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April 14, 2008
File No. 84679.4-ALB08RP001

Ms Hope Monzeglio
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

**Subject: Summary of Drilling and Sampling Activities**
**Western Refining Company, Ciniza Refinery**
**Gallup, New Mexico**
**NMED ID # NMD000333211**
**HWB-GRCC-07-001**

Dear Ms. Monzeglio:

Kleinfelder West, Inc. (Kleinfelder), on behalf of Western Refining Company (Western), is submitting this letter report summarizing the installation of replacement monitoring wells KA-1R, KA-2R and KA-3R, the abandonment of existing monitoring wells KA-1 and KA-2, and groundwater sampling at the above referenced site. Fieldwork was performed between March 13 and 15, 2008, and sampling of new monitoring wells KA-1R and KA-2R was performed on March 20, 2008 (field notes included in Appendix A). The well installation and sampling was performed in accordance with Kleinfelder's December 12, 2007 letter and the New Mexico Environment Department-Hazardous Waste Bureau's (NMED-HWB) December 20, 2007 approval letter.

## Site Description

The Site is located at 35° 29.41'N, 108° 25.80'W, McKinley County, New Mexico. The facility is an active refinery. Refinery equipment near the site includes the new American Petroleum Institute (API) oil/water separator (separator), an off-gas flare, two aeration lagoons and an evaporation pond (Figure 1).

## Site History

Kleinfelder installed monitoring wells KA-1, KA-2, and KA-3 in June 2007. The work was performed in accordance with Kleinfelder's Work Plan No. 83817.PROP-ALB07001 Rev. 1 dated May 24, 2007. Western approved Kleinfelder's work plan via purchase order C16449 dated June 4, 2007. The NMED-HWB approved the work plan in a letter dated June 4, 2007. Fieldwork for this event was performed between June 11 - 21, 2007.



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| | | TRANSMITTAL DATE: 04/15/08 |
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| Summary of Drilling and Sampling Activites | 0 | | 04/15/08 | 84679.4-ALB08RP001 |
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**INSTRUCTIONS/REMARKS**

CC's: D. Cobrain, C. Frischkorn
J. Lieb, E. Reige,
W. Price, C.Chavez,
and B. Powell

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In its Notice of Disapproval letter dated October 15, 2007, the NMED-HWB rejected the installation of monitoring wells KA-1, KA-2, and KA-3, required that replacement monitoring wells be installed, and that the existing monitoring wells be plugged and abandoned. In a letter dated December 12, 2007, Kleinfelder submitted a new scope of work based upon these requirements. In a follow-up letter dated December 20, 2007, the NMED approved the scope of work, but required that existing monitoring well KA-3 be left in place.

## Scope of Work

The scope of work as directed by the NMED included the following:

- Installation of replacement monitoring wells KA-1R and KA-2R to depths of approximately 14.5 feet below ground surface (ft bgs) via hollow stem auger (HSA) drilling methods. The new monitoring wells were to be installed approximately five feet away from existing monitoring wells KA-1 and KA-2, respectively, and were to be screened from approximately four to 14 ft bgs;

- Installation of replacement monitoring well KA-3R approximately five feet away from existing monitoring well KA-3. The new well was to be installed via HSA drilling methods, with an outer casing/auger seated approximately 23 ft bgs and total depth (TD) at 30.5 ft bgs. A 2-inch monitoring well was to be set with a screened interval of approximately 25 to 30 ft bgs;

- Monitoring wells KA-1R and KA-2R were to be developed by manual bailing and surging. Groundwater samples were to be collected from the wells within two weeks of installation, and analyzed for volatile organic compounds (VOCs) per EPA Method 8260, semivolatile organics (SVOCs) / polyaromatic hydrocarbons (PAH) per EPA Method 8310, total petroleum hydrocarbons (gasoline range organics, diesel-range organics, and motor oil-range organics) per EPA Method 8015B, and RCRA 8 metals per EPA Method 6010/7470; and

- Monitoring wells KA-1 and KA-2 were to be properly plugged and abandoned during the same mobilization that the replacement wells were installed.

## Scope of Work Deviations

Due to ongoing construction activity on the eastern side of the new API separator at the time of the replacement monitor well installation, monitor well KA-1R was installed approximately 15 feet away from KA-1, rather than the initially proposed 5-foot distance. Construction activities at the time of installation included excavation of an approximate 15-foot deep pit on the southeastern corner of the new API separator for installation of a leak detector.

When existing monitoring well KA-1 was installed, a steel culvert prevented access of the drill rig closer to the API separator. At the time of installation of KA-1R, a soil ramp had been built over the culvert to allow construction equipment access to the eastern



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side of the new API Separator. This enabled KA-1R to be installed closer to the new API separator.

Because of the approximate 0.8 foot higher ground elevation of KA-1 compared to KA-1R, the well screen of KA-1R was installed at a depth of approximately 3.7 to 13.7 feet below grade in order to be approximately 14.5 feet below the ground surface of KA-1. Screen elevations are summarized below:

| Well ID | Ground Elevation (feet) | Top of Casing Elevation (feet) | Screen Location (bgs in feet) | Screen Location (elevation in feet) |
|---|---|---|---|---|
| KA-1 | 6918.3 (*) | 6918.08 | 4.5 - 9.5 | 6913.8 - 6908.8 |
| KA-1R | 6917.5 | 6918.43 | 3.7 - 13.7 | 6913.8 - 6903.8 |

* Estimated based on top of casing
bgs = below ground surface

## Field Investigation

Rodgers Environmental Services, Inc. performed drilling of soil borings and installation of monitoring wells using a CME 75 drill rig and hollow stem auger drilling methods (See Figure 1 for boring and well locations). Borings were logged from cuttings generated during drilling (borehole logs included as Appendix B). The following fieldwork was performed:

- Monitoring well KA-3R was drilled and installed between March 13 and 14, 2008. The borehole was drilled from ground surface to 23 ft bgs using 10.25-in inner diameter (ID)/14.75-in outer diameter (OD) auger flights. Eight-inch casing was grouted in place to 23 ft bgs. The borehole was drilled to the TD of 30.7 ft bgs using 3.75-in ID/6.75-in OD auger flights;

- Monitoring well KA-3R was installed using 2-in ID schedule 40 PVC casing to a TD of 30.7 ft bgs. KA-3R was installed with 0.010-in slot screen from 25.4 to 30.4 ft bgs;

- Monitoring wells KA-1R and KA-2R were drilled and installed on March 14, 2008. Boreholes KA-1R and KA-2R were drilled from ground surface to their respective TDs of 14.0 and 14.5 ft bgs using 3.75-in ID/6.75-in O.D. auger flights;

- Monitoring wells KA-1R and KA-2R were installed using 2-in ID schedule 40 PVC casing to their respective TDs of 14.0 and 14.5 ft bgs. KA-1R was installed with 0.010-in slot screen from 3.7 to 13.7 ft bgs. KA-2R was installed with 0.010-in slot screen from 4.2 to 14.2 ft bgs;

- The replacement monitoring wells were developed by bailing and surging on March 15, 2008. Monitoring well KA-1R bailed dry after five gallons and did not recharge sufficiently to continue development. Thirty gallons were bailed from monitoring well KA-2R. Development water was disposed of in the API separator


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drain. Insufficient water was present in monitoring well KA-3R to conduct development;

- Existing monitoring wells KA-1 and KA-2 were abandoned using cement/bentonite grout placed into the well via tremmie pipe. Monitoring well KA-3 was left in place;

- Replacement monitoring wells KA-1R and KA-2R were gauged and sampled on March 20, 2008. The wells were purged of three casing volumes via hand bailing. Water quality parameters were monitored and recorded with a properly calibrated YSI-556 water quality meter (parameters included in field notes in Appendix A). KA-1R and KA-2R were sampled for volatile organic compounds (VOCs) per EPA Method 8260, semivolatile organics (SVOCs) / polyaromatic hydrocarbons (PAH) per EPA Method 8310, total petroleum hydrocarbons (gasoline range organics, diesel-range organics, and motor oil-range organics) per EPA Method 8015B, and RCRA 8 metals per EPA Method 6010/7470. Purge water was disposed of in the separator drain. Insufficient water was present in KA-3R to sample;

- Cuttings generated during drilling were contained in 55 gallon drums. A composite soil sample was collected from the cuttings from existing monitoring wells KA-2 and KA-3, as well as from replacement monitoring wells KA-1R, KA-2R, and KA-3R following installation. The sample was collected for classification in order to dispose of the cuttings in Western's on-site landfarm. Cuttings from existing monitoring well KA-1 could not be sampled due to damage to the drum. The composite sample was analyzed for anions per EPA method 9056A, mercury per EPA method 7471, and for total metals per EPA method 6010B. The sample was also to be analyzed for free liquid, ignitability, corrosivity, and reactivity; and

- The replacement monitoring wells were surveyed on March 20, 2008.

## Site Stratigraphy

Soils in all borings are generally dry to moist lean clays, with varying sand content. Borehole logs are included as Appendix B. Following is a general description of the observed subsurface conditions:

- Ground surface to 22 ft bgs: Soils are typically red-brown to grey-brown lean clays with 25% to 50% sand. Sand is fine- to coarse-grained.

- 22 ft bgs to 30.5 ft bgs: Bedrock, likely Chinle sandstone.



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## Site Hydrogeology

Following monitoring well installation but prior to development, the depth to water (DTW) was measured in each well on March 15, 2008 (see Table 1). The DTW in KA-1R and KA-2R was measured at 8.2 and 8.61 feet below top of casing (ft btoc) respectively. KA-3R was dry. Groundwater gradient near the API Separator is to the west toward the aeration lagoons.

Prior to sampling monitoring wells KA-1R and KA-2R on March 20, 2008, DTW was again measured in the replacement wells, as well as in existing monitoring well KA-3 (see Table 1). The DTW in KA-1R, KA-2R, and KA-3R were measured at 9.50, 8.77, and 30.70 ft btoc, respectively. It is important to note that the DTW in KA-3R corresponds to the TD measured in the well. The DTW in KA-3 was measured at 8.61 ft btoc. A groundwater contour map is included as Figure 2.

At the request of Jim Lieb (Western), DTW in existing monitoring wells were also measured, but were not used to construct the groundwater elevation contour map. The DTW in GWM-1 and GWM-2 were measured at 19.77 and 19.04 ft btoc, respectively. GWM-3 was dry.

## Soil Analytical Results

Several analytes were detected above the laboratory practical quantitation limits (PQL) in the composite soil sample collected from cuttings from monitoring wells KA-2, KA-3, KA-1R, KA-2R, and KA-3R (soil analytical results included in Appendix C; results summarized in Table 2). Chloride was detected at 170 mg/kg (PQL = 1.5 mg/kg). Mercury was detected at 0.073 mg/kg (PQL = 0.033 mg/kg). Barium was detected at 520 mg/kg (PQL = 2.0 mg/kg). Chromium was detected at 15 mg/kg (PQL = 1.5 mg/kg). Lead was detected at 6.2 mg/kg (PQL = 1.2 mg/kg).

The composite soil sample tested negative for free liquid. The flash point, determined from the ignitability analysis, was <200 degrees Fahrenheit. The pH of the soil, determined from the corrosivity analysis, was 8.72. Reactive cyanide and reactive sulfide were not detected in the composite sample.

## Groundwater Analytical Results

Groundwater samples were collected from replacement monitoring wells KA-1R and KA-2R on March 20, 2008 (groundwater analytical results included in Appendix C; results summarized in Table 3 and on Figure 3). No analytes were detected in the sample from KA-1R above New Mexico Water Quality Control Commission (NMWQCC) standards. In the sample from KA-2R, benzene was detected at 76 microgram per liter (µg/L), which is above the NMWQCC standard of 10 µg/L. Methyl tert-butyl ether was detected at 260 µg/L, which is above the NMWQCC standard of 100 µg/L. Total naphthalenes were detected at 70 mg/L, which is above the NMWQCC standard of 30 µg/L.



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If you have any questions concerning the project of the content of this report, please contact Jim Lieb at (505) 722-0227 or me at (505) 344-7373.

Sincerely,

**KLEINFELDER, INC.**

Reviewed by:

Eileen Shannon, P.G.
Project Manager

FOR: Barbara J. Everett, R.G., P.G.
Program Manager

Enclosures: Figure 1 – Site Plan
Figure 2 – Groundwater Elevation Contour Map, Alluvial Aquifer, March 20, 2008
Figure 3 – Distribution of Contaminants in Groundwater, March 20, 2008
Table 1 – Summary of Fluid Level Measurements
Table 2 – Composite Soil Sample Laboratory Analytical Results
Table 3 – Groundwater Sample Laboratory Analytical Results
Appendix A – Field Notes
Appendix B – Borehole Logs
Appendix C – Laboratory Analytical Results

cc: J. Lieb, Western Refining Company
E. Reige, Western Refining Company
D. Cobrain, NMED-HWB
C. Frischkorn, NMED-HWB
C. Chavez, NMOCD
W. Price, NMOCD
B. Powell, NMOCD Aztec Office

# FIGURES

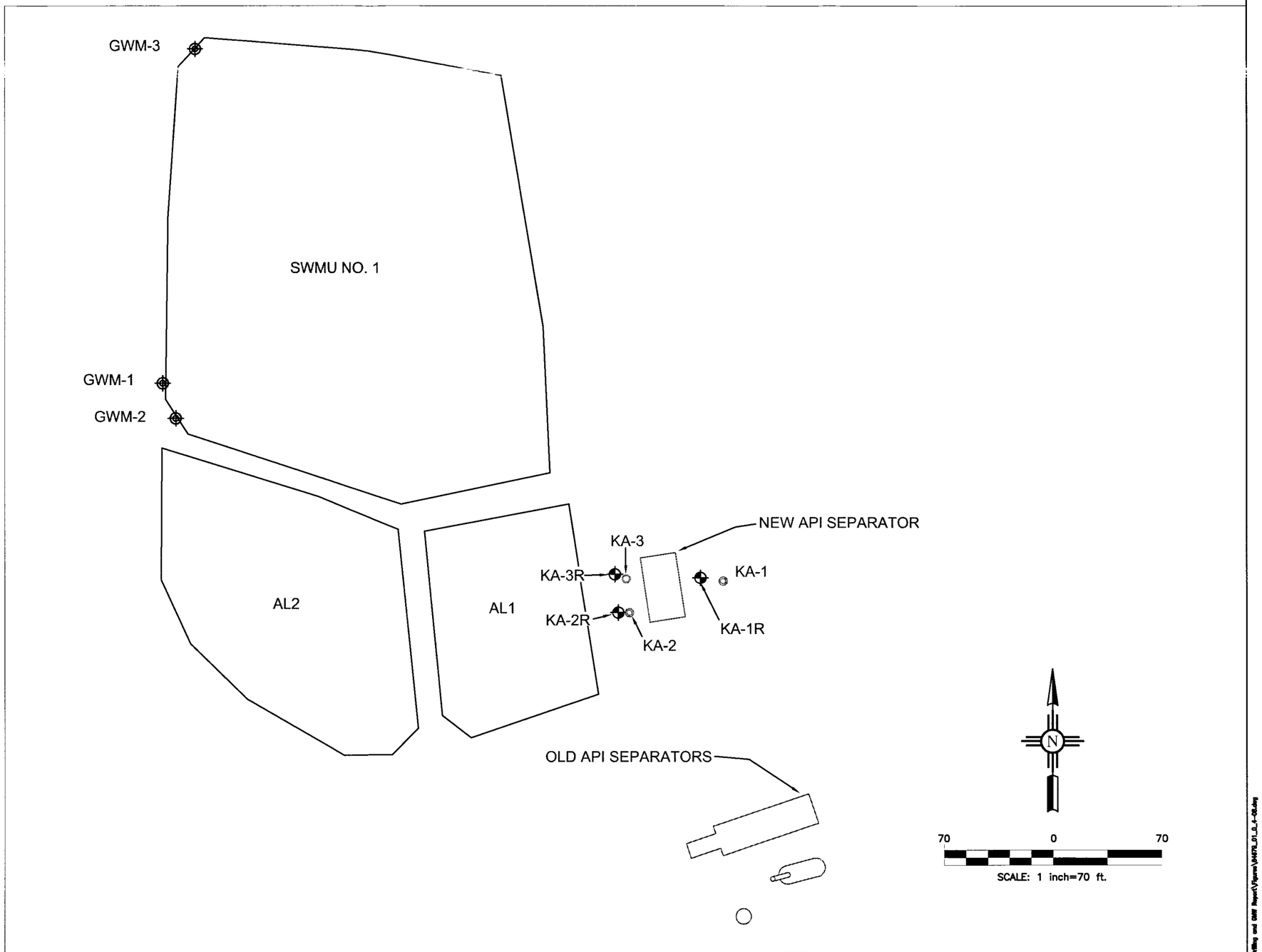
## SURVEY DATA

| Well ID | Northing | Easting | Top of Casing Elevation |
|---|---|---|---|
| KA-1R | 1634567.51 | 2545700.49 | 6918.43 |
| KA-2R | 1634565.05 | 2545647.32 | 6917.27 |
| KA-3 | 1634583.87 | 2545645.49 | 6917.17 |
| KA-3R | 1634589.80 | 2545645.10 | 6917.31 |

NOTES:
1. COORDINATES ARE NEW MEXICO STATE PLANE GRID, WEST ZONE, NAD 83.
2. ELEVATIONS SHOWN NAVD 88.
3. COORDINATES AND ELEVATIONS WERE DETERMINED FROM BRASS CAP, NMSHD 2765-11 (USED FOR CINIZA CONTROL SURVEY).
4. SURVEYING BY LYNN ENGINEERING & SURVEYING, INC., DATES 06/21/07 AND 03/20/08.
5. SOURCE: LOCATIONS OF SWM UNITS, AERATION LAGOONS, AND OLD API SEPERATORS TAKEN FROM A DRAWING PROVIDED BY GIANT REFINING CO. ENTITLED "REFINERY MONITOR WELL LOCATIONS," DRAWING NO. Z-02-155, DATED 10/20/1997.

## LEGEND

- KA-3 = Monitoring Well Location
- KA-1R = New Monitoring Well Location
- KA-1 = Monitoring Well Location (Abandoned)
- GWM-1 = Existing Monitoring Well Location
- SWMU = Solid Waste Management Unit
- AL = Aeration Lagoon

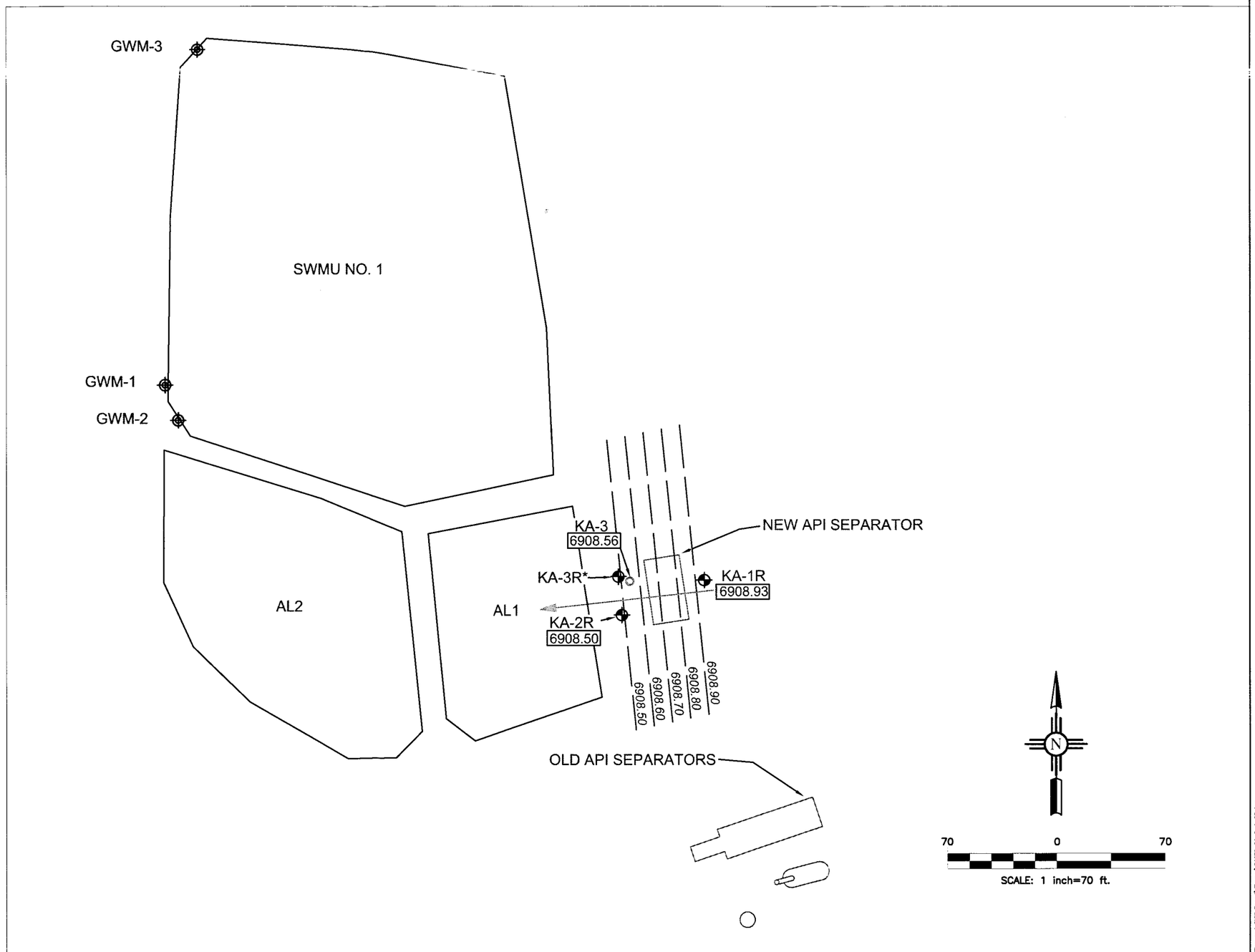



| KLEINFELDER | SITE PLAN<br>Ciniza Refinery<br>Jamestown, New Mexico | | FIGURE |
|---|---|---|---|
| Originator: B. Lucero | Drawn By: PDan | Date: April 2008 | 1 |
| | Project No.: 84679 | Drawing No.:84679_01_0_4-08 | |
| Approved By: E. Shannon | Scale: 1" = 70' | Drawing Category: A | |

## LEGEND

- KA-3 = Monitoring Well Location
- KA-1R = New Monitoring Well Location
- GWM-1 = Existing Monitoring Well Location
- SWMU = Solid Waste Management Unit
- AL = Aeration Lagoon
- KA-1R 6908.93 = Groundwater Surface Elevation
- 6908.50 = Groundwater Elevation Contour
- = Groundwater Flow Direction

NOTES:
* Not used in groundwater surface contour




| KLEINFELDER | GROUNDWATER ELEVATION CONTOUR MAP<br>**Alluvial Aquifer (March 20, 2008)**<br>Ciniza Refinery<br>Jamestown, New Mexico | | FIGURE |
|---|---|---|---|
| Originator: B. Lucero | Drawn By: PDan | Date: April 2008 | **2** |
| Approved By: E. Shannon | Project No.: 84679 | Drawing No.:84679_01_0_4-08 | |
| | Scale: 1" = 70' | Drawing Category: A | |

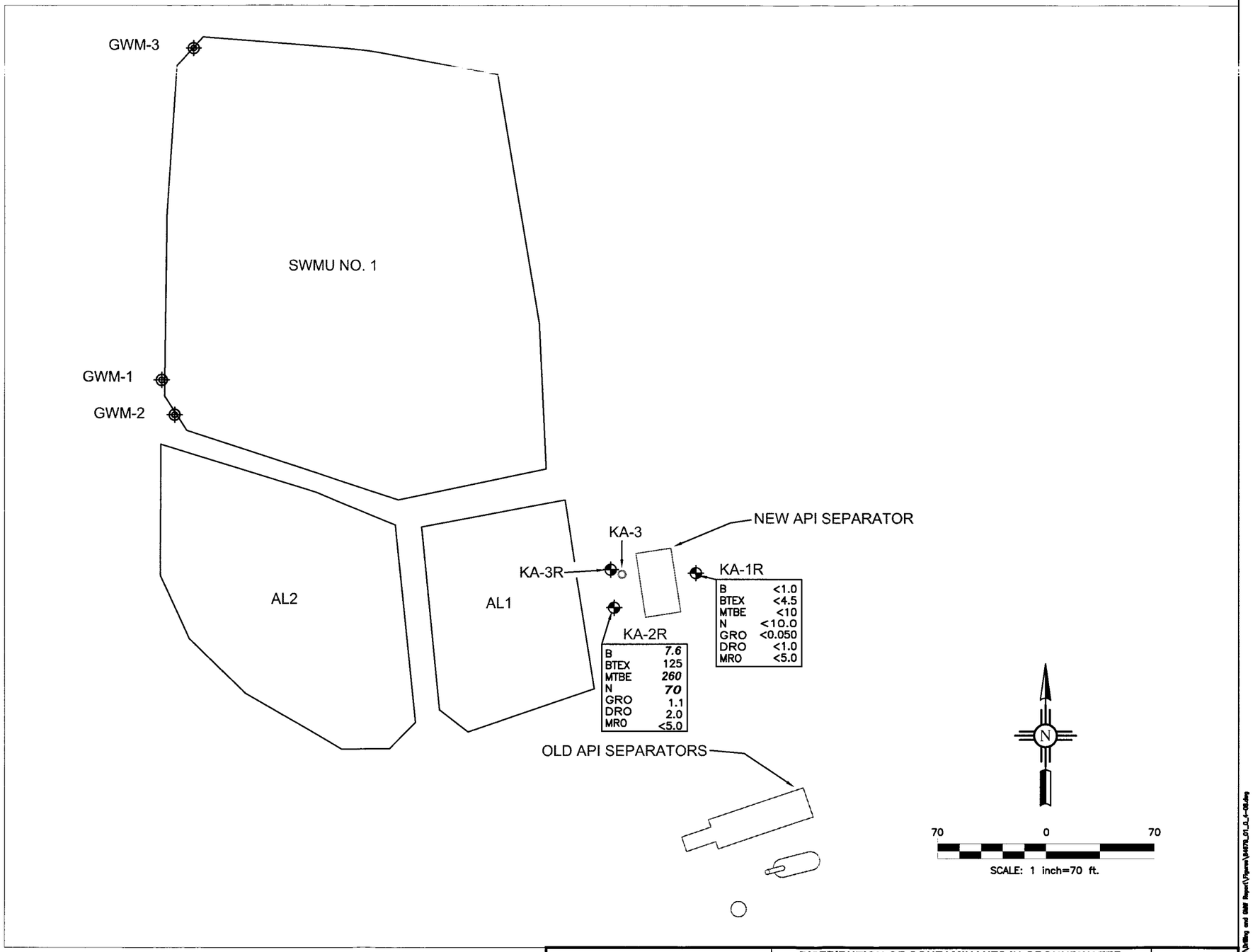
## LEGEND

KA-3 = Monitoring Well Location
KA-1R = New Monitoring Well Location
GWM-1 = Existing Monitoring Well Location
SWMU = Solid Waste Management Unit
AL = Aeration Lagoon

| | |
|---|---|
| B | <1.0 |
| BTEX | <4.5 |
| MTBE | <10 |
| N | <10.0 |
| GRO | <0.050 |
| DRO | <1.0 |
| MRO | <5.0 |

B = Benzene
BTEX = Benzene + Toulene + Ethylbenzene + Total Xylene
MTBE = Methyl Tert-butyl Ether
N = Naph + 1-Methylnapthalene + 2-Methylnapthalene
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
MRO = Motor Oil Range Organics

NOTE: Values in ***BOLD*** exceed the NMWQCC Standard
3R Not Sampled Due to Lack of Water




| KLEINFELDER | DISTRIBUTION OF CONTAMINANTS IN GROUNDWATER<br>March 20, 2008<br>Ciniza Refinery<br>Jamestown, New Mexico | | FIGURE |
|---|---|---|---|
| Originator: B. Lucero | Drawn By: PDan | Date: April 2008 | 3 |
| Approved By: E. Shannon | Project No.: 84679 | Drawing No.:84679_01_0_4-08 | |
| | Scale: 1" = 70' | Drawing Category: A | |

# TABLES

**Table 1**
**Summary of Fluid Level Measurements**
**Western Refining Company, Ciniza Refinery**

| WELL ID | TOTAL DEPTH (ft btoc) | SCREENED INTERVAL (ft bgs) | TOC ELEVATION (ft AMSL) | DATE | TIME | DEPTH TO WATER (ft btoc) | GROUNDWATER SURFACE ELEVATION (ft AMSL) |
|---|---|---|---|---|---|---|---|
| KA-1R | 14 | 3.7 - 13.7 | 6918.43 | 3/15/2008 | 12:19 PM | 8.20 | 6910.23 |
| | | | | 3/20/2008 | 9:38 AM | 9.50 | 6908.93 |
| KA-2R | 14.5 | 4.2 - 14.2 | 6917.27 | 3/15/2008 | 9:28 AM | 8.61 | 6908.66 |
| | | | | 3/20/2008 | 9:42 AM | 8.77 | 6908.50 |
| KA-3 | 25 | 15 - 25 | 6917.17 | 6/12/2007 | 10:15 AM | 12.50 | 6904.67 |
| | | | | 6/21/2007 | 9:15 AM | 8.50 | 6908.67 |
| | | | | 3/20/2008 | 9:45 AM | 8.61 | 6908.56 |
| KA-3R | 30.7 | 25.4 - 30.4 | 6917.31 | 3/14/2008 | 9:40 AM | Dry | N/A |
| | | | | 3/14/2008 | 11:15 AM | Dry | N/A |
| | | | | 3/15/2008 | 9:54 AM | 30.68 | 6886.63 |
| | | | | 3/15/2008 | 12:08 PM | 30.68 | 6886.63 |
| | | | | 3/20/2008 | 9:40 AM | 30.70 | 6886.61 |

ft = feet
btoc = below top of casing
bgs = below ground surface
AMSL = above mean sea level
N/A = not applicable
Note: water measured in KA-3R on 3/15/2008 and 3/20/2008 is likely residual water from monitoring well drilling and installation

## Table 2
## Composite Soil Sample Laboratory Analytical Results
## Western Refining Company, Ciniza Refinery

| Analyte | Result | Units | Method |
|---|---|---|---|
| **Chloride** | 170 | mg/kg | EPA 9056A |
| **Mercury** | 0.073 | mg/kg | EPA 7471 |
| **Arsenic** | ND (<12) | mg/kg | EPA 6010B |
| **Barium** | 520 | mg/kg | EPA 6010B |
| **Cadmium** | ND (<0.50) | mg/kg | EPA 6010B |
| **Chromium** | 15 | mg/kg | EPA 6010B |
| **Lead** | 6.2 | mg/kg | EPA 6010B |
| **Selenium** | ND (<50) | mg/kg | EPA 6010B |
| **Silver** | ND (<1.2) | mg/kg | EPA 6010B |
| **Free Liquid** | Negative | Pos/Neg | Paint Filter |
| **Flash Point** | >200 | °F | SW1010M |
| **pH of Soil** | 8.72 | SU | SW9045D |
| **Cyanide, Reactive** | ND (<0.05) | mg/kg | SW846 |
| **Sulfide, Reactive** | ND (<20) | mg/kg | SW846 |

Note: Results are not compared to NMED standards since disposal will be at Western's on-site landfarm.

SU = Standard pH Units

mg/kg = milligram per kilogram

°F = degrees Fahrenheit

# Table 3
## Groundwater Sample Laboratory Analytical Results
## Western Refining Company, Ciniza Refinery

| Sample ID | Date Collected | B[2] | T[3] | E[4] | X[5] | BTEX[6] | MtBE[7] | Naphthalenes[8] | TPH - GRO[9] | TPH - DRO[10] | TPH - MRO[11] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **KA-1R** | 6/21/2007 | <1.0 | <1.0 | <1.0 | <1.5 | <4.5 | <1.0 | <10.0 | <0.050 | <1.0 | <5.0 |
| **KA-2R** | 6/21/2007 | **76** | 3 | 24 | 22 | 125 | **260** | **70** | 1.1 | 2.0 | <5.0 |
| ***NMWQCC[1] Standard (µg/L)*** | | ***10*** | ***750*** | ***750*** | ***620*** | *--* | ***100*** | ***30*** | *--* | *--* | *--* |

[1] New Mexico Water Quality Control Commission

Values in shaded boxes indicate that the result exceeds the NMWQCC standard

[2] B = benzene (µg/L)

[3] T = toluene (µg/L)

[4] E = ethylbenzene (µg/L)

[5] X = total xylenes (µg/L)

[6] BTEX = B+T+E+X (µg/L)

[7] M = Methyl tert-butyl ether (MTBE, µg/L)

[8] Total Naphthalenes = Naphthalene + 1-Methylnaphthalene + 2-Methylnaphthalene

[9] Total Petroleum Hydrocarbons, Gasoline Range Organics (mg/L)

[10] Total Petroleum Hydrocarbons, Diesel Range Organics (mg/L)

[11] Total Petroleum Hydrocarbons, Motor Oil Range Organics (mg/L)

# APPENDIX A

## Field Notes

04/21/07 84679 BLJ
20
Ciniza Refinery
Groundwater Monitoring

out for analysis by EPA methods 8015B (TPH GRO + DRO) and 8021B (BTEX + MtBE). Sample ID = KA-1.

1205 Tag DTW in KA-3 at 9.68 ft, insufficient to continue purging, will submit samples collected at 1100 for analysis by EPA methods 8015B (TPH GRO + DRO) and 8021B (BTEX + MtBE). Sample ID = KA-3. B. Lucero leaving API area.

1213 B. Lucero to ABQ.

1455 @ Hall Environmental to drop-off samples.

1500 @ KA Office.

Summary

Developed and sampled wells KA-1 and KA-2, purged and sampled well KA-3. Wells were sampled for analysis by EPA method 8015B (TPH GRO + DRO) and method 8021B (BTEX + MTBE). Note: wells referred to incorrectly in notes; KA-2 and KA-3 references are reversed.

BLJ 04/21/07

3/13/08 84679
Ciniza Refinery
Monitoring Well Sampling

7:30 - Eileen Shannon [illegible] on site
[illegible] West [illegible] Jim Lee Rodgers
Drilling (John Aguirre) [illegible]
on site 7:45 A.M. Attended the
Safety meeting through Bill
8:45 - 9:30 Obtained [illegible] permit
and [illegible] (Permit [illegible] [illegible])
[illegible]
Jim Lee escorted us to site
9:35 - Tailgate Safety meeting. [illegible]
Starting to postholes
Prior to entry, gave Rodgers
~~Personnel~~ personnel H&S [illegible]
Start postholes digging for KA-3R
Strong wind gusts throughout the
afternoon. Decided to do repairs
well first
10:05-10:35 delay waiting [illegible]
Generator moved - exhaust
in breathing zone
10:35 - Set up on KA-3R
Drill to 20'
12:00-1:00 Lunch

3/13/08 84679
22 Cimiza Refinery EZS
continued Monitor well Installation
1:00 - drilled down to 23 feet bgs and installed conductor casing

| | DTP | DTW |
|---|---|---|
| 2:40 KA-2 | — | 8.22 brown stain on pole |
| KA-3 | rig parked on top | |
| KA-1 | could not find - worked around | |

2:00 - ~~3:00~~ 3:15 pulled augers (10" ID / 14 3/4 OD)
3:30 - grouted in casing (5") @ 23 feet
- visited w/ Jim Lieb re: heavy rig at location. OK with him. Will start @ 7:30 A tomorr. with ~~installation~~ advancement of 6 5/8" boring to 30.5 feet with 4" augers
Labeled barrels Non haz - Lab Pending KA-2
Off site @ 3:45 off refinery property at 4 pm

Summary
Attended safety meeting and got required permits
~~Installed~~ Advanced Monitor well boring for KA-3 & KA-2 to 23 feet and grouted conductor casing in place

EZS 3/13/09

3/14/09 84679
Cimiza Refinery
Monitor Well Install

7:30A on site. Attend Permit [illegible]
vehicles [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

8:24 - Start [illegible]
[illegible] OD [illegible]
[illegible]
weather - [illegible]
[illegible]

9:20 - Start advancing [illegible]
- drilled to TD [illegible]
9:40 - drg TD

9:45 - Set well KA [illegible]
[illegible]
EZS ~~[illegible]~~ 4" [illegible]
SE [illegible] 24.5 [illegible] ~~[illegible]~~

11:10
TD = 30.5 with 4" point [illegible]
on [illegible]
[illegible]
[illegible]

Slow going pulling augers out of conductor casing (sticky clay)

11:15 ~~12:15~~ CLS 12:00 Lunch

12:00 ~ Will need to drill KA-1R next to be out of way of API separator work. Will take time to find KA-1 - buried under soil ramp built over conduit

12:30-2:30 Could not find ~~KA-2~~ KA-1 CLS set up ~30 from separator about 2 feet below ground surface east of conduit pipe

Called to have Jim Lieb come out ~~KA-2~~ KA-1 was located east of conduit pipe. Originally They had hoped put closer to API separator however could not get rig over conduit pipe. Conduit pipe now has ramp over it due to API separator wall Installed ~~KA-2R~~ KA-1R CLS. Were going to search for ~~KA-1~~ KA-1 CLS east of conduit but API-separator workers had to have access to move soil pile

3:00 Mob over to KA-2R



2:345 Install MW-2R to 14.5 feet TD well screen from 4.14 ft bgs. Slow pull [illegible] to 2 ft bgs [illegible] sand to 1 ft bgs

3:45 - off site. [illegible] increasing 65 mr/hr [illegible] stopping point

CLS 3/14/08

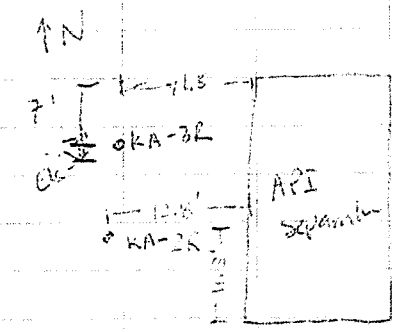
3/15/08

84679
Cinco Refinery
Monitor well Installation

7:30 - 8:00 Calibrate YSI in wood barn using 1413.1 µS/cm conductivity solution, 4.01 and 10.01 pH solution

8:00 - 8:30 Drive to site, pick up ice

8:45 - at site




- measured well distances from API
- spoke with subs working in back side of API
- measured DTW predischarge after cut off

| | DTP | DTW | TD | Time |
|---|---|---|---|---|
| KA-2R | — | 8.61 | 13.65 | 9:28 |
| KA-3R | — | 30.68 | 30.71 ~~30.72~~ | 9:54 |
| KA-1R | — | 8.20 | 13.40 ~~13.45~~ | 12:19 |

- clean, making forms, setting posts



3/15/08 continued

84679
Cinco Refinery
Monitor well Installation

12:05 Attempted to sample small quantity of water KA-3R could not get enough in the bailer after 3 attempts
- gauged well prior to sample attempt DTW = 30.68, TD = 30.71

~9:30-10:30
Developed KA-2R
- removed 30 gals water (drilling)
- cloudy initially, clearing, low soil turbid after 20 gal

12:20-12:45
Developed KA-1R slow recovery
- bailed dry after 5 gallons
- cloudy

12:45 - collected soil sampler (3 jars composited) from:
5 drums KA-3R
1 drum KA-1R + KA-3R
2 drums KA-1 & KA-3 (6-11 & 6-12-0)

KA-1R cuttings placed in stockpile generated from API leak detector excavation, OKed by Jim Lieb
2 1/2 55 gal drum

84679
Cinizo Refinery
Monitoring Installation

ES

3/15/08 Continued

relabelled old drums (labels must have come off)

1:45 - off site

ES 3/15/08

3/17/08 Note - ~~Purge~~ ES development water placed in drain for new API Separator

03/20/08



84679
Cinizo Refinery
Groundwater Monitoring/Surveying

ES

0745 B. Lucero on-site from HERO. Tim Lynn and Aaron Mega Lynn Engineering on-site. Will attend Refinery safety training @ 0800.

0840 All personnel have completed safety training & coordinated activities w/ Tim Lucero (Cinizo). Proceeding to gate S to get vehicle passes. Then to job for "safe work plan".

0918 @ API Separator after obtaining required permits/passes.

0930 Have received HASS w/ Lynn Engineering personnel, will have removed caps from wells. T. Lynn & A. Mega are setting up equipment. Preparing to tag DTW in wells.

| Time | Well | DTP | DTW | DTB | H |
|---|---|---|---|---|---|
| 0938 | KA-1R | — | 9.50 | 13.75 | 4.25 |
| 0940 | KA-3R | — | 30.70 | 30.70 | — |
| 0942 | KA-2R | — | 8.77 | 13.82 | 5.05 |
| 0945 | KA-3 | — | 8.61 | NM | — |

Bof

84679
Cinizz Refinery
Groundwater Monitoring/Surveying

FBH

0948 Note we: KA-3R. Meter alarms when probe touches bottom of well. Attempted to retrieve water w/ bailer - there is not sufficient water in KA-3R to bail or sample. Purge volumes of KA-1R and KA-2R are as follows: (see pg. 16 for calculation of casing volume of a 2-in I.D. well)

KA-1R:

0.16 gal/ft × (4.25 ft) = 0.68 gal

0.68 gal × 3 = 2.04 gal purge

≃ 2 gal purge

~~0.16 gal~~

KA-2R:

0.16 gal/ft × (5.05 ft) = 0.808 gal

0.808 gal × 3 = 2.424 gal

≃ 2.5 gal purge

0954 Preparing to purge KA-1R. All purge water will be captured in a bucket and disposed of in drain for oil water separator (aux).

1013 Have purged 2 gallons from well KA-1R. Water quality parameters were monitored and recorded with c 45I-556, SN 05A2015AJ. The



84679
Cinizz Refinery
Groundwater Monitoring/Surveying

FBH

cont meter was calibrated on 03/18/08 for pH and specific conductance. The meter has not been used since calibration.

1041 Have collected sample KA-1R from well KA-1R. Collected (x3) 40 ml VOAs for 8260B analysis, (x3) 40 ml VOAs for 8015B analysis, (x1) 1-liter amber glass jar for 8310 analysis, (x1) 125-ml poly for RCRA 8 metals analysis. Water is cloudy, pinkish-tan in color, with minor silt. There is no odor. The samples have been placed on ice in a cooler. Note: water quality parameters recorded w/ 45I-556 at 0.25, 1, 2 gallons during purge of KA-1R.

1112 Have purged 3 gallons from well KA-2R. Water quality parameters were monitored and recorded w/ 45I-556 at 0.75, 1.5, 3 gallons.

1133 Have collected sample KA-2R from well KA-2R. Collected (x3) 40-ml VOAs for 8260B analysis, (x3) 40-ml VOAs for

cont 8015B analysis; (X1) 1-liter amber glass jar for 8310 analysis, (X1) 125-ml poly for RCRA 8 metals analytes. Water is cloudy, pinkish-tan, with minor silt. The water has a noticeable hydrocarbon odor. The samples have been placed on ice in a cooler. Note: samples KA-1R and KA-2R were all collected from their respective bailers using bottom-emptying devices.

1159 Per request by J. Lieb (Cimarron) will tag DTW in wells GWM-1, GWM-2, GWM-3. Lynn Engineering off-site.

| Time | Well | DTP | DTW | DTB | |
|---|---|---|---|---|---|
| 1204 | GWM-3 | — | — | 17.94 | dry |
| 1206 | GWM-1 | — | 19.77 | 36.49 | |
| 1208 | GWM-2 | — | 19.04 | 19.04 | |

1221 B. Lucero leaving site to turn-in badges + vehicle pass. All wells secured.

1237 @ main office. Office is closed for lunch. Cannot return badge and keys until 1300.

1310 Have signed out at office and



cont turned-in badge + keys. Have notified J. Lieb of completion of sampling/surveying. B. Lucero leaving site for ABQ.

1550 Have dropped-off samples at Hall. B. Lucero to Klemfelder office.

Summary

Gauged DTW in wells KA-1R, KA-2R, KA-3, KA-3R, GWM-1, GWM-2, and GWM-3. Sampled wells KA-1R and KA-2R for analysis by EPA methods 8260B, 8015B, 8310, and for RCRA 8 metals. Lynn Engineering performed survey of new wells KA-1R, KA-2R, and KA-3R.

BWJ 03/20/08

## Water Quality Parameters
## Recorded During Purging March 20, 2008
## Western Refining Company, Gallup Refinery

KA-1R

| Purge Vol. (gal) | DateTime (M/D/Y) | Temp (°C) | pH | SpCond (mS/cm) |
|---|---|---|---|---|
| 0.25 | 3/20/2008 10:05 | 12.35 | 7.46 | 1.564 |
| 1 | 3/20/2008 10:08 | 11.72 | 7.44 | 1.72 |
| 2 | 3/20/2008 10:15 | 12.04 | 7.4 | 1.879 |

KA-2R

| Purge Vol. (gal) | DateTime (M/D/Y) | Temp (°C) | pH | SpCond (mS/cm) |
|---|---|---|---|---|
| 0.25 | 3/20/2008 11:02 | 18.83 | 6.83 | 2.087 |
| 1 | 3/20/2008 11:05 | 18.84 | 7.14 | 2.095 |
| 2 | 3/20/2008 11:07 | 18.9 | 7.16 | 2.046 |
| 3 | 3/20/2008 11:10 | 19.04 | 7.14 | 1.968 |

Note: above data was downloaded from YSI-556 water quality meter

# APPENDIX B

## Borehole Logs

# KLEINFELDER

# Soil Boring/Monitoring Well Log



| Date | | | Project | Well No. |
|---|---|---|---|---|
| | Started: 3/14/2008 | Rig Type: CME 75 | Ciniza Refinery Monitor Well Install | KA-1R |
| | Completed: 3/14/2008 | Driller: J. Aguirre, Rodgers | | |
| | Backfilled: 3/14/2008 | Weather: Sunny, Windy | Top of Casing El.: 6918.43' | Logged By: E. Shannon |
| Northing: 1634587.51 | | Easting: 2545700.49 | Location: East of New API Separator | |

Sample Type:
G - Grab Sample
CS - 3.5" I.D. Continuous Sampler
SPT - 2" O.D. 1.38" I.D. Tube Sample
U - 3 " O.D. 2.42" I.D. Ring Sample
ST - 3" O.D. Thin-Walled Shelby Tube
NR - No Recovery

**Groundwater**

| Depth (ft) | Hour | Date |
|---|---|---|
| 8.20 | 12:19:00 PM | 3/15/2008 |
| 9.50 | 9:38:00 AM | 3/20/2008 |

| Groundwater Depth (ft.) | Depth (ft.) | Graphical Log | Sample Taken | Sample Type | Penetration Resistance (Blows per foot) | PID Heated Headspace Reading, ppm | Analytical Sample Number | Visual Classification | WELL CONSTRUCTION |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | | SANDY LEAN CLAY (CL) - reddish brown, dry grading to moist, 35 - 50% fine to medium grained sand | Cement bentonite grout |
| | | | | | | | | Note: Boring drilled with hollow stem auger. Soil visually classified from auger cuttings. | 3/8" bentonite chips; 2" Sch. 40 PVC casing; 10/20 sand 3.7' bgs |
| | 5 | | | | | | | | |
| | 10 | | | | | | | Wet with increasing sand content from 11.5 ft bgs. | 0.010" Slot Screen |
| | | | | | | | | 14.0' El. 6904.4' | 13.7' bgs End Cap |

Total Depth 14.0'

## Additional Groundwater Measurements

| Depth (ft) | Hour | Date |
|---|---|---|
| | | |
| | | |

| Depth (ft) | Hour | Date |
|---|---|---|
| | | |
| | | |

| Depth (ft) | Hour | Date |
|---|---|---|
| | | |
| | | |

# KLEINFELDER

# Soil Boring/Monitoring Well Log



| Date | | | Project | Well No. |
|---|---|---|---|---|
| Started: 3/14/2008 | Rig Type: CME 75 | | Ciniza Refinery Monitor Well Install | KA-2R |
| Completed: 3/14/2008 | Driller: J. Aguirre, Rodgers | | | |
| Backfilled: 3/14/2008 | Weather: Sunny, Windy | Top of Casing El.: 6917.27' | Logged By: E. Shannon | |
| Northing: 1634565.05 | Easting: 2545647.32 | Location: West of New API Separator | | |

Sample Type:
G - Grab Sample
CS - 3.5" I.D. Continuous Sampler
SPT - 2" O.D. 1.38" I.D. Tube Sample
U - 3 " O.D. 2.42" I.D. Ring Sample
ST - 3" O.D. Thin-Walled Shelby Tube
NR - No Recovery

**Groundwater**

| Depth (ft) | Hour | Date |
|---|---|---|
| 8.61 | 9:28:00 AM | 3/15/2008 |
| 8.77 | 9:42:00 AM | 3/20/2008 |

| Groundwater Depth (ft.) | Depth (ft.) | Graphical Log | Sample Taken | Sample Type | Penetration Resistance (Blows per foot) | PID Heated Headspace Reading, ppm | Analytical Sample Number | Visual Classification | WELL CONSTRUCTION |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | | | | | | | SANDY LEAN CLAY (CL) - grayish brown, dry to moist, 25 - 30% coarse to fine grained sand | Cement surface completion; 3/8" bentonite chips; 2" Sch. 40 PVC casing; 10/20 sand; 4.2' bgs |
| | 5 | | | | | | | Grades to reddish-brown in color at 5 ft bgs. | |
| | | | | | | | | Note: Boring drilled with hollow stem auger. Soil visually classified from auger cuttings. | 0.010" Slot Screen |
| | 10 | | | | | | | 14.5' El. 6902.8' | 14.2' bgs End Cap |

Total Depth 14.5'

## Additional Groundwater Measurements

| Depth (ft) | Hour | Date |
|---|---|---|
| | | |
| | | |

| Depth (ft) | Hour | Date |
|---|---|---|
| | | |
| | | |

| Depth (ft) | Hour | Date |
|---|---|---|
| | | |
| | | |

# KLEINFELDER

# Soil Boring/Monitoring Well Log



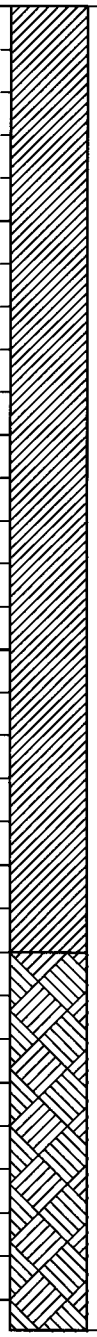
| Date | | | Project | Well No. |
|---|---|---|---|---|
| Started: 3/13/2008 | Rig Type: CME 75 | | Ciniza Refinery Monitor Well Install | KA-3R |
| Completed: 3/14/2008 | Driller: J. Aguirre, Rodgers | | | |
| Backfilled: 3/14/2008 | Weather: Sunny, Windy | Top of Casing El.: 6917.31' | Logged By: E. Shannon | |
| Northing: 1634589.8 | Easting: 2545645.1 | Location: West of New API Separator | | |

Sample Type: G - Grab Sample; CS - 3.5" I.D. Continuous Sampler; SPT - 2" O.D. 1.38" I.D. Tube Sample; U - 3 " O.D. 2.42" I.D. Ring Sample; ST - 3" O.D. Thin-Walled Shelby Tube; NR - No Recovery

**Groundwater**

| Depth (ft) | Hour | Date |
|---|---|---|
| Dry | 9:40:00 AM | 3/14/2008 |
| Dry | 11:15:00 AM | 3/14/2008 |

Groundwater Depth (ft.) | Depth (ft.) | Graphical Log | Sample Taken | Sample Type | Penetration Resistance (Blows per foot) | PID Heated Headspace Reading, ppm | Analytical Sample Number | Visual Classification | WELL CONSTRUCTION



0 — 5 — 10 — 15 — 20 — 25 — 30

SANDY LEAN CLAY (CL) - red, dry to moist, coarse to fine grained sand

Note: Boring drilled with hollow stem auger. Soil visually classified from auger cuttings.

Driller noted easier drilling at 6.5 ft bgs. Soil grades to darker brown in color.

Driller noted change in drilling at 12.5 ft bgs. Auger cuttings increased in sand content and graded moist to wet.

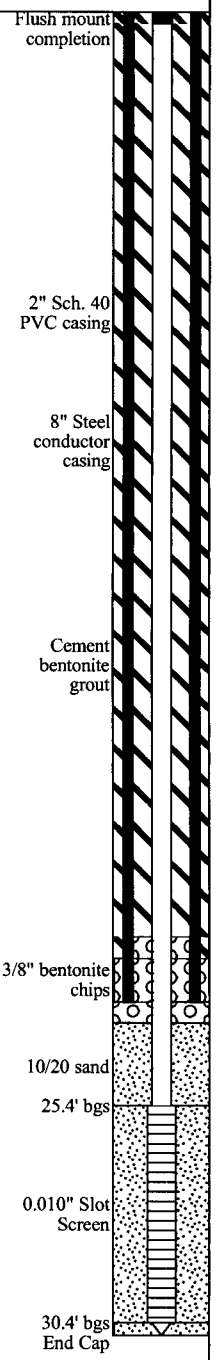
Wet at 17 ft bgs.

22.0' — El. 6895.3'

BEDROCK - driller noted hard drilling at 22 ft bgs, set conductor casing at 23 ft bgs.

30.7' — El. 6886.6'

Total Depth 30.7'




## Additional Groundwater Measurements

| Depth (ft) | Hour | Date |
|---|---|---|
| 30.68 | 9:54:00 AM | 3/15/2008 |
| 30.68 | 12:08:00 PM | 3/15/2008 |

| Depth (ft) | Hour | Date |
|---|---|---|
| 30.70 | 9:40:00 AM | 3/20/2008 |
| | | |

| Depth (ft) | Hour | Date |
|---|---|---|
| | | |
| | | |

# APPENDIX C

## Laboratory Analytical Results

HALL ENVIRONMENTAL ANALYSIS LABORATORY

# COVER LETTER

Friday, April 04, 2008

Eileen Shannon
Kleinfelder
8300 Jefferson, NE Suite B
Albuquerque, NM 87113

TEL: (505) 344-7373
FAX (505) 344-1711

RE: Ciniza Refinery

Order No.: 0803155

Dear Eileen Shannon:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 3/17/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | Drum Sample Composite |
| **Lab Order:** | 0803155 | **Collection Date:** | 3/15/2008 12:45:00 PM |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/17/2008 |
| **Lab ID:** | 0803155-01 | **Matrix:** | SOIL |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 9056A: ANIONS** | | | | | | Analyst: SLB |
| Chloride | 170 | 1.5 | | mg/Kg | 5 | 3/19/2008 8:22:47 PM |
| **EPA METHOD 7471: MERCURY** | | | | | | Analyst: SLB |
| Mercury | 0.073 | 0.033 | | mg/Kg | 1 | 3/20/2008 2:55:23 PM |
| **EPA METHOD 6010B: SOIL METALS** | | | | | | Analyst: TES |
| Arsenic | ND | 12 | | mg/Kg | 5 | 3/27/2008 12:11:30 PM |
| Barium | 520 | 2.0 | | mg/Kg | 20 | 3/27/2008 12:17:57 PM |
| Cadmium | ND | 0.50 | | mg/Kg | 5 | 3/27/2008 12:11:30 PM |
| Chromium | 15 | 1.5 | | mg/Kg | 5 | 3/27/2008 12:11:30 PM |
| Lead | 6.2 | 1.2 | | mg/Kg | 5 | 3/27/2008 12:11:30 PM |
| Selenium | ND | 50 | | mg/Kg | 20 | 3/27/2008 12:17:57 PM |
| Silver | ND | 1.2 | | mg/Kg | 5 | 3/27/2008 12:11:30 PM |
| **PAINT FILTER TEST** | | | | | | Analyst: TAF |
| Free Liquid | NEG | 0 | | Pos/Neg | 1 | 4/1/2008 |

**Qualifiers:**

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

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800-735-4489 • 406-252-6325 • 406-252-6069 fax • eli@energylab.com

# LABORATORY ANALYTICAL REPORT

**Client:** Hall Environmental
**Project:** 0803155
**Lab ID:** B08031230-001
**Client Sample ID:** 0803155-01B, Drum Sample Composite

**Report Date:** 03/28/08
**Collection Date:** 03/15/08 12:45
**DateReceived:** 03/18/08
**Matrix:** Soil

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **IGNITABILITY** | | | | | | | |
| Flash Point (Ignitability) | >200 | °F | | 30.0 | | SW1010M | 03/26/08 11:44 / mgs |
| **CORROSIVITY** | | | | | | | |
| pH of Soil and Waste | 8.72 | s.u. | | 0.10 | | SW9045D | 03/27/08 10:54 / mgs |
| **REACTIVITY** | | | | | | | |
| Cyanide, Reactive | ND | mg/kg | | 0.05 | 250 | SW846 Ch 7 | 03/27/08 15:55 / kjp |
| Sulfide, Reactive | ND | mg/kg | | 20 | 500 | SW846 Ch 7 | 03/27/08 08:00 / pwc |

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

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800-735-4489 • 406-252-6325 • 406-252-6069 fax • eli@energylab.com

# QA/QC Summary Report

**Client:** Hall Environmental
**Project:** 0803155

**Report Date:** 03/28/08
**Work Order:** B08031230

| Analyte | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: SW846 Ch 7** | | | | | | | | | Batch: 31601 |
| **Sample ID: MB-31601** | Method Blank | | | | Run: AUTOAN201-B_080327B | | | | 03/27/08 15:56 |
| Cyanide, Reactive | ND | mg/kg | 0.05 | | | | | | |
| **Method: SW846 Ch 7** | | | | | | | | | Batch: R108215 |
| **Sample ID: MB-R108215** | Method Blank | | | | Run: MISC-HZW_080327B | | | | 03/27/08 08:00 |
| Sulfide, Reactive | ND | mg/kg | 10 | | | | | | |
| **Sample ID: LCS-R108215** | Laboratory Control Sample | | | | Run: MISC-HZW_080327B | | | | 03/27/08 08:00 |
| Sulfide, Reactive | 26 | mg/kg | 20 | 81 | 50 | 150 | | | |

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

# QA/QC SUMMARY REPORT

**Client:** Kleinfelder
**Project:** Ciniza Refinery **Work Order:** 0803155

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 9056A: Anions** | | | | | | | | | |
| **Sample ID: MB-15405** | | *MBLK* | | | Batch ID: | **15405** | Analysis Date: | 3/19/2008 4:36:28 PM | |
| Chloride | ND | mg/Kg | 0.30 | 0 | 0 | 0 | 0 | 0 | |
| **Sample ID: LCS-15405** | | *LCS* | | | Batch ID: | **15405** | Analysis Date: | 3/19/2008 4:53:52 PM | |
| Chloride | 15.22 | mg/Kg | 0.30 | 101 | 90 | 110 | | | |
| **Method: EPA Method 7471: Mercury** | | | | | | | | | |
| **Sample ID: MB-15421** | | *MBLK* | | | Batch ID: | **15421** | Analysis Date: | 3/20/2008 2:52:16 PM | |
| Mercury | ND | mg/Kg | 0.033 | | | | | | |
| **Sample ID: LCS-15421** | | *LCS* | | | Batch ID: | **15421** | Analysis Date: | 3/20/2008 2:53:50 PM | |
| Mercury | 0.1654 | mg/Kg | 0.033 | 99.3 | 80 | 120 | | | |
| **Method: EPA Method 6010B: Soil Metals** | | | | | | | | | |
| **Sample ID: MB-15481** | | *MBLK* | | | Batch ID: | **15481** | Analysis Date: | 3/27/2008 11:29:13 AM | |
| Arsenic | ND | mg/Kg | 2.5 | | | | | | |
| Barium | ND | mg/Kg | 0.10 | | | | | | |
| Cadmium | ND | mg/Kg | 0.10 | | | | | | |
| Chromium | ND | mg/Kg | 0.30 | | | | | | |
| Lead | ND | mg/Kg | 0.25 | | | | | | |
| Selenium | ND | mg/Kg | 2.5 | | | | | | |
| Silver | ND | mg/Kg | 0.25 | | | | | | |
| **Sample ID: LCS-15481** | | *LCS* | | | Batch ID: | **15481** | Analysis Date: | 3/27/2008 11:32:09 AM | |
| Arsenic | 26.22 | mg/Kg | 2.5 | 105 | 80 | 120 | | | |
| Barium | 25.51 | mg/Kg | 0.10 | 102 | 80 | 120 | | | |
| Cadmium | 25.95 | mg/Kg | 0.10 | 104 | 80 | 120 | | | |
| Chromium | 26.13 | mg/Kg | 0.30 | 105 | 80 | 120 | | | |
| Lead | 25.97 | mg/Kg | 0.25 | 104 | 80 | 120 | | | |
| Selenium | 27.20 | mg/Kg | 2.5 | 109 | 80 | 120 | | | |
| Silver | 24.90 | mg/Kg | 0.25 | 99.6 | 80 | 120 | | | |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name KLEIN

Date Received: 3/17/2008

Work Order Number 0803155

Received by: TLS

Sample ID labels checked by _____ Initials

Checklist completed by: _____ Signature | 3/17/08 Date

Matrix

Carrier name Client drop-off

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☐ | Not Shipped ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | N/A ☑ | |
| Chain of custody present? | Yes ☑ | No ☐ | | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | | |
| Sample containers intact? | Yes ☑ | No ☐ | | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | | |
| All samples received within holding time? | Yes ☑ | No ☐ | | |
| Water - VOA vials have zero headspace? | No VOA vials submitted ☑ | Yes ☐ | No ☐ | |
| Water - Preservation labels on bottle and cap match? | Yes ☐ | No ☐ | N/A ☑ | |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ | |
| Container/Temp Blank temperature? | 5° | *<6° C Acceptable* If given sufficient time to cool. | | |

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

# Chain-of-Custody Record

Client: Kleinfelder

Address: 8300 Jefferson NE Suite B
Albuquerque NM 87109

Phone #: 505-344-7373

email or Fax#: eshannon@kleinfelder.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Giuza Refinery

Project #: 84679/46
~~846792~~ E28

Project Manager: Eileen Shannon

Sampler: Eileen Shannon

Sample Temperature:

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| Date | Time | Sample Request ID | Container Type and # | Preservative Type | HEAL No. | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | EDC (Method 8260) | 8310 (PNA or PAH) | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Paint Filters ~~Flash~~ BTU | RCI | Total Metals - RCRA 8 | Chloride (300.0) | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/15/08 | 12:45 | Drum Sample Composite | 2x8oz | ice | 0803155-1 | | | | | | | | | | | | X | X | X | X | |

| Date | Time | Relinquished by | Received by |
|---|---|---|---|
| 3/17/08 | 12:28 | Eileen L. Shannon | [signature] |
| 3/17/08 | 13:16 | [signature] | [signature] 3/17/08 13:16 |

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

# COVER LETTER

Friday, April 04, 2008

Eileen Shannon
Kleinfelder
8300 Jefferson, NE Suite B
Albuquerque, NM 87113

TEL: (505) 344-7373
FAX (505) 344-1711

RE: Ciniza Refinery

Order No.: 0803222

Dear Eileen Shannon:

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 3/21/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

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

**Hall Environmental Analysis Laboratory, Inc.** **Date:** *04-Apr-08*

**CLIENT:** Kleinfelder
**Project:** Ciniza Refinery
**Lab Order:** 0803222

## CASE NARRATIVE

Analytical Comments for METHOD 8015GRO_W, SAMPLE 0803222-02A: Elevated surrogate due to matrix interference.

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | KA-1R |
| **Lab Order:** | 0803222 | **Collection Date:** | 3/20/2008 10:41:00 AM |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **SCC** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 3/28/2008 8:28:35 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 3/28/2008 8:28:35 PM |
| Surr: DNOP | 91.3 | 58-140 | | %REC | 1 | 3/28/2008 8:28:35 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 3/28/2008 12:13:05 PM |
| Surr: BFB | 103 | 79.2-121 | | %REC | 1 | 3/28/2008 12:13:05 PM |
| **EPA METHOD 8310: PAHS** | | | | | | Analyst: **DMF** |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| 1-Methylnaphthalene | ND | 2.0 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| 2-Methylnaphthalene | ND | 2.0 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Acenaphthylene | ND | 2.5 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Acenaphthene | ND | 5.0 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Fluorene | ND | 0.80 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Phenanthrene | ND | 0.60 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Anthracene | ND | 0.60 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Fluoranthene | ND | 0.30 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Pyrene | ND | 0.30 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Benz(a)anthracene | ND | 0.070 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Chrysene | ND | 0.20 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Benzo(b)fluoranthene | ND | 0.10 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Benzo(k)fluoranthene | ND | 0.070 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Benzo(a)pyrene | ND | 0.070 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Dibenz(a,h)anthracene | ND | 0.070 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Benzo(g,h,i)perylene | ND | 0.080 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Indeno(1,2,3-cd)pyrene | ND | 0.080 | | µg/L | 1 | 4/3/2008 12:31:51 PM |
| Surr: Benzo(e)pyrene | 72.6 | 59.9-133 | | %REC | 1 | 4/3/2008 12:31:51 PM |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **SNV** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 3/25/2008 3:11:30 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **TES** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 3/26/2008 6:47:06 PM |
| Barium | 0.22 | 0.020 | | mg/L | 1 | 3/26/2008 6:47:06 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 3/26/2008 6:47:06 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 3/26/2008 6:47:06 PM |
| Lead | 0.0077 | 0.0050 | | mg/L | 1 | 3/26/2008 6:47:06 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 3/26/2008 6:47:06 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 3/26/2008 6:47:06 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **JDC** |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | KA-1R |
| **Lab Order:** | 0803222 | **Collection Date:** | 3/20/2008 10:41:00 AM |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: JDC |
| Benzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Toluene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Acetone | ND | 10 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Bromomethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Chloromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 3/27/2008 1:56:24 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | KA-1R |
| **Lab Order:** | 0803222 | **Collection Date:** | 3/20/2008 10:41:00 AM |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: JDC |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 3/27/2008 1:56:24 AM |
| Surr: 1,2-Dichloroethane-d4 | 83.4 | 68.1-123 | | %REC | 1 | 3/27/2008 1:56:24 AM |
| Surr: 4-Bromofluorobenzene | 83.4 | 53.2-145 | | %REC | 1 | 3/27/2008 1:56:24 AM |
| Surr: Dibromofluoromethane | 84.4 | 68.5-119 | | %REC | 1 | 3/27/2008 1:56:24 AM |
| Surr: Toluene-d8 | 85.4 | 64-131 | | %REC | 1 | 3/27/2008 1:56:24 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | KA-2R |
| **Lab Order:** | 0803222 | **Collection Date:** | 3/20/2008 11:33:00 AM |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: SCC |
| Diesel Range Organics (DRO) | 2.0 | 1.0 | | mg/L | 1 | 3/28/2008 9:03:39 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 3/28/2008 9:03:39 PM |
| Surr: DNOP | 73.8 | 58-140 | | %REC | 1 | 3/28/2008 9:03:39 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 1.1 | 0.050 | | mg/L | 1 | 3/28/2008 1:13:29 PM |
| Surr: BFB | 140 | 79.2-121 | S | %REC | 1 | 3/28/2008 1:13:29 PM |
| **EPA METHOD 8310: PAHS** | | | | | | Analyst: DMF |
| Naphthalene | 8.0 | 2.0 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| 1-Methylnaphthalene | 6.2 | 2.0 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| 2-Methylnaphthalene | ND | 2.0 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Acenaphthylene | ND | 2.5 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Acenaphthene | ND | 5.0 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Fluorene | 1.5 | 0.80 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Phenanthrene | 2.2 | 0.60 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Anthracene | ND | 0.60 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Fluoranthene | ND | 0.30 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Pyrene | ND | 0.30 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Benz(a)anthracene | ND | 0.070 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Chrysene | ND | 0.20 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Benzo(b)fluoranthene | ND | 0.10 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Benzo(k)fluoranthene | ND | 0.070 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Benzo(a)pyrene | ND | 0.070 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Dibenz(a,h)anthracene | ND | 0.070 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Benzo(g,h,i)perylene | ND | 0.080 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Indeno(1,2,3-cd)pyrene | ND | 0.080 | | µg/L | 1 | 4/3/2008 1:19:50 PM |
| Surr: Benzo(e)pyrene | 72.7 | 59.9-133 | | %REC | 1 | 4/3/2008 1:19:50 PM |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: SNV |
| Mercury | ND | 0.00020 | | mg/L | 1 | 3/25/2008 3:13:15 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: TES |
| Arsenic | ND | 0.020 | | mg/L | 1 | 3/26/2008 6:51:13 PM |
| Barium | 0.32 | 0.020 | | mg/L | 1 | 3/26/2008 6:51:13 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 3/26/2008 6:51:13 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 3/26/2008 6:51:13 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 3/26/2008 6:51:13 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 3/26/2008 6:51:13 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 3/26/2008 6:51:13 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: JDC |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | KA-2R |
| **Lab Order:** | 0803222 | **Collection Date:** | 3/20/2008 11:33:00 AM |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: JDC |
| Benzene | 76 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Toluene | 3.0 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Ethylbenzene | 24 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Methyl tert-butyl ether (MTBE) | 260 | 10 | | µg/L | 10 | 3/26/2008 11:54:56 AM |
| 1,2,4-Trimethylbenzene | 17 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,3,5-Trimethylbenzene | 6.6 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Naphthalene | 14 | 2.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1-Methylnaphthalene | 26 | 4.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 2-Methylnaphthalene | 30 | 4.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Acetone | ND | 10 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Bromomethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Chloromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 3/27/2008 2:24:55 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | KA-2R |
| **Lab Order:** | 0803222 | **Collection Date:** | 3/20/2008 11:33:00 AM |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: JDC |
| Isopropylbenzene | 1.9 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 4-Isopropyltoluene | 1.0 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| n-Butylbenzene | 2.7 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| n-Propylbenzene | 2.3 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| sec-Butylbenzene | 1.5 | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Styrene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Xylenes, Total | 22 | 1.5 | | µg/L | 1 | 3/27/2008 2:24:55 AM |
| Surr: 1,2-Dichloroethane-d4 | 85.6 | 68.1-123 | | %REC | 1 | 3/27/2008 2:24:55 AM |
| Surr: 4-Bromofluorobenzene | 82.2 | 53.2-145 | | %REC | 1 | 3/27/2008 2:24:55 AM |
| Surr: Dibromofluoromethane | 84.7 | 68.5-119 | | %REC | 1 | 3/27/2008 2:24:55 AM |
| Surr: Toluene-d8 | 86.4 | 64-131 | | %REC | 1 | 3/27/2008 2:24:55 AM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | Trip Blank |
| **Lab Order:** | 0803222 | **Collection Date:** | |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 3/28/2008 1:43:37 PM |
| Surr: BFB | 108 | 79.2-121 | | %REC | 1 | 3/28/2008 1:43:37 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: JDC |
| Benzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Acetone | ND | 10 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Bromomethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Chloromethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *04-Apr-08*

| | | | |
|---|---|---|---|
| **CLIENT:** | Kleinfelder | **Client Sample ID:** | Trip Blank |
| **Lab Order:** | 0803222 | **Collection Date:** | |
| **Project:** | Ciniza Refinery | **Date Received:** | 3/21/2008 |
| **Lab ID:** | 0803222-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: JDC |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Styrene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 3/26/2008 12:23:34 PM |
| Surr: 1,2-Dichloroethane-d4 | 83.1 | 68.1-123 | | %REC | 1 | 3/26/2008 12:23:34 PM |
| Surr: 4-Bromofluorobenzene | 84.2 | 53.2-145 | | %REC | 1 | 3/26/2008 12:23:34 PM |
| Surr: Dibromofluoromethane | 83.1 | 68.5-119 | | %REC | 1 | 3/26/2008 12:23:34 PM |
| Surr: Toluene-d8 | 85.8 | 64-131 | | %REC | 1 | 3/26/2008 12:23:34 PM |

**Qualifiers:**

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

# QA/QC SUMMARY REPORT

**Client:** Kleinfelder
**Project:** Ciniza Refinery **Work Order:** 0803222

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8015B: Diesel Range** | | | | | | | | | |
| **Sample ID: MB-15451** | | *MBLK* | | | Batch ID: | **15451** | Analysis Date: | | 3/27/2008 9:13:39 PM |
| Diesel Range Organics (DRO) | ND | mg/L | 1.0 | | | | | | |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 | | | | | | |
| **Sample ID: LCS-15451** | | *LCS* | | | Batch ID: | **15451** | Analysis Date: | | 3/27/2008 9:48:38 PM |
| Diesel Range Organics (DRO) | 5.335 | mg/L | 1.0 | 93.8 | 74 | 157 | | | |
| **Sample ID: LCSD-15451** | | *LCSD* | | | Batch ID: | **15451** | Analysis Date: | | 3/27/2008 10:23:37 PM |
| Diesel Range Organics (DRO) | 5.019 | mg/L | 1.0 | 87.5 | 74 | 157 | 6.10 | 23 | |
| **Method: EPA Method 8015B: Gasoline Range** | | | | | | | | | |
| **Sample ID: 5ML RB** | | *MBLK* | | | Batch ID: | **R27908** | Analysis Date: | | 3/28/2008 8:41:23 AM |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | |
| **Sample ID: 2.5UG GRO LCS** | | *LCS* | | | Batch ID: | **R27908** | Analysis Date: | | 3/28/2008 8:18:56 PM |
| Gasoline Range Organics (GRO) | 0.4922 | mg/L | 0.050 | 98.4 | 80 | 115 | | | |
| **Sample ID: 2.5UG GRO LCSD** | | *LCSD* | | | Batch ID: | **R27908** | Analysis Date: | | 3/28/2008 8:48:51 PM |
| Gasoline Range Organics (GRO) | 0.5044 | mg/L | 0.050 | 101 | 80 | 115 | 2.45 | 8.39 | |

**Qualifiers:**

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

# QA/QC SUMMARY REPORT

**Client:** Kleinfelder
**Project:** Ciniza Refinery **Work Order:** 0803222

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8310: PAHs** | | | | | | | | | |
| **Sample ID: MB-15462** | | *MBLK* | | | Batch ID: | 15462 | Analysis Date: | 4/3/2008 9:19:52 AM | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 2.0 | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 2.0 | | | | | | |
| Acenaphthylene | ND | µg/L | 2.5 | | | | | | |
| Acenaphthene | ND | µg/L | 5.0 | | | | | | |
| Fluorene | ND | µg/L | 0.80 | | | | | | |
| Phenanthrene | ND | µg/L | 0.60 | | | | | | |
| Anthracene | ND | µg/L | 0.60 | | | | | | |
| Fluoranthene | ND | µg/L | 0.30 | | | | | | |
| Pyrene | ND | µg/L | 0.30 | | | | | | |
| Benz(a)anthracene | ND | µg/L | 0.070 | | | | | | |
| Chrysene | ND | µg/L | 0.20 | | | | | | |
| Benzo(b)fluoranthene | ND | µg/L | 0.10 | | | | | | |
| Benzo(k)fluoranthene | ND | µg/L | 0.070 | | | | | | |
| Benzo(a)pyrene | ND | µg/L | 0.070 | | | | | | |
| Dibenz(a,h)anthracene | ND | µg/L | 0.070 | | | | | | |
| Benzo(g,h,i)perylene | ND | µg/L | 0.080 | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | µg/L | 0.080 | | | | | | |
| **Sample ID: LCS-15462** | | *LCS* | | | Batch ID: | 15462 | Analysis Date: | 4/3/2008 10:55:52 AM | |
| Naphthalene | 25.56 | µg/L | 2.0 | 63.9 | 37.3 | 91.2 | | | |
| 1-Methylnaphthalene | 24.62 | µg/L | 2.0 | 61.4 | 36.7 | 91.2 | | | |
| 2-Methylnaphthalene | 24.24 | µg/L | 2.0 | 60.6 | 35.8 | 91.6 | | | |
| Acenaphthylene | 25.43 | µg/L | 2.5 | 63.4 | 14.4 | 114 | | | |
| Acenaphthene | 25.14 | µg/L | 5.0 | 62.8 | 43.9 | 96.5 | | | |
| Fluorene | 2.560 | µg/L | 0.80 | 63.8 | 47.4 | 102 | | | |
| Phenanthrene | 1.270 | µg/L | 0.60 | 63.2 | 46.9 | 107 | | | |
| Anthracene | 1.270 | µg/L | 0.60 | 63.2 | 49.1 | 110 | | | |
| Fluoranthene | 2.620 | µg/L | 0.30 | 65.3 | 44.8 | 102 | | | |
| Pyrene | 2.580 | µg/L | 0.30 | 64.3 | 49.2 | 104 | | | |
| Benz(a)anthracene | 0.2600 | µg/L | 0.070 | 64.8 | 50.5 | 113 | | | |
| Chrysene | 1.300 | µg/L | 0.20 | 64.7 | 41.3 | 98.5 | | | |
| Benzo(b)fluoranthene | 0.3200 | µg/L | 0.10 | 63.9 | 52.7 | 106 | | | |
| Benzo(k)fluoranthene | 0.1600 | µg/L | 0.070 | 64.0 | 44.9 | 105 | | | |
| Benzo(a)pyrene | 0.1700 | µg/L | 0.070 | 67.7 | 52.8 | 115 | | | |
| Dibenz(a,h)anthracene | 0.3400 | µg/L | 0.070 | 67.9 | 50.5 | 108 | | | |
| Benzo(g,h,i)perylene | 0.3700 | µg/L | 0.080 | 74.0 | 55.4 | 108 | | | |
| Indeno(1,2,3-cd)pyrene | 0.6510 | µg/L | 0.080 | 65.0 | 15.1 | 117 | | | |
| **Sample ID: LCSD-15462** | | *LCSD* | | | Batch ID: | 15462 | Analysis Date: | 4/3/2008 11:43:52 AM | |
| Naphthalene | 25.94 | µg/L | 2.0 | 64.8 | 37.3 | 91.2 | 1.48 | 32.1 | |
| 1-Methylnaphthalene | 25.40 | µg/L | 2.0 | 63.3 | 36.7 | 91.2 | 3.12 | 32.7 | |
| 2-Methylnaphthalene | 24.99 | µg/L | 2.0 | 62.5 | 35.8 | 91.6 | 3.05 | 34 | |
| Acenaphthylene | 26.60 | µg/L | 2.5 | 66.3 | 14.4 | 114 | 4.50 | 38.8 | |
| Acenaphthene | 26.23 | µg/L | 5.0 | 65.6 | 43.9 | 96.5 | 4.24 | 38.6 | |
| Fluorene | 2.710 | µg/L | 0.80 | 67.6 | 47.4 | 102 | 5.69 | 29.3 | |

**Qualifiers:**

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

# QA/QC SUMMARY REPORT

**Client:** Kleinfelder
**Project:** Ciniza Refinery **Work Order:** 0803222

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8310: PAHs** | | | | | | | | | |
| **Sample ID: LCSD-15462** | | *LCSD* | | | Batch ID: | **15462** | Analysis Date: | 4/3/2008 11:43:52 AM | |
| Phenanthrene | 1.390 | µg/L | 0.60 | 69.2 | 46.9 | 107 | 9.02 | 25 | |
| Anthracene | 1.370 | µg/L | 0.60 | 68.2 | 49.1 | 110 | 7.58 | 23.9 | |
| Fluoranthene | 2.760 | µg/L | 0.30 | 68.8 | 44.8 | 102 | 5.20 | 15.7 | |
| Pyrene | 2.780 | µg/L | 0.30 | 69.3 | 49.2 | 104 | 7.46 | 15.3 | |
| Benz(a)anthracene | 0.2800 | µg/L | 0.070 | 69.8 | 50.5 | 113 | 7.41 | 19 | |
| Chrysene | 1.380 | µg/L | 0.20 | 68.7 | 41.3 | 98.5 | 5.97 | 16.6 | |
| Benzo(b)fluoranthene | 0.3400 | µg/L | 0.10 | 67.9 | 52.7 | 106 | 6.06 | 21.7 | |
| Benzo(k)fluoranthene | 0.1700 | µg/L | 0.070 | 68.0 | 44.9 | 105 | 6.06 | 19.4 | |
| Benzo(a)pyrene | 0.1800 | µg/L | 0.070 | 71.7 | 52.8 | 115 | 5.71 | 16.7 | |
| Dibenz(a,h)anthracene | 0.3600 | µg/L | 0.070 | 71.9 | 50.5 | 108 | 5.71 | 17.3 | |
| Benzo(g,h,i)perylene | 0.3700 | µg/L | 0.080 | 74.0 | 55.4 | 108 | 0 | 18 | |
| Indeno(1,2,3-cd)pyrene | 0.7360 | µg/L | 0.080 | 73.5 | 15.1 | 117 | 12.3 | 17.7 | |
| **Method: EPA Method 7470: Mercury** | | | | | | | | | |
| **Sample ID: MB-15464** | | *MBLK* | | | Batch ID: | **15464** | Analysis Date: | 3/25/2008 2:35:37 PM | |
| Mercury | ND | mg/L | 0.00020 | | | | | | |
| **Sample ID: LCS-15464** | | *LCS* | | | Batch ID: | **15464** | Analysis Date: | 3/25/2008 2:37:22 PM | |
| Mercury | 0.005334 | mg/L | 0.00020 | 107 | 80 | 120 | | | |
| **Method: EPA 6010B: Total Recoverable Metals** | | | | | | | | | |
| **Sample ID: MB-15474** | | *MBLK* | | | Batch ID: | **15474** | Analysis Date: | 3/26/2008 6:17:00 PM | |
| Arsenic | ND | mg/L | 0.020 | | | | | | |
| Barium | ND | mg/L | 0.010 | | | | | | |
| Cadmium | ND | mg/L | 0.0020 | | | | | | |
| Chromium | ND | mg/L | 0.0060 | | | | | | |
| Lead | ND | mg/L | 0.0050 | | | | | | |
| Selenium | ND | mg/L | 0.050 | | | | | | |
| Silver | ND | mg/L | 0.0050 | | | | | | |
| **Sample ID: LCS-15474** | | *LCS* | | | Batch ID: | **15474** | Analysis Date: | 3/26/2008 6:21:23 PM | |
| Arsenic | 0.4613 | mg/L | 0.020 | 92.3 | 80 | 120 | | | |
| Barium | 0.4529 | mg/L | 0.010 | 90.6 | 80 | 120 | | | |
| Cadmium | 0.4595 | mg/L | 0.0020 | 91.9 | 80 | 120 | | | |
| Chromium | 0.4515 | mg/L | 0.0060 | 90.3 | 80 | 120 | | | |
| Lead | 0.4499 | mg/L | 0.0050 | 90.0 | 80 | 120 | | | |
| Selenium | 0.4504 | mg/L | 0.050 | 90.1 | 80 | 120 | | | |
| Silver | 0.4643 | mg/L | 0.0050 | 92.9 | 80 | 120 | | | |

**Qualifiers:**

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

# QA/QC SUMMARY REPORT

**Client:** Kleinfelder
**Project:** Ciniza Refinery **Work Order:** 0803222

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | |
| **Sample ID: 5mL rb** | | *MBLK* | | | Batch ID: | **R27881** | Analysis Date: | 3/26/2008 9:28:39 AM | |
| Benzene | ND | µg/L | 1.0 | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | |
| ,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | |
| ,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | |
| -Methylnaphthalene | ND | µg/L | 4.0 | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | |
| Bromomethane | ND | µg/L | 1.0 | | | | | | |
| -Butanone | ND | µg/L | 10 | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | |
| Chloromethane | ND | µg/L | 1.0 | | | | | | |
| -Chlorotoluene | ND | µg/L | 1.0 | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | |
| is-1,2-DCE | ND | µg/L | 1.0 | | | | | | |
| is-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | |
| ,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | |
| ,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | |
| ,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | |
| ,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | |
| -Isopropyltoluene | ND | µg/L | 1.0 | | | | | | |

**Qualifiers:**

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

# QA/QC SUMMARY REPORT

**Client:** Kleinfelder
**Project:** Ciniza Refinery **Work Order:** 0803222

| Analyte | Result | Units | PQL | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | |
| **ample ID: 5mL rb** | | *MBLK* | | | Batch ID: | **R27881** | Analysis Date: | 3/26/2008 9:28:39 AM | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | |
| -Butylbenzene | ND | µg/L | 1.0 | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | |
| tyrene | ND | µg/L | 1.0 | | | | | | |
| rt-Butylbenzene | ND | µg/L | 1.0 | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | |
| 1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | |
| etrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | |
| 2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | |
| 2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | |
| 1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | |
| richloroethene (TCE) | ND | µg/L | 1.0 | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | |
| 2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | |
| inyl chloride | ND | µg/L | 1.0 | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | Batch ID: | **R27881** | Analysis Date: | 3/26/2008 10:26:17 AM | |
| enzene | 19.11 | µg/L | 1.0 | 95.6 | 72.4 | 126 | | | |
| oluene | 17.37 | µg/L | 1.0 | 86.9 | 69.4 | 126 | | | |
| Chlorobenzene | 20.06 | µg/L | 1.0 | 100 | 83.1 | 111 | | | |
| 1-Dichloroethene | 18.86 | µg/L | 1.0 | 94.3 | 81.4 | 122 | | | |
| richloroethene (TCE) | 17.72 | µg/L | 1.0 | 88.6 | 64.4 | 118 | | | |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name KLEIN | Date Received: 3/21/2008

Work Order Number 0803222 | Received by: AT

Checklist completed by: _____ Signature | 3/21/08 Date | Sample ID labels checked by AB Initials

Matrix | Carrier name Client drop-off

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☐ | Not Shipped ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | N/A ☑ | |
| Chain of custody present? | Yes ☑ | No ☐ | | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | | |
| Sample containers intact? | Yes ☑ | No ☐ | | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | | |
| All samples received within holding time? | Yes ☑ | No ☐ | | |
| Water - VOA vials have zero headspace? | No VOA vials submitted ☐ | Yes ☑ | No ☐ | |
| Water - Preservation labels on bottle and cap match? | Yes ☑ | No ☐ | N/A ☐ | |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ | |
| Container/Temp Blank temperature? | 10° | *<6° C Acceptable* If given sufficient time to cool. | | |

COMMENTS:

---

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

# Chain-of-Custody Record

Client: Kleinfelder West, Inc

Address: 8300 Jefferson Blvd NE
Albuquerque, NM 87113

Phone #: (505) 344-7373

email or Fax#: (505) 344-1711

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☑ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Cuniza Refinery

Project #: 84679 task 4/4b

Project Manager: Eileen Shannon

Sampler: Cuero, Brian

[redacted]

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| Date | Time | Sample Request ID | Container Type and # | Preservative Type | HEAL No. | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | EDC (Method 8260) | 8310 (PNA or PAH) | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | RCRA 8 metals | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0803222 | | | | | | | | | | | | | | | | |
| 03/20/08 | 1041 | KA-1R | (X)(2) 40ml VOA<br>(X)1 liter<br>(X)125-ml poly | HCl<br>N/A<br>$HNO_3$ | -1 | | | X | | | | X | | | X | | X | | | | |
| 03/20/08 | 1133 | KA-2R | (X)(2) 40ml VOA<br>(X)1 liter<br>(X)125-ml poly | HCl<br>N/A<br>$HNO_3$ | -2 | | | X | | | | X | | | X | | X | | | | |
| | | Trip Blank | | | -3 | | | X | | | | | | | X | | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Remarks: |
|---|---|---|---|---|
| 03/20/08 | 1550 | Brian Cuero | 3/20/08 1550 | |
| Date: | Time: | Relinquished by: | Received by: | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.