2,4,6-Tribromophenol	63.8	10-161	%REC	1	6/25/2004 10:32:00 PM
Surr: Nitrobenzene-d5	61.0	9-132	%REC	1	6/25/2004 10:32:00 PM
Surr: 2-Fluorobiphenyl	48.0	16-127	%REC	1	6/25/2004 10:32:00 PM
Surr: 4-Terphenyl-d14	66.4	16-163	%REC	1	6/25/2004 10:32:00 PM
VOLATILES BY GC/MS		**SW8260B**			Analyst: **GHP-L**
Benzene	ND	5.0	µg/L	1	6/22/2004 8:52:00 PM
Ethylbenzene	ND	5.0	µg/L	1	6/22/2004 8:52:00 PM
Toluene	ND	5.0	µg/L	1	6/22/2004 8:52:00 PM
Total Xylenes	ND	10	µg/L	1	6/22/2004 8:52:00 PM
Surr: 4-Bromofluorobenzene	93.2	72-114	%REC	1	6/22/2004 8:52:00 PM
Surr: Dibromofluoromethane	97.9	80-114	%REC	1	6/22/2004 8:52:00 PM
Surr: Toluene-d8	97.6	84-113	%REC	1	6/22/2004 8:52:00 PM

NEL LABORATORIES

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

6010W_T **Test Method:** SW 6010B-Total

Sample ID: MB-5920	SampType: MBLK	TestCode: 6010W_T	Units: mg/L	Prep Date: 6/25/2004	Run ID: R_ICP-1_040629G
	Batch ID: 5920	TestNo: SW6010B		Analysis Date: 6/29/2004	SeqNo: 203589

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.050									
Antimony	ND	0.050									
Arsenic	ND	0.050									
Barium	ND	0.0050									
Beryllium	ND	0.0050									
Boron	ND	0.020									
Cadmium	ND	0.0050									
Chromium	ND	0.010									
Cobalt	ND	0.010									
Copper	ND	0.010									
Iron	ND	0.10									
Lead	ND	0.050									
Manganese	ND	0.0050									
Molybdenum	ND	0.010									
Nickel	ND	0.040									
Selenium	ND	0.050									
Silver	ND	0.010									
Thallium	ND	0.10									
Zinc	ND	0.10									

Sample ID: LCS-5920	SampType: LCS	TestCode: 6010W_T	Units: mg/L	Prep Date: 6/25/2004	Run ID: R_ICP-1_040629G
	Batch ID: 5920	TestNo: SW6010B		Analysis Date: 6/29/2004	SeqNo: 203590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1.07	0.050	1	0	107	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
JI - MS or MSD outside accepance limits. LCS acceptable.
J - This concentration is considered an estimate due to LCS failure.
C - Unspiked sample >5 times the amount spiked
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

6010W_T **Test Method:** SW 6010B-Total

Sample ID: **LCS-5920** SampType: **LCS** TestCode: **6010W_T** Units: **mg/L** Prep Date: **6/25/2004** Run ID: **R_ICP-1_040629G**
Batch ID: **5920** TestNo: **SW6010B** Analysis Date: **6/29/2004** SeqNo: **203590**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.9996	0.050	1	0	100	85	115	0	0		
Arsenic	0.525	0.050	0.5	0	105	85	115	0	0		
Barium	1.087	0.0050	1	0	109	88	115	0	0		
Beryllium	0.1084	0.0050	0.1	0	108	85	115	0	0		
Boron	1.149	0.020	1	0	115	85	115	0	0		
Cadmium	0.5464	0.0050	0.5	0	109	85	115	0	0		
Chromium	0.5444	0.010	0.5	0	109	85	115	0	0		
Cobalt	0.5741	0.010	0.5	0	115	85	115	0	0		
Copper	0.5705	0.010	0.5	0	114	85	115	0	0		
Iron	1.212	0.10	1	0	97	85	115	0	0		
Lead	1.08	0.050	1	0	108	85	115	0	0		
Manganese	0.5483	0.0050	0.5	0	110	85	115	0	0		
Molybdenum	0.101	0.010	0.1	0	101	85	115	0	0		
Nickel	1.097	0.040	1	0	110	85	115	0	0		
Selenium	0.481	0.050	0.5	0	96.2	85	115	0	0		
Silver	0.5474	0.010	0.5	0	109	85	115	0	0		
Thallium	2.1	0.10	2	0	105	85	115	0	0		
Zinc	0.4289	0.10	0.5	0	85.8	85	115	0	0		

Sample ID: **L0406292-001AMS** SampType: **MS** TestCode: **6010W_T** Units: **mg/L** Prep Date: **6/25/2004** Run ID: **R_ICP-1_040629G**
Batch ID: **5920** TestNo: **SW6010B** Analysis Date: **6/29/2004** SeqNo: **203594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1.13	0.050	1	0.157	97.3	75	125	0	0		
Antimony	0.9743	0.050	1	0	97.4	75	125	0	0		
Arsenic	0.489	0.050	0.5	0	97.8	75	125	0	0		
Barium	1.142	0.0050	1	0.1638	97.8	75	125	0	0		
Beryllium	0.09309	0.0050	0.1	0	93.1	75	125	0	0		
Boron	1.136	0.020	1	0.1219	101	75	125	0	0		
Cadmium	0.5183	0.0050	0.5	0.01575	101	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
C - Unspiked sample >5 times the amount spiked
B - Analyte detected in the associated Method Blank
JI - MS or MSD outside accepance limits. LCS acceptable.
R - RPD outside accepted recovery limits
J - This concentration is considered an estimate due to LCS failure.

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

6010W_T **Test Method:** SW 6010B-Total

Sample ID: **L0406292-001AMS** SampType: **MS** TestCode: **6010W_T** Units: **mg/L** Prep Date: **6/25/2004** Run ID: **R_ICP-1_040629G**
Batch ID: **5920** TestNo: **SW6010B** Analysis Date: **6/29/2004** SeqNo: **203594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.7279	0.010	0.5	0.2498	95.6	75	125	0	0		
Cobalt	0.5125	0.010	0.5	0	103	75	125	0	0		
Copper	0.5811	0.010	0.5	0.05876	104	75	125	0	0		
Iron	1.285	0.10	1	0.2607	102	75	125	0	0		
Lead	1.054	0.050	1	0.0945	96	75	125	0	0		
Manganese	0.7514	0.0050	0.5	0.2712	96	75	125	0	0		
Molybdenum	0.1014	0.010	0.1	0	101	75	125	0	0		
Nickel	1.111	0.040	1	0.1477	96.4	75	125	0	0		
Selenium	0.435	0.050	0.5	0	87	75	125	0	0		
Silver	0.5011	0.010	0.5	0	100	75	125	0	0		
Thallium	1.763	0.10	2	0	88.2	75	125	0	0		
Zinc	16.27	0.10	0.5	15.86	83.2	75	125	0	0		

Sample ID: **L0406292-001AMSD** SampType: **MSD** TestCode: **6010W_T** Units: **mg/L** Prep Date: **6/25/2004** Run ID: **R_ICP-1_040629G**
Batch ID: **5920** TestNo: **SW6010B** Analysis Date: **6/29/2004** SeqNo: **203595**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1.17	0.050	1	0.157	101	75	125	1.13	3.48	20	
Antimony	1.108	0.050	1	0	111	75	125	0.9743	12.8	20	
Arsenic	0.516	0.050	0.5	0	103	75	125	0.489	5.37	20	
Barium	1.122	0.0050	1	0.1638	95.8	75	125	1.142	1.78	20	
Beryllium	0.0973	0.0050	0.1	0	97.3	75	125	0.09309	4.42	20	
Boron	1.19	0.020	1	0.1219	107	75	125	1.136	4.64	20	
Cadmium	0.5361	0.0050	0.5	0.01575	104	75	125	0.5183	3.37	20	
Chromium	0.6398	0.010	0.5	0.2498	78	75	125	0.7279	12.9	20	
Cobalt	0.5443	0.010	0.5	0	109	75	125	0.5125	6.02	20	
Copper	0.5705	0.010	0.5	0.05876	102	75	125	0.5811	1.85	20	
Iron	1.281	0.10	1	0.2607	102	75	125	1.285	0.273	20	
Lead	1.083	0.050	1	0.0945	98.8	75	125	1.054	2.71	20	
Manganese	0.7588	0.0050	0.5	0.2712	97.5	75	125	0.7514	0.985	20	

Qualifiers: ND - Not Detected at the Reporting Limit
JI - MS or MSD outside accepance limits. LCS acceptable.
J - This concentration is considered an estimate due to LCS failure.
C - Unspiked sample >5 times the amount spiked
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

6010W_T

Test Method: **SW 6010B-Total**

Sample ID: **L0406292-001AMSD**	SampType: **MSD**	TestCode: **6010W_T**	Units: **mg/L**	Prep Date: **6/25/2004**	Run ID: **R_ICP-1_040629G**
	Batch ID: **5920**	TestNo: **SW6010B**		Analysis Date: **6/29/2004**	SeqNo: **203595**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	0.1199	0.010	0.1	0	120	75	125	0.1014	16.7	20	
Nickel	1.08	0.040	1	0.1477	93.3	75	125	1.111	2.81	20	
Selenium	0.446	0.050	0.5	0	89.2	75	125	0.435	2.50	20	
Silver	0.524	0.010	0.5	0	105	75	125	0.5011	4.47	20	
Thallium	1.922	0.10	2	0	96.1	75	125	1.763	8.63	20	
Zinc	9.609	0.10	0.5	15.86	-1250	75	125	16.27	51.5	20	SR

Qualifiers:
ND - Not Detected at the Reporting Limit
Jl - MS or MSD outside accepance limits. LCS acceptable.
J - This concentration is considered an estimate due to LCS failure.
C - Unspiked sample >5 times the amount spiked
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

8270_W **Test Method:** **SW8270C**

Sample ID: **040623-8270W-MB** SampType: **MBLK** TestCode: **8270_W** Units: **µg/L** Prep Date: **6/23/2004** Run ID: **L_SVOAMS-1_040625A**
Batch ID: **5899** TestNo: **SW8270C** Analysis Date: **6/25/2004** SeqNo: **203289**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	5.0									
Acenaphthylene	ND	5.0									
Anthracene	ND	5.0									
Benz(a)anthracene	ND	5.0									
Benzo(b)fluoranthene	ND	5.0									
Benzo(k)fluoranthene	ND	5.0									
Benzo(g,h,i)perylene	ND	5.0									
Benzo(a)pyrene	ND	5.0									
Chrysene	ND	5.0									
Dibenz(a,h)anthracene	ND	5.0									
Fluoranthene	ND	5.0									
Fluorene	ND	5.0									
Indeno(1,2,3-cd)pyrene	ND	5.0									
Naphthalene	ND	5.0									
Phenanthrene	ND	5.0									
Pyrene	ND	5.0									
Surr: Nitrobenzene-d5	34.82	1.0	50	0	69.6	9	132	0	0		
Surr: 2-Fluorobiphenyl	30.92	1.0	50	0	61.8	16	127	0	0		
Surr: 4-Terphenyl-d14	41.02	1.0	50	0	82	16	163	0	0		

Sample ID: **040623-8270W-LCS** SampType: **LCS** TestCode: **8270_W** Units: **µg/L** Prep Date: **6/23/2004** Run ID: **L_SVOAMS-1_040625A**
Batch ID: **5899** TestNo: **SW8270C** Analysis Date: **6/25/2004** SeqNo: **203291**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	25.98	5.0	40	0	65	38.4	110	0	0		
Pyrene	27.96	5.0	40	0	69.9	43.7	142	0	0		
Surr: Nitrobenzene-d5	35.82	1.0	50	0	71.6	9	132	0	0		
Surr: 2-Fluorobiphenyl	32.54	1.0	50	0	65.1	16	127	0	0		
Surr: 4-Terphenyl-d14	36.68	1.0	50	0	73.4	16	163	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
C - Unspiked sample >5 times the amount spiked
B - Analyte detected in the associated Method Blank
JI - MS or MSD outside accepance limits. LCS acceptable.
R - RPD outside accepted recovery limits
J - This concentration is considered an estimate due to LCS failure.

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

8270_W **Test Method:** SW8270C

Sample ID: **040623-8270W-LCS** SampType: **LCSD** TestCode: **8270_W** Units: **µg/L** Prep Date: **6/23/2004** Run ID: **L_SVOAMS-1_040625A**
Batch ID: **5899** TestNo: **SW8270C** Analysis Date: **6/25/2004** SeqNo: **203290**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	27.48	5.0	40	0	68.7	38.4	110	25.98	5.61	25	
Pyrene	31.56	5.0	40	0	78.9	43.7	142	27.96	12.1	25	
Surr: Nitrobenzene-d5	38.98	1.0	50	0	78	9	132	0	0	0	
Surr: 2-Fluorobiphenyl	34.28	1.0	50	0	68.6	16	127	0	0	0	
Surr: 4-Terphenyl-d14	44.26	1.0	50	0	88.5	16	163	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
JI - MS or MSD outside accepance limits. LCS acceptable.
J - This concentration is considered an estimate due to LCS failure.
C - Unspiked sample >5 times the amount spiked
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

BTEX_8260_W **Test Method:** **SW8260B**

Sample ID: **mblk**	SampType: **mblk**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:	Run ID: **L_VOAMS-2_040622B**
	Batch ID: **R20917**	TestNo: **SW8260B**		Analysis Date: **6/22/2004**	SeqNo: **201841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	5.0									
Ethylbenzene	ND	5.0									
Toluene	ND	5.0									
Total Xylenes	ND	10									
Surr: Dibromofluoromethane	48.95	0.50	50	0	97.9	80	114	0	0		
Surr: Toluene-d8	46.45	0.50	50	0	92.9	84	113	0	0		
Surr: 4-Bromofluorobenzene	44.94	0.50	50	0	89.9	72	114	0	0		

Sample ID: **mblk**	SampType: **mblk**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:	Run ID: **L_VOAMS-2_040623A**
	Batch ID: **R20962**	TestNo: **SW8260B**		Analysis Date: **6/23/2004**	SeqNo: **202261**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	5.0									
Ethylbenzene	ND	5.0									
Toluene	ND	5.0									
Total Xylenes	ND	10									
Surr: Dibromofluoromethane	48.21	0.50	50	0	96.4	80	114	0	0		
Surr: Toluene-d8	48.39	0.50	50	0	96.8	84	113	0	0		
Surr: 4-Bromofluorobenzene	46.2	0.50	50	0	92.4	72	114	0	0		

Sample ID: **Lcs 50**	SampType: **lcs**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:	Run ID: **L_VOAMS-2_040622B**
	Batch ID: **R20917**	TestNo: **SW8260B**		Analysis Date: **6/22/2004**	SeqNo: **201839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	91.44	5.0	100	0	91.4	80	127	0	0		
Ethylbenzene	49.57	5.0	50	0	99.1	79	125	0	0		
Toluene	46.61	5.0	50	0	93.2	79	124	0	0		
Total Xylenes	142.8	10	150	0	95.2	82	128	0	0		
Surr: Dibromofluoromethane	49.78	0.50	50	0	99.6	80	114	0	0		
Surr: Toluene-d8	49	0.50	50	0	98	84	113	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
C - Unspiked sample >5 times the amount spiked
B - Analyte detected in the associated Method Blank
JI - MS or MSD outside accepance limits. LCS acceptable.
R - RPD outside accepted recovery limits
J - This concentration is considered an estimate due to LCS failure.

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

BTEX_8260_W **Test Method:** **SW8260B**

Sample ID: **Lcs 50**	SampType: **lcs**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:			Run ID: **L_VOAMS-2_040622B**
	Batch ID: **R20917**	TestNo: **SW8260B**		Analysis Date: **6/22/2004**			SeqNo: **201839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	48.53	0.50	50	0	97.1	72	114	0	0		

Sample ID: **Lcs 50**	SampType: **lcs**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:			Run ID: **L_VOAMS-2_040623A**
	Batch ID: **R20962**	TestNo: **SW8260B**		Analysis Date: **6/23/2004**			SeqNo: **202258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	94.67	5.0	100	0	94.7	80	127	0	0		
Ethylbenzene	51.38	5.0	50	0	103	79	125	0	0		
Toluene	47.64	5.0	50	0	95.3	79	124	0	0		
Surr: Dibromofluoromethane	49.92	0.50	50	0	99.8	80	114	0	0		
Surr: Toluene-d8	48.87	0.50	50	0	97.7	84	113	0	0		
Surr: 4-Bromofluorobenzene	46.76	0.50	50	0	93.5	72	114	0	0		

Sample ID: **Lcsd 50**	SampType: **lcsd**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:			Run ID: **L_VOAMS-2_040622B**
	Batch ID: **R20917**	TestNo: **SW8260B**		Analysis Date: **6/22/2004**			SeqNo: **201840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	89.39	5.0	100	0	89.4	80	127	91.44	2.27	20	
Ethylbenzene	48.66	5.0	50	0	97.3	79	125	49.57	1.85	20	
Toluene	45.25	5.0	50	0	90.5	79	124	46.61	2.96	20	
Total Xylenes	142.3	10	150	0	94.9	82	128	142.8	0.351	20	
Surr: Dibromofluoromethane	49.65	0.50	50	0	99.3	80	114	0	0	0	
Surr: Toluene-d8	48.96	0.50	50	0	97.9	84	113	0	0	0	
Surr: 4-Bromofluorobenzene	47.2	0.50	50	0	94.4	72	114	0	0	0	

Sample ID: **Lcsd 50**	SampType: **lcsd**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:			Run ID: **L_VOAMS-2_040623A**
	Batch ID: **R20962**	TestNo: **SW8260B**		Analysis Date: **6/23/2004**			SeqNo: **202259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	92.22	5.0	100	0	92.2	80	127	94.67	2.62	20	

Qualifiers: ND - Not Detected at the Reporting Limit
C - Unspiked sample >5 times the amount spiked
B - Analyte detected in the associated Method Blank
JI - MS or MSD outside accepance limits. LCS acceptable.
R - RPD outside accepted recovery limits
J - This concentration is considered an estimate due to LCS failure.

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

BTEX_8260_W **Test Method:** **SW8260B**

Sample ID: **Lcsd 50** SampType: **lcsd** TestCode: **BTEX_8260_** Units: **µg/L** Prep Date: Run ID: **L_VOAMS-2_040623A**
Batch ID: **R20962** TestNo: **SW8260B** Analysis Date: **6/23/2004** SeqNo: **202259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	51.29	5.0	50	0	103	79	125	51.38	0.175	20	
Toluene	46.64	5.0	50	0	93.3	79	124	47.64	2.12	20	
Surr: Dibromofluoromethane	49.56	0.50	50	0	99.1	80	114	0	0	0	
Surr: Toluene-d8	48.87	0.50	50	0	97.7	84	113	0	0	0	
Surr: 4-Bromofluorobenzene	47.08	0.50	50	0	94.2	72	114	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
JI - MS or MSD outside accepance limits. LCS acceptable.
J - This concentration is considered an estimate due to LCS failure.
C - Unspiked sample >5 times the amount spiked
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Date: *14-Sep-04*

CLIENT: Terracon
Work Order: L0406278
Project: Huntsman-Brickland Refinery

ANALYTICAL QC SUMMARY REPORT

HG_7470_T **Test Method:** **SW 7470-Total**

Sample ID: **MB-5936**	SampType: **MBLK**	TestCode: **HG_7470_T**	Units: **mg/L**	Prep Date: **6/30/2004**	Run ID: **R_HG-1_040630B**
	Batch ID: **5936**	TestNo: **SW7470**		Analysis Date: **6/30/2004**	SeqNo: **203850**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.00020									

Sample ID: **LCS-5936**	SampType: **LCS**	TestCode: **HG_7470_T**	Units: **mg/L**	Prep Date: **6/30/2004**	Run ID: **R_HG-1_040630B**
	Batch ID: **5936**	TestNo: **SW7470**		Analysis Date: **6/30/2004**	SeqNo: **203849**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00171	0.00020	0.002	0	85.5	80.5	112	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
JI - MS or MSD outside accepance limits. LCS acceptable.
J - This concentration is considered an estimate due to LCS failure.
C - Unspiked sample >5 times the amount spiked
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Date: *14-Sep-04*

NEL LABORATORIES

CHAIN OF CUSTODY

NEL Work Order: 0406078

Public Water System (PWS) Number: _____

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

Reno 800-368-5221
Las Vegas 888-368-3282

Project Name:	Project Number:
HUNTSMAN-BRICKLAND REFINERY	68997611
Purchase Order Number:	**Sampled By:** FVS/VVT
NEL Quote No.:	**NEL Sales Rep:**

Company: TERRACON
Attention: MARY WELLS, P.E.
Address: 1630 HICKORY LOOP, SUITE H
City, State, Zip Code: LAS CRUCES, NM 88005
Phone Number: (505) 527-1700
Fax Number: (505) 527-1092
Billing Address
Expected Due Date: JUNE 29, 2004

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

Note #1: Enter the number of containers submitted for the indicated Analysis followed by the preservation (see Box #2 below).
Eg: 3A = 3 containers with HCl preservation

Sampled Time	Sampled Date	Customer Sample Identification	NEL ID	Total # of Containers	Matrix (Box #1)	Analysis: See Note #1	8021 BTEX	6010/7470 METALS (See List)	8270 PAH								Remarks
10:05	6/16/04	MW-4	01	5	AQ	3A	1B	1E									OK to run w/ headspace per Mary Wells 6/22/04 JH.
10:27	6/16/04	MW-14	02	5	AQ	3A	1B	1E									
10:55	6/16/04	MW-7	03	5	AQ	3A	1B	1E									
11:30	6/16/04	MW-15	04	5	AQ	3A	1B	1E									
12:15	6/16/04	MW-9S	05	5	AQ	3A	1B	1E									
3:20	6/16/04	MW-03D	06	5	AQ	3A	1B	1E									
3:35	6/16/04	MW-03S	07	5	AQ	3A	1B	1E									
11:30	6/17/04	MW-06D	08	5	AQ	3A	1B	1E									
12:00	6/17/04	MW-06S	09	5	AQ	3A	1B	1E									
	6/17/04	DUP	10	5	AQ	3A	1B	1E									

Received w/ headspace

NO headspace

Received w/ headspace

Custody Seal intact? Y N None Temp. 10°C

Condition when received good

Box #1
DW - Drinking Water
WW - Waste Water
OL - Oil/Organic Liquid
SD - Solid
AQ - Aqueous
A - Air

Box #2
A. HCl
B. HNO_3
C. H_2SO_4
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	6/21/04 - 5:00 pm	Via Fed Ex		
2 Via	Fed Ex		A. Flood		6/22/04 10:30
3					

NEL LABORATORIES

CHAIN OF CUSTODY

NEL Work Order: 0406278

Public Water System (PWS) Number: _____

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

Reno 800-368-5221
Las Vegas 888-368-3282

Project Name:	Project Number:
HUNTSMAN - BRICKLAND REFINERY	68997611
Purchase Order Number:	**Sampled By:** FVS/VVT
NEL Quote No.:	**NEL Sales Rep:**

Company: TERRACON
Attention: MARY WELLS, P.E.
Address: 1630 HICKORY LOOP, SUITE H
City, State, Zip Code: LAS CRUCES, NM 88005
Phone Number: (505) 527-1700
Fax Number: (505) 527-1092
Billing Address
Expected Due Date: JUNE 29, 2004

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

Sampled Time	Sampled Date	Customer Sample Identification	NEL ID	Total # of Containers	Matrix (Box #1)	Analysis: See Note #1	8021 BTEX	6010/7470 METALS (SEE LIST)	8270 PAH											Remarks
12:15	6/17/04	RIVER UP	11	5	AQ	3A	1B	1E												NO headspace
12:30	6/17/04	RIVER DOWN	12	5	AQ	3A	1B	1E												↓

Note #1:
Enter the number of containers submitted for the indicated Analysis followed by the preservation (see Box #2 below).
Eg: 3A = 3 containers with HCl preservation

Custody Seal intact? Y N None Temp. 10
Condition when received good

Box #1
DW - Drinking Water
WW - Waste Water
OL - Oil/Organic Liquid
SD - Solid
AQ - Aqueous
A - Air

Box #2
A. HCl
B. HNO_3
C. H_2SO_4
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	6/21/04 - 5:00 pm	VIA FedEX	FedEX	
2 VIA FedEX			A Flood		6/22/04 10:30
3					

NEL LABORATORIES

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

Monday, December 27, 2004

Mary Wells, P.E.
Terracon- Las Cruces
1630 Hickory Loop, Suite H
Las Cruces, NM 88005

TEL: 505-527-1700
FAX: 505-527-1092

RE Project: **68997611** Order No.: **L0412179**

Dear Mary Wells, P.E.:

NEL Laboratories, Las Vegas received 8 samples on 12/21/04 11:30:00 AM for the analyses presented in the following report.

The case narrative for the project listed above specifies all quality assurance deficiencies associated with the data. Data that is not qualified in the case narrative has met or exceeded the US-EPA or laboratory specifications for the analytical method.

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

Wes Harvey
Laboratory Manager

12-27-04
Date

Certifications:

Idaho	NV052
Nevada	NV052
California	2002

received
1-3-05 a.g.

NEL LABORATORIES

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

CLIENT: Terracon- Las Cruces
Project: 68997611
Lab Order: L0412179

CASE NARRATIVE

Date: *27-Dec-04*

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, Las Vegas

Date: *27-Dec-04*

CLIENT: Terracon- Las Cruces
Project: 68997611
Lab Order: L0412179

Lab ID: L0412179-001
Collection Date: 12/16/04 3:12:00 PM
Client Sample ID: MW-3S
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 3:55:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 3:55:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 3:55:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 3:55:00 PM
Surr: Dibromofluoromethane	82.9	77-127		%REC	1	12/21/04 3:55:00 PM
Surr: Toluene-d8	95.3	73-127		%REC	1	12/21/04 3:55:00 PM
Surr: 4-Bromofluorobenzene	65.6	57-139		%REC	1	12/21/04 3:55:00 PM

Lab ID: L0412179-002
Collection Date: 12/16/04 3:00:00 PM
Client Sample ID: MW-3D
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 4:29:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 4:29:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 4:29:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 4:29:00 PM
Surr: 4-Bromofluorobenzene	72.7	57-139		%REC	1	12/21/04 4:29:00 PM
Surr: Dibromofluoromethane	82.5	77-127		%REC	1	12/21/04 4:29:00 PM
Surr: Toluene-d8	102	73-127		%REC	1	12/21/04 4:29:00 PM

Lab ID: L0412179-003
Collection Date: 12/16/04 12:26:00 PM
Client Sample ID: MW-6S
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 7:24:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 7:24:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 7:24:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 7:24:00 PM
Surr: 4-Bromofluorobenzene	81.1	57-139		%REC	1	12/21/04 7:24:00 PM
Surr: Dibromofluoromethane	82.7	77-127		%REC	1	12/21/04 7:24:00 PM
Surr: Toluene-d8	107	73-127		%REC	1	12/21/04 7:24:00 PM

NEL Laboratories, Las Vegas

Date: *27-Dec-04*

CLIENT: Terracon- Las Cruces
Project: 68997611
Lab Order: L0412179

Lab ID: L0412179-004 **Collection Date:** 12/16/04 11:58:00 AM
Client Sample ID: MW-6D **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 5:04:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 5:04:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 5:04:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 5:04:00 PM
Surr: 4-Bromofluorobenzene	70.3	57-139		%REC	1	12/21/04 5:04:00 PM
Surr: Dibromofluoromethane	83.6	77-127		%REC	1	12/21/04 5:04:00 PM
Surr: Toluene-d8	100	73-127		%REC	1	12/21/04 5:04:00 PM

Lab ID: L0412179-005 **Collection Date:** 12/16/04 11:10:00 AM
Client Sample ID: MW-9S **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 5:39:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 5:39:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 5:39:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 5:39:00 PM
Surr: 4-Bromofluorobenzene	69.5	57-139		%REC	1	12/21/04 5:39:00 PM
Surr: Dibromofluoromethane	81.9	77-127		%REC	1	12/21/04 5:39:00 PM
Surr: Toluene-d8	99.4	73-127		%REC	1	12/21/04 5:39:00 PM

Lab ID: L0412179-006 **Collection Date:** 12/16/04 3:30:00 PM
Client Sample ID: RIVER UP **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 6:14:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 6:14:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 6:14:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 6:14:00 PM
Surr: 4-Bromofluorobenzene	73.8	57-139		%REC	1	12/21/04 6:14:00 PM
Surr: Dibromofluoromethane	83.3	77-127		%REC	1	12/21/04 6:14:00 PM
Surr: Toluene-d8	104	73-127		%REC	1	12/21/04 6:14:00 PM

NEL Laboratories, Las Vegas

Date: *27-Dec-04*

CLIENT: Terracon- Las Cruces
Project: 68997611
Lab Order: L0412179

Lab ID: L0412179-007
Collection Date: 12/16/04 3:40:00 PM
Client Sample ID: RIVER DOWN
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 6:49:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 6:49:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 6:49:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 6:49:00 PM
Surr: 4-Bromofluorobenzene	73.4	57-139		%REC	1	12/21/04 6:49:00 PM
Surr: Dibromofluoromethane	85.9	77-127		%REC	1	12/21/04 6:49:00 PM
Surr: Toluene-d8	104	73-127		%REC	1	12/21/04 6:49:00 PM

Lab ID: L0412179-008
Collection Date: 12/16/04
Client Sample ID: DUP
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **GHP-L**
Benzene	ND	5.0		µg/L	1	12/21/04 8:34:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/21/04 8:34:00 PM
Toluene	ND	5.0		µg/L	1	12/21/04 8:34:00 PM
Total Xylenes	ND	10		µg/L	1	12/21/04 8:34:00 PM
Surr: 4-Bromofluorobenzene	82.9	57-139		%REC	1	12/21/04 8:34:00 PM
Surr: Dibromofluoromethane	81.3	77-127		%REC	1	12/21/04 8:34:00 PM
Surr: Toluene-d8	106	73-127		%REC	1	12/21/04 8:34:00 PM

NEL LABORATORIES

CLIENT: Terracon- Las Cruces
Work Order: L0412179
Project: 68997611

ANALYTICAL QC SUMMARY REPORT

BTEX_8260_W **Test Method:** **SW8260B**

Sample ID: **mblk**	SampType: **mblk**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:	Run ID: **L_VOAMS-2_041221A**
	Batch ID: **R23746**	TestNo: **SW8260B**		Analysis Date: **12/21/04**	SeqNo: **229920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	5.0									
Ethylbenzene	ND	5.0									
Toluene	ND	5.0									
Total Xylenes	ND	10									
Surr: Dibromofluoromethane	42.76	0.50	50	0	85.5	77	127	0	0		
Surr: Toluene-d8	50.6	0.50	50	0	101	73	127	0	0		
Surr: 4-Bromofluorobenzene	35.11	0.50	50	0	70.2	57	139	0	0		

Sample ID: **ccv20**	SampType: **lcs**	TestCode: **BTEX_8260_**	Units: **µg/L**	Prep Date:	Run ID: **L_VOAMS-2_041221A**
	Batch ID: **R23746**	TestNo: **SW8260B**		Analysis Date: **12/21/04**	SeqNo: **229919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.4	5.0	20	0	92	80	127	0	0		
Ethylbenzene	20.47	5.0	20	0	102	79	125	0	0		
Toluene	17.83	5.0	20	0	89.2	79	124	0	0		
m,p-Xylene	37.58	10	40	0	94	82	128	0	0		
o-Xylene	18.75	5.0	20	0	93.8	82	126	0	0		
Surr: Dibromofluoromethane	43.73	0.50	50	0	87.5	77	127	0	0		
Surr: Toluene-d8	47.79	0.50	50	0	95.6	73	127	0	0		
Surr: 4-Bromofluorobenzene	37.52	0.50	50	0	75	57	139	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
C - Unspiked sample >5 times the amount spiked
B - Analyte detected in the associated Method Blank
JI - MS or MSD outside accepance limits. LCS acceptable.
R - RPD outside accepted recovery limits
J - This concentration is considered an estimate due to LCS failure.

Date: *27-Dec-04*

NEL Laboratories, Las Vegas

Sample Receipt Checklist

Client Name **TERRAC.LC** Date and Time Receive **12/21/04 11:30:00 AM**

Work Order Numbe **L0412179** Received by **SLA-LV**

Checklist completed by _____ 12/21/04 Reviewed by _____ 12/21/04

Signature | Date | Initials | Date

Matrix Carrier name FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

NEL LABORATORIES

CHAIN OF CUSTODY

NEL Work Order: L0412179

Public Water System (PWS) Number:

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

Reno 800-368-5221
Las Vegas 888-368-3282

Project Name: Huntsman - Brickland	Project Number: 68997611
Purchase Order Number:	Sampled By: V. Trujillo and F. Small
NEL Quote No.:	NEL Sales Rep:

Company: Terracon
Attention: Mary Wells, P.E.
Address: 1630 Hickory Loop, Suite H
City, State, Zip Code: Las Cruces, NM 88005
Phone Number: 505.527.1700
Fax Number: 505.527.1092
Billing Address
Expected Due Date:

Requested Turnaround: ____ 5-day ____ 2-day ____ 1-day ____ Other X 10day

Analysis: BTEX 8260 (See Note #1)

Sampled Time	Sampled Date	Customer Sample Identification	NEL ID	Total # of Containers	Matrix (Box #1)	BTEX 8260													Remarks
3:12	12/16/04	MW-3S	1	2	AQ	2A													
300	12/16/04	MW-3D	2	2	AQ	2A													
1226	12/16/04	MW-6S	3	2	AQ	2A													
11:58	12/16/04	MW-6D	4	2	AQ	2A													
11:10	12/16/04	MW-9S	5	2	AQ	2A													
3:30	12/16/04	River-UP	6	2	AQ	2A													
3:40	12/16/04	River-DOWN	7	2	AQ	2A													
	12/16/04	Dup	8	2	AQ	2A													

Note #1: Enter the number of containers submitted for the indicated Analysis followed by the preservation (see Box #2 below). Eg: 3A = 3 containers with HCl preservation

Custody Seal intact? Y N None (circled) Temp. 7.0
Condition when received: good (circled)

Box #1
DW - Drinking Water
WW - Waste Water
OL - Oil/Organic Liquid
SD - Solid
AQ - Aqueous
A - Air

Box #2
A. HCl
B. HNO_3
C. H_2SO_4
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		S. Alhassen	[signature]	12/01/04 11:3[illegible]
2					
3					

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 6-16-04	
Weather: Clear, warm	
MW # 4	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 11:02am
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well: 9.12 gallons
Measuring Point: Top of PVC casing	(.041 x dxd x h)
	Evacuation Method: Pumping
Static Water Level: 4.10'	Decontamination Procedure: Alconox wash
Total Well Depth: 18.00'	with two rinses
Height of Water Column (h): 13.90'	

EVACUATION RECORD						
Time:	9:48am	9:53am	9:58am	10:02am		
Vol. Purged (gal):	**Initial**	10	10	10		
Water Temperature (F):	73	72	72	71		
pH (standard units):	6.59	7.03	7.02	7.06		
Specific Conductivity (uS):	1470	1562	1564	1565		
Turbidity (subjective):	NM	NM	NM	NM		
Odor (subjective):	Slight	None	None	None		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 6-16-04 Time: 10:05am	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM – Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 6-16-04	
Weather: Clear, warm	
MW # 14	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 11:06am
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 13.49 gallons
	Evacuation Method: Pumping
Static Water Level: 5.65'	Decontamination Procedure: Alconox wash
Total Well Depth: 26.10'	with two rinses
Height of Water Column (h): 20.45'	

EVACUATION RECORD						
Time:	10:16am	10:21am	10:23am			
Vol. Purged (gal):	**Initial**	10	5			
Water Temperature (F):	76	74	71			
pH (standard units):	6.71	6.87	6.87			
Specific Conductivity (uS):	1003	1591	1588			
Turbidity (subjective):	NM	NM	NM			
Odor (subjective):	Slight	None	None			
Dissolved Oxygen:	NM	NM	NM			

SAMPLING DATA	
Date: 6-16-04 Time: 10:27am	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 6-16-04	
Weather: Clear, warm	
MW # 7	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 11:14am
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 7.45 gallons
	Evacuation Method: Pumping
Static Water Level: 4.21'	Decontamination Procedure: Alconox wash
Total Well Depth: 15.50'	with two rinses
Height of Water Column (h): 11.29'	

EVACUATION RECORD						
Time:	10:36am	10:40am	10:46am	10:48am		
Vol. Purged (gal):	**Initial**	10	10	5		
Water Temperature (F):	76	76	73	72		
pH (standard units):	6.74	7.10	7.15	7.14		
Specific Conductivity (uS):	714	764	911	923		
Turbidity (subjective):	Turbid	Turbid	Turbid	Turbid		
Odor (subjective):	Slight	Slight	Slight	Slight		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 6-16-04 Time: 10:55am	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA
Job Name: Huntsman
Job Location: Sunland Park, NM
Job No. 68997611
Test Date: 6-16-04
Weather: Clear, warm
MW # 15 Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 11:32am
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 11.90 gallons
	Evacuation Method: Pumping
Static Water Level: 14.34'	Decontamination Procedure: Alconox wash
Total Well Depth: 32.41'	with two rinses
Height of Water Column (h): 18.07'	

EVACUATION RECORD

Time:	11:06am	11:15am	11:21am	11:24am		
Vol. Purged (gal):	**Initial**	15	15	5		
Water Temperature (F):	78	78	78	76		
pH (standard units):	6.89	7.19	7.21	7.17		
Specific Conductivity (uS):	890	919	913	911		
Turbidity (subjective):	Clear	Clear	Clear	Clear		
Odor (subjective):	Slight	Slight	Slight	Slight		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 6-16-04 Time: 11:30am	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 6-16-04	
Weather: Clear, warm	
MW # 09S	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 01:51pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 4.94 gallons
	Evacuation Method: Pumping
Static Water Level: 6.04'	Decontamination Procedure: Alconox wash
Total Well Depth: 13.60'	with two rinses
Height of Water Column (h): 7.56'	

EVACUATION RECORD

Time:	11:41am	11:42am	11:45am	11:47am		
Vol. Purged (gal):	**Initial**	5	5	5		
Water Temperature (F):	80	74	72	71		
pH (standard units):	6.75	7.10	7.12	7.14		
Specific Conductivity (uS):	1477	1482	1463	1451		
Turbidity (subjective):	Clear	Clear	Clear	Clear		
Odor (subjective):	Slight	Slight	Slight	Slight		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 6-16-04 Time: 12:15pm	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 6-16-04	
Weather: Clear, warm	
MW # 03D	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 02:01pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 21.19 gallons
	Evacuation Method: Pumping
Static Water Level: 5.38'	Decontamination Procedure: Alconox wash
Total Well Depth: 37.50'	with two rinses
Height of Water Column (h): 32.12'	

EVACUATION RECORD						
Time:	2:29pm	2:37pm	2:58pm	3:16pm	3:18	
Vol. Purged (gal):	**Initial**	20	20	20	5	
Water Temperature (F):	79	75	78	78	74	
pH (standard units):	6.75	7.20	7.26	7.31	7.21	
Specific Conductivity (uS):	1623	1812	1726	1705	1655	
Turbidity (subjective):	Clear	Clear	Clear	Clear	Clear	
Odor (subjective):	None	None	None	None	None	
Dissolved Oxygen:	NM	NM	NM	NM	NM	

SAMPLING DATA	
Date: 6-16-04 Time: 3:20pm	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 6-16-04	
Weather: Clear, warm	
MW # 03S	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 02:02pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 7.33 gallons
	Evacuation Method: Pumping
Static Water Level: 5.39'	Decontamination Procedure: Alconox wash
Total Well Depth: 16.50'	with two rinses
Height of Water Column (h): 11.11'	

EVACUATION RECORD						
Time:	3:25pm	3:27pm	3:29pm	3:33pm		
Vol. Purged (gal):	**Initial**	5	5	2		
Water Temperature (F):	74	71	71	72		
pH (standard units):	6.64	7.17	7.34	7.32		
Specific Conductivity (uS):	1209	1079	9596	1144		
Turbidity (subjective):	Clear	Clear	Clear	Clear		
Odor (subjective):	None	None	None	None		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 6-16-04 Time: 3:35pm	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA
Job Name: Huntsman
Job Location: Sunland Park, NM
Job No. 68997611
Test Date: 6-17-04
Weather: Clear, warm
MW # 06S Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 01:56pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 7.03 gallons
	Evacuation Method: Pumping
Static Water Level: 6.25'	Decontamination Procedure: Alconox wash
Total Well Depth: 17.00'	with two rinses
Height of Water Column (h): 10.75'	

EVACUATION RECORD

Time:	11:33am	11:35am	11:40am			
Vol. Purged (gal):	**Initial**	5	3			
Water Temperature (F):	74	73	76			
pH (standard units):	7.10	6.96	7.01			
Specific Conductivity (uS):	1054	936	1027			
Turbidity (subjective):	Clear	Clear	Clear			
Odor (subjective):	Slight	Slight	Slight			
Dissolved Oxygen:	NM	NM	NM			

SAMPLING DATA	
Date: 6-17-04 Time: 12:00am	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 6-17-04	
Weather: Clear, warm	
MW # 06D	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 6-15-04	Time: 01:54pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 20.77 gallons
	Evacuation Method: Pumping
Static Water Level: 6.24'	Decontamination Procedure: Alconox wash
Total Well Depth: 38.00'	with two rinses
Height of Water Column (h): 31.76'	

EVACUATION RECORD						
Time:	10:35am	10:43am	11:03am	11:22am	11:24	
Vol. Purged (gal):	**Initial**	20	20	20	5	
Water Temperature (F):	73	72	78	77	73	
pH (standard units):	6.86	7.32	7.30	7.29	7.24	
Specific Conductivity (uS):	1501	1655	1527	1680	1630	
Turbidity (subjective):	Clear	Clear	Clear	Clear	Clear	
Odor (subjective):	None	None	None	None	None	
Dissolved Oxygen:	NM	NM	NM	NM	NM	

SAMPLING DATA	
Date: 6-17-04 Time: 1:30pm	Samples Filtered: No
No. of Sample Containers Collected: 5	Method: N/A
Analysis Requested: EPA 8021, 8270, & 6010	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl, HNO_3, and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 12-16-04	
Weather: Cool, windy	
MW # 09S	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 12-15-04	Time: 02:22pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 5.02 gallons
	Evacuation Method: Pumping
Static Water Level: 7.83'	Decontamination Procedure: Alconox wash
Total Well Depth: 15.50'	with two rinses
Height of Water Column (h): 7.67'	

EVACUATION RECORD						
Time:	10:53am	11:02am	11:04am	11:08am		
Vol. Purged (gal):	**Initial**	5	5	5		
Water Temperature (F):	64	67	67	68		
pH (standard units):	7.17	7.23	7.24	7.24		
Specific Conductivity (uS):	1069	1103	1111	1132		
Turbidity (subjective):	Clear	Clear	Clear	Clear		
Odor (subjective):	Slight	Slight	Slight	Slight		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 12-16-04 Time: 11:10pm	Samples Filtered: No
No. of Sample Containers Collected: 2	Method: N/A
Analysis Requested: EPA 8260	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 12-16-04	
Weather: Cool, windy	
MW # 06D	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 12-15-04	Time: 02:33pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 19.49 gallons
	Evacuation Method: Pumping
Static Water Level: 8.20'	Decontamination Procedure: Alconox wash
Total Well Depth: 38.00'	with two rinses
Height of Water Column (h): 29.80'	

EVACUATION RECORD						
Time:	11:24am	11:35am	11:47am	11:57am		
Vol. Purged (gal):	**Initial**	20	20	20		
Water Temperature (F):	63	65	67	67		
pH (standard units):	7.08	7.32	7.34	7.34		
Specific Conductivity (uS):	1294	1414	1451	1451		
Turbidity (subjective):	Clear	Clear	Clear	Clear		
Odor (subjective):	None	None	None	None		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 12-16-04 Time: 11:58am	Samples Filtered: No
No. of Sample Containers Collected: 2	Method: N/A
Analysis Requested: EPA 8260	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 12-16-04	
Weather: Cool, windy	
MW # 06S	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 12-15-04	Time: 02:30pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 5.75 gallons
	Evacuation Method: Pumping
Static Water Level: 8.21'	Decontamination Procedure: Alconox wash
Total Well Depth: 17.00'	with two rinses
Height of Water Column (h): 8.79'	

EVACUATION RECORD						
Time:	12:11pm	12:14pm	12:23pm			
Vol. Purged (gal):	**Initial**	5	3			
Water Temperature (F):	66	67	65			
pH (standard units):	7.15	7.19	7.16			
Specific Conductivity (uS):	988	841	1059			
Turbidity (subjective):	Clear	Clear	Clear			
Odor (subjective):	Slight	Slight	Slight			
Dissolved Oxygen:	NM	NM	NM			

SAMPLING DATA	
Date: 12-16-04 Time: 12:26pm	Samples Filtered: No
No. of Sample Containers Collected: 2	Method: N/A
Analysis Requested: EPA 8260	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl and refrigeration

NM - Not measured

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 12-16-04	
Weather: *Cool, windy*	
MW # 03D	Sampled By: VVT/FVS

WATER LEVEL DATA / EVACUATION DATA	
Date: 12-15-04	Time: 02:40pm
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 19.71 gallons
	Evacuation Method: Pumping
Static Water Level: 7.36'	Decontamination Procedure: Alconox wash
Total Well Depth: 37.50'	with two rinses
Height of Water Column (h): 30.14'	

EVACUATION RECORD						
Time:	2:22pm	2:32pm	2:45pm	2:59pm		
Vol. Purged (gal):	**Initial**	20	20	20		
Water Temperature (F):	67	65	65	65		
pH (standard units):	7.12	7.20	7.22	7.23		
Specific Conductivity (uS):	1351	1427	1399	1437		
Turbidity (subjective):	Clear	Clear	Clear	Clear		
Odor (subjective):	None	None	None	None		
Dissolved Oxygen:	NM	NM	NM	NM		

SAMPLING DATA	
Date: 12-16-04 Time: 3:00pm	Samples Filtered: No
No. of Sample Containers Collected: 2	Method: N/A
Analysis Requested: EPA 8260	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl and refrigeration

NM - *Not measured*

GROUNDWATER SAMPLING DATA SUMMARY

GENERAL DATA	
Job Name: Huntsman	
Job Location: Sunland Park, NM	
Job No. 68997611	
Test Date: 12-16-04	
Weather: Cool, windy	
MW # 03S	Sampled By: VVT/FVS

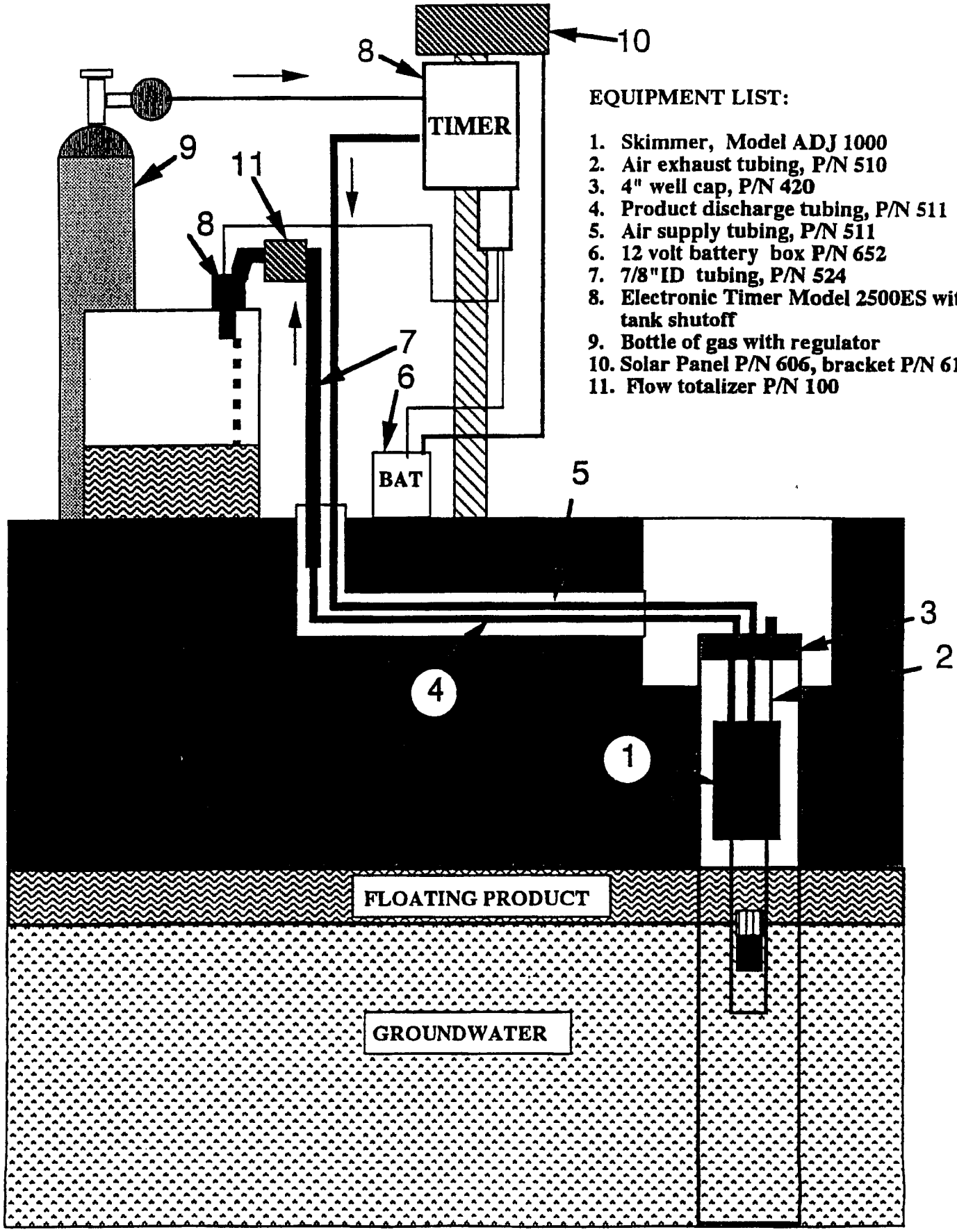
WATER LEVEL DATA / EVACUATION DATA	
Date: 12-15-04	Time: 02:38m
Measuring Method: Oil-water interface meter	Casing Diameter (d): 4"
	Volume of Water in Well:
Measuring Point: Top of PVC casing	(.041 x dxd x h) 6.02 gallons
	Evacuation Method: Pumping
Static Water Level: 7.29'	Decontamination Procedure: Alconox wash
Total Well Depth: 16.50'	with two rinses
Height of Water Column (h): 9.21'	

EVACUATION RECORD						
Time:	3:03pm	3:05pm	3:09pm			
Vol. Purged (gal):	**Initial**	5	2			
Water Temperature (F):	65	65	65			
pH (standard units):	7.29	7.43	7.31			
Specific Conductivity (uS):	869	937	927			
Turbidity (subjective):	Clear	Clear	Clear			
Odor (subjective):	None	Slight	Slight			
Dissolved Oxygen:	NM	NM	NM			

SAMPLING DATA	
Date: 12-16-04 Time: 3:12pm	Samples Filtered: No
No. of Sample Containers Collected: 2	Method: N/A
Analysis Requested: EPA 8260	
	Samples Preserved: Yes
Laboratory: NEL, Las Vegas, Nevada	Method: HCl and refrigeration

NM - Not measured

XITECH LNAPL RECOVERY SYSTEM
Without the use of AC Power

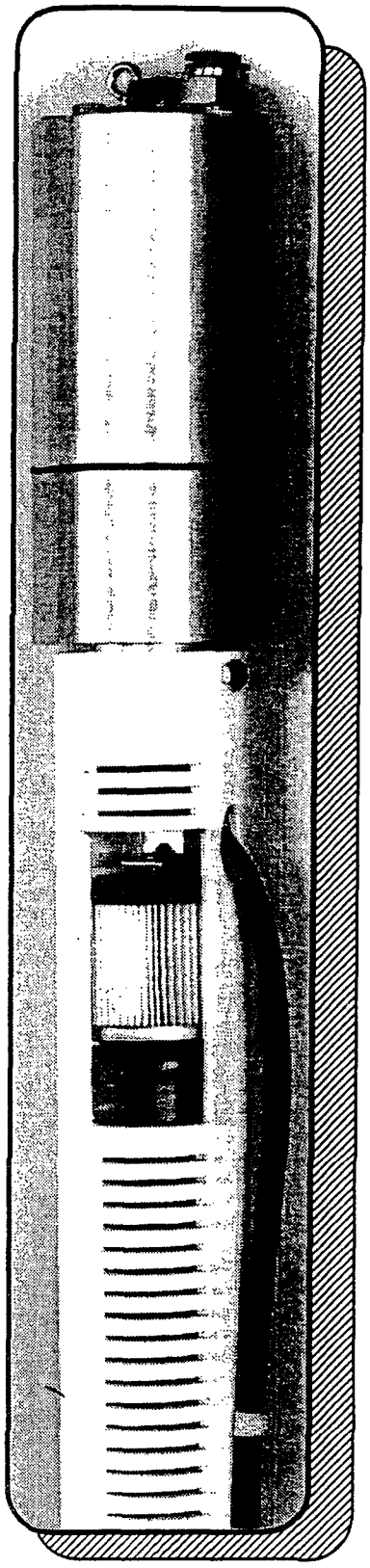


EQUIPMENT LIST:

1. Skimmer, Model ADJ 1000
2. Air exhaust tubing, P/N 510
3. 4" well cap, P/N 420
4. Product discharge tubing, P/N 511
5. Air supply tubing, P/N 511
6. 12 volt battery box P/N 652
7. 7/8"ID tubing, P/N 524
8. Electronic Timer Model 2500ES with tank shutoff
9. Bottle of gas with regulator
10. Solar Panel P/N 606, bracket P/N 613
11. Flow totalizer P/N 100

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

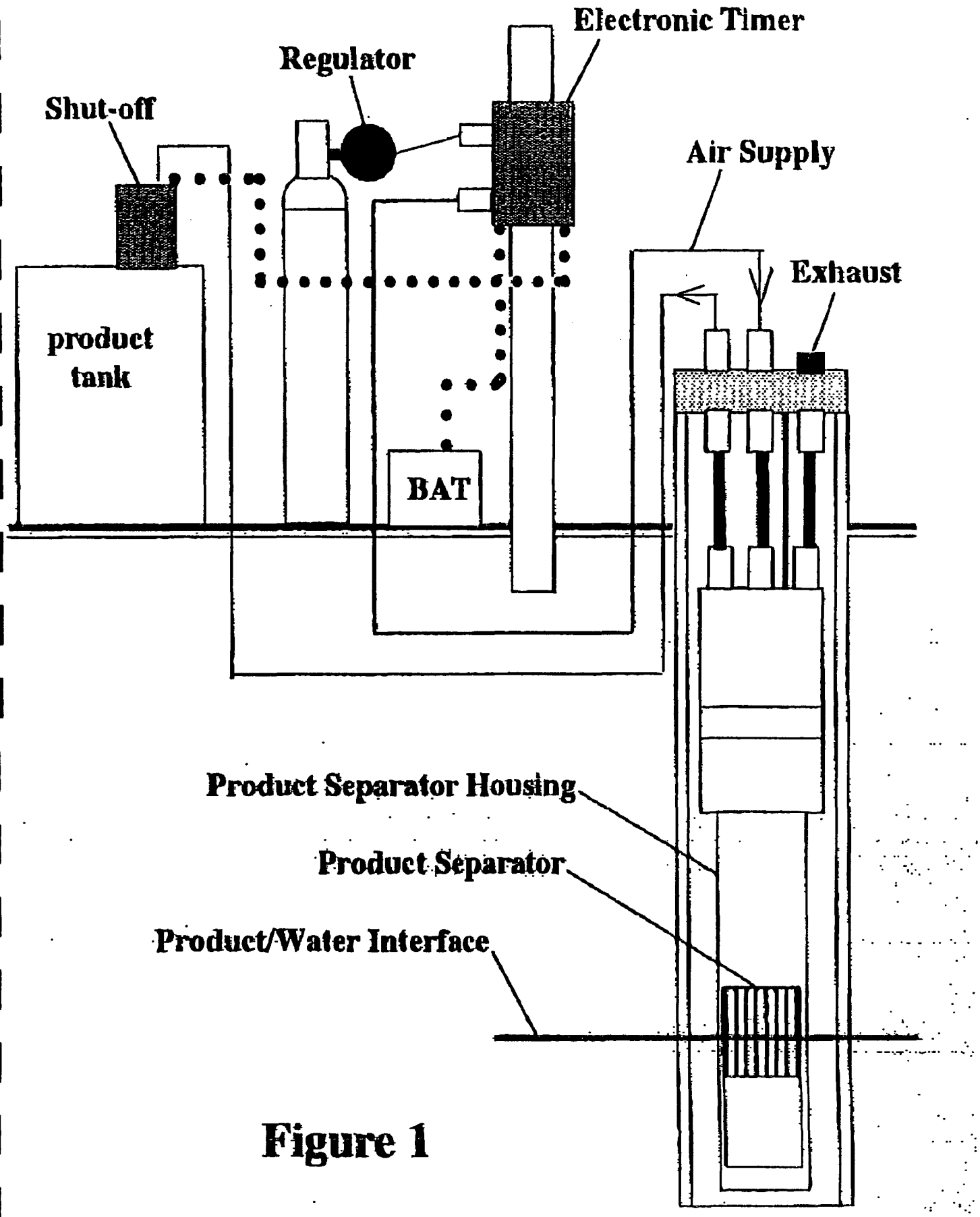


Figure 1

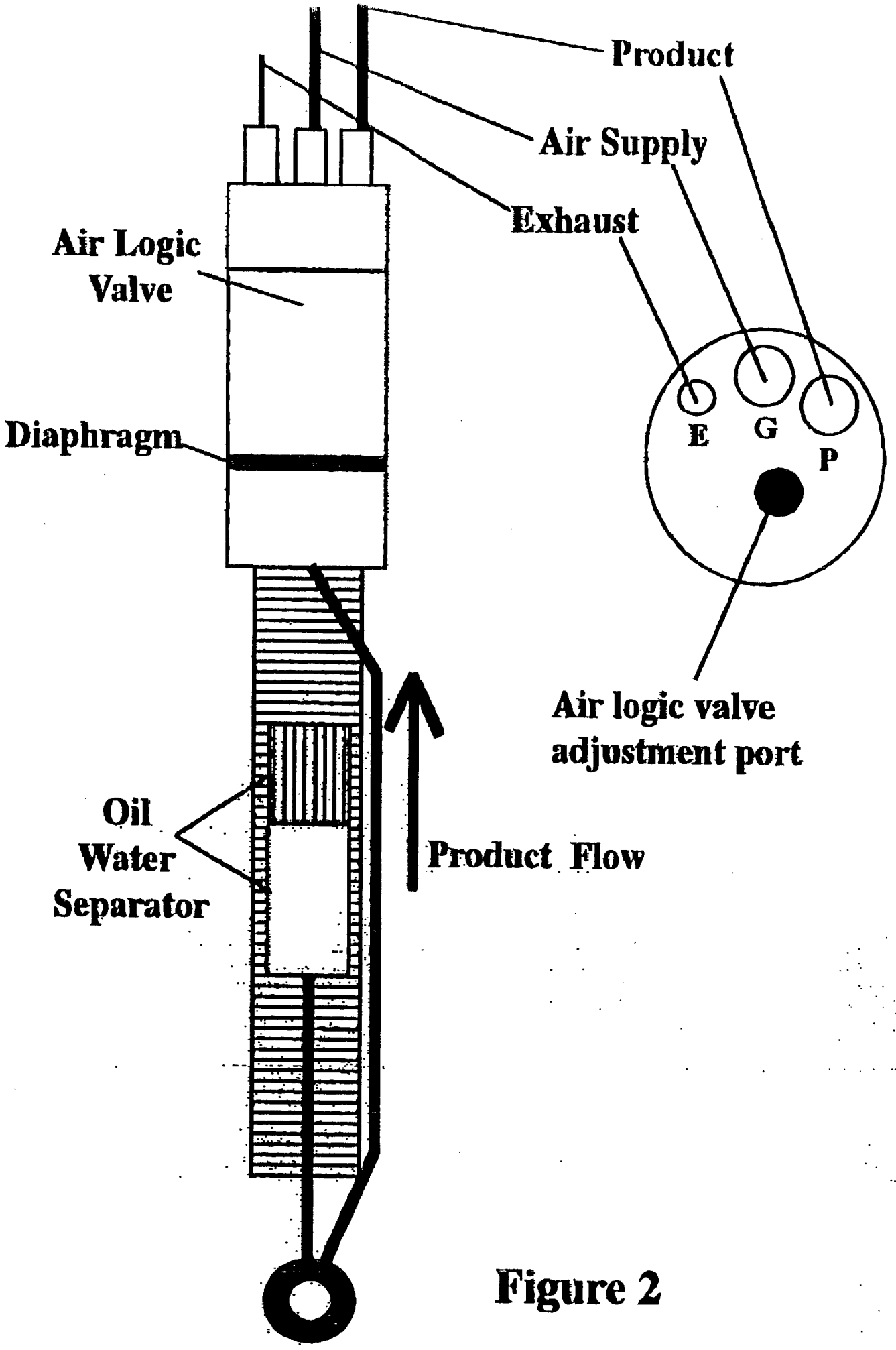

Product
Air Supply
Exhaust
Air Logic
Valve
Diaphragm
E
G
P
Air logic valve
adjustment port
Oil
Water
Separator
Product Flow

Figure 2

2500ES Electronic Timer

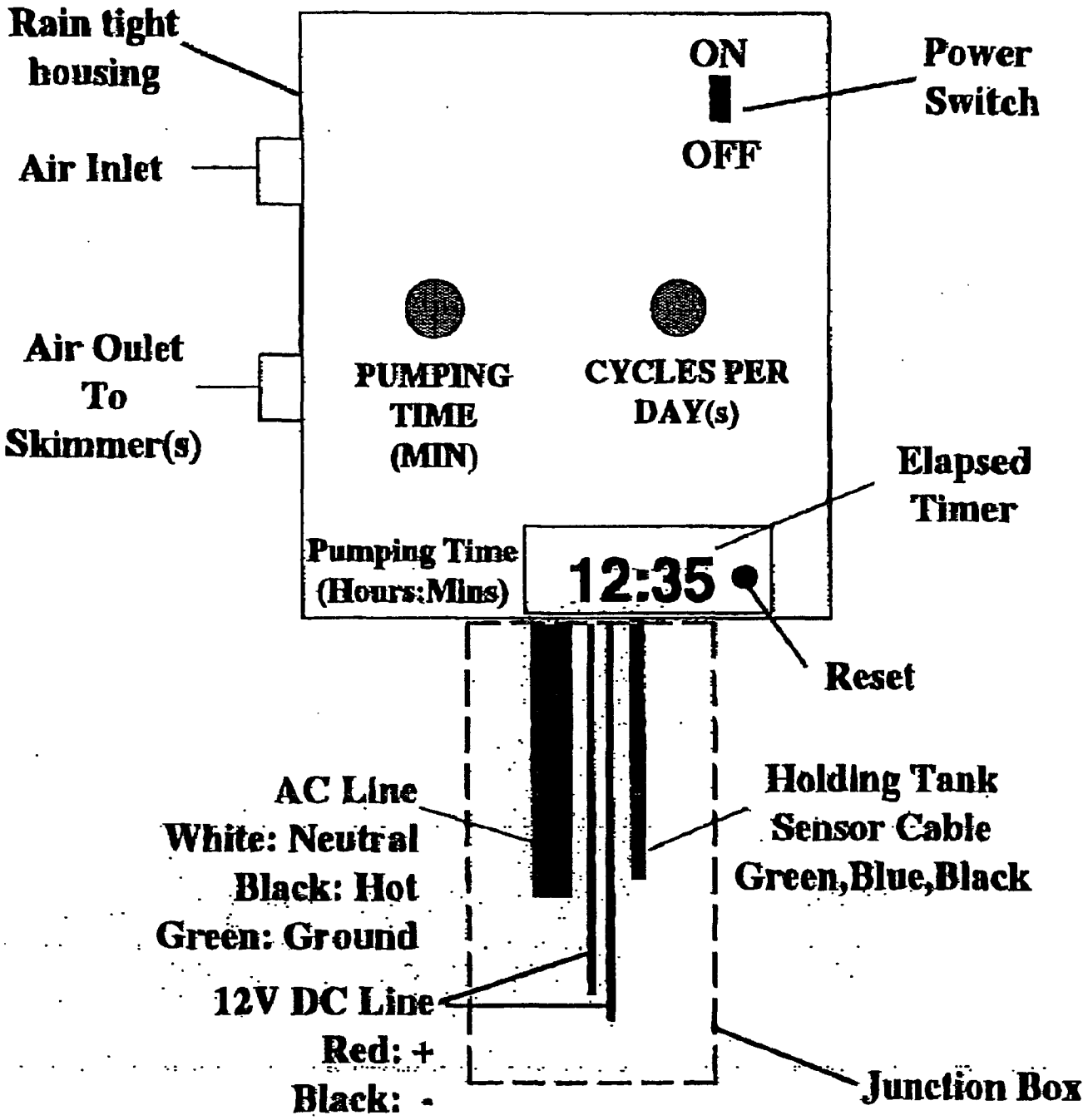


Figure 3

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

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N/A
Manifest Doc. No.: 121201
2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address:
Huntsman Polymers Corporation
2400 S. Grandview Avenue
Odessa, Texas 79760

Former Brickland Refinery
McNutt Road
Sunland Park, NM

4. Generator's Phone (915) 640-8354

5. Transporter 1 Company Name: Terracon
6. US EPA ID Number: N/A
A. Transporter's Phone: 505.527.1700

7. Transporter 2 Company Name:
8. US EPA ID Number:
B. Transporter's Phone:

9. Designated Facility Name and Site Address:
RHINO Environmental
2 Miles North of Newman
Otero County, New Mexico
10. US EPA ID Number: N/A
C. Facility's Phone: 505.644.0932

11. Waste Shipping Name and Description: Contaminated Groundwater	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hydrocarbon Impacted Water	1	Tank	277	Gal
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above:
Suspected Hydrocarbon Contamination

E. Handling Codes for Wastes Listed Above:

15. Special Handling Instructions and Additional Information:
Water is NOT potable. Prevent contact with potable water.

Cell F

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: As Agent for Huntsman Polymers Corporation: Fred Small
Signature: [signature]
Month: 7 Day: 2 Year: 04

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: FRED V. SMALL
Signature: [signature]
Month: 7 Day: 2 Year: 04

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month: Day: Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Daniele Berardelli
Signature: [signature]
Month: 7 Day: 2 Year: 04

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

ORIGINAL – RETURN TO GENERATOR

12-BLS-C5 Rev. 12/98

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Doc. No. | 2. Page 1 of

3. Generator's Name and Mailing Address: Huntsman Polymers Corporation, 2400 S. Grandview Avenue, Odessa, Texas 79760

Former Brickland Refinery, McNutt Road, Sunland Park, NM

4. Generator's Phone (915) 640-8354

5. Transporter 1 Company Name: TERRACON | 6. US EPA ID Number | A. Transporter's Phone: (505) 527-1700

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address: RHINO Environmental, 2 Miles North of Newman, Otero, County, New Mexico | 10. US EPA ID Number: N/A | C. Facility's Phone: 915-842-9911 ~~505.644.0932~~

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
Contaminated Groundwater				
a. Hydrocarbon Impacted Water	1	Tank	160	Gal
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above: Suspected Hydrocarbon Contamination

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: Water is non-potable. Prevent contact with potable water.

Cell H

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: As Agent for Huntsman Polymers Corp.: Fred Small | Signature: Fred Small | Month 12 Day 17 Year 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: FRED V. SMALL | Signature: Fred Small | Month 12 Day 23 Year 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month . Day . Year .

19. Discrepancy Indication Space: Line # 5 — TERRACON, 1630 HICKORY LOOP, SUITE H, LAS CRUCES, NM 88005

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [illegible] | Signature | Month 12 Day 23 Year 03

GENERATOR — TRANSPORTER — FACILITY

Printed by: KELLER & ASSOCIATES, INC. Neenah, WI 54957-0368

ORIGINAL – RETURN TO GENERATOR

12-BLS-05 Rev. 12/96