GW - 032

REPORTS

Year(s)

MW Installation Report 8/07/2007

MONITORING WELL INSTALLATION REPORT
CINIZA REFINERY
JAMESTOWN, NEW MEXICO
KLEINFELDER PROJECT NO. 84679

Prepared for:

GIANT INDUSTRIES
CINIZA REFINERY
I-40, EXIT 39
JAMESTOWN, NEW MEXICO

Prepared by:
KLEINFELDER
8300 Jefferson NE Suite B
Albuquerque, New Mexico 87113

August 7, 2007

KLEINFELDER
An employee owned company

August 7, 2007

Kleinfelder Project No. 84679
File No.: 84679.3-ALB07RP001

Giant Industries
Ciniza Refinery
I-40, Exit 39
Jamestown, NM 87347
Attn: Mr. Jim Lieb

Subject: **Monitoring Well Installation Report**
Ciniza Refinery
Jamestown, New Mexico

Dear Mr. Lieb:

Kleinfelder West, Inc. (Kleinfelder) is pleased to present the results of the monitoring well installations and groundwater monitoring event performed at the Ciniza Refinery in Jamestown, NM. This report includes a description of field activities, a summary of data, and discussion of results. With your approval, a copy of this report will be forwarded to Ms. Hope Monzeglio with the New Mexico Environment Department Hazardous Waste Bureau and Carl Chavez with the New Mexico Oil Conservation Division.

Should any questions arise concerning this report, please contact the project manager, Mr. Justin Ball, at (505) 344-7373.

Respectfully submitted,
KLEINFELDER WEST, INC.

Brian Lucero
Staff Geologist

Reviewed by:

Justin D. Ball, P.G.
Project Manager

BL:JDB:ad

c: Hope Monzeglio, NMED HWB
Carl Chavez, OCD

KLEINFELDER 8300 Jefferson NE, Suite B, Albuquerque, NM 87113 (505) 344-7373 (505) 344-1711 fax

TABLE OF CONTENTS

1.0 INTRODUCTION

This report presents the results of the monitoring well installations and groundwater monitoring event performed at Giant Industries' (Giant) Ciniza refinery located at I-40, Exit 39, in Jamestown, NM (Site). The work was performed in accordance with Kleinfelder, Inc.'s (Kleinfelder's) Work Plan No. 83817.PROP-ALB07001 Rev. 1 dated May 24, 2007 (Kleinfelder, 2007). Giant Industries approved Kleinfelder's work plan via purchase order C16449 dated June 4, 2007. The New Mexico Environment Department (NMED) approved the work plan in a letter dated June 4, 2007. Fieldwork for this event was performed on June 11 & 12, and June 21, 2007.

1.1 Site Description

The Site is located at 35° 29.41'N, 108° 25.80'W, McKinley County, New Mexico (see Figure 1). 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.

1.2 Site History and Previous Work

Mr. Justin Ball mobilized on May 9th, 2007 for a site orientation and reconnaissance with Mr. Jim Lieb, and Mr. Steve Morris of Giant Industries, Inc. During this visit, details were discussed concerning the Work Plan detailed in the NMED Hazardous Waste Bureau (HWB) letter dated March 23, 2007. This and subsequent conversations refined the scope of work and cost estimate. The purpose of the monitoring well installations and groundwater monitoring event, per the letter from the HWB, is to address potential leaks of hydrocarbons from the new API separator.

1.3 Proposed Scope of Work

The scope of work specified in the approved work plan included the following key elements:

- Developing a work plan and project planning;
- Advancing a total of 3 soil borings; 2 borings to 10 feet (ft) below ground surface (bgs) and 1 boring to 25 ft bgs;
- Collecting soil screening readings and lithologic information at 5-ft intervals or less in each boring using a 5-ft continuous sampler;
- Collecting soil samples at specified intervals from each boring for analysis by EPA methods 8021B [Benzene, Toluene, Ethylbenzene, total xylenes (BTEX) and Methyl tert-Butyl Ether (MTBE)], and 8015B [Total Petroleum Hydrocarbons (TPH) gasoline range organics (GRO), diesel range organics (DRO) and motor oil range organics (MRO)];
- Converting each boring to a 2-in diameter monitoring well;

- Developing and sampling each well for analysis by EPA methods 8021B (BTEX and MTBE), and 8015B (TPH GRO and DRO);

- Reporting the results of the soil characterization and groundwater monitoring events.

1.4 Work Plan Deviations

The following workplan deviations were discussed and approved by Giant and HWB during the field event:

- The surface completions of monitoring wells KA-1 through KA-3 were constructed with flush mounted vaults to allow for vehicle access between the new API separator and Areation Lagoon #1;

- Boring/monitoring well KA-1 was located approximately 45 ft east of new API separator instead of 20 ft, due to the presence of subsurface and aboveground utilities.

1.5 Project Preparation

Upon receipt of authorization to proceed from Giant, the following tasks were performed prior to commencing field activities:

- Project files were set up and work orders were issued to Spectrum Exploration, Inc. for drilling services;

- The HWB project manager, Ms. Hope Monzeglio, and the Giant project manager, Mr. Jim Lieb were notified of planned onsite activities;

- The New Mexico One Call system was contacted for utility line location;

- A Health and Safety Plan (HASP) was generated for the project (signature pages in Appendix A);

Field supplies were secured and checked for workability and sample containers were obtained from Hall Environmental Analysis Laboratories (HEAL) in Albuquerque, NM.

2.0 FIELD ACTIVITIES

Field activities were conducted on June 11 & 12, 2007 and on June 21, 2007. While in the field, the HASP was reviewed and a tailgate safety meeting was conducted each day. The HASP signatory pages are included in Appendix A. Work was performed in OSHA Level D personal protective equipment, which was modified to include the use of personal hydrogen sulfide meters by Kleinfelder and contractor personnel. A degreed field geologist supervised field activities and performed work in compliance with the HASP. A copy of the field notes is included in Appendix B. Field work was conducted in accorance with Kleinfelder's standard quality assurance/quality control procedures, as outlined in the Field Operating Procedures included in Appendix C.

2.1 Soil Boring Advancement, Soil Sampling, and Soil Analysis

The soil borings were advanced in three locations around the new API separator in the northwest portion of the refinery property (Figure 2). The procedures used to sample soils are detailed in Appendix C. A summary of these activities is provided below. Boring logs are included in Appendix D.

Advancement of soil borings was performed using Hollow Stem Auger (HSA) drilling methods (outer diameter 8 inches). Borings KA-1 was advanced on the east side of the API separator to 10 ft bgs; KA-2 and KA-3 were advanced on the west side of the API separator to 10 and 25 ft bgs, respectively (see Figure 2). Soils were sampled using a properly decontaminated 5-ft continuous sampler.

Once collected, samples were visually classified and logged by a degreed geologist using the American Society for Testing and Materials standard D 2488-00, "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)." Two soil samples were collected from each soil sample interval; one for heated headspace field analysis and the other for possible laboratory analysis. Heated headspace readings were made using a field calibrated Thermo Environmental Instruments 580B PID and the field screening procedures described in Appendix C. Results are listed in Table 1. The second soil sample was placed in laboratory-provided glassware and preserved on ice for possible laboratory analyses.

Soil samples were collected from soil intervals with elevated headspace readings, and/or staining or olfactory evidence of hydrocarbon impact, from the bottom of each boring, and from the surface of the water table. In addition, per the March 23, 2007 NMED HWB letter, a sample was collected "from the confining layer in the deepest boring". The samples were containerized, preserved, and submitted under chain of custody to HEAL in Albuquerque, NM. Soil samples were submitted for analysis by EPA methods 8021B (BTEX and MTBE), and 8015B (TPH GRO, DRO and MRO). Soil samples for VOC and TPH-GRO analysis were extracted with methanol in the field.

2.2 Monitoring Well Installation and Groundwater Sampling

After drilling and sampling activities were completed, each hole was converted to a monitoring well using 2-in inside diameter (I.D.), schedule 40, flush-joint, threaded

polyvinyl chloride (PVC) casing and screen. The groundwater monitoring wells were constructed using a threaded PVC bottom plug and flush-joint, threaded, factory-slotted well screen (0.010 machine-slot). A 2-inch diameter PVC expanding locking top plug was placed at the top of the groundwater monitoring well.

Monitoring wells KA-1 and KA-2 were constructed with the screened interval set from 4.5 to 9.5 ft bgs in order to intersect the water table. Since KA-1 and KA-2 were advanced into the confining unit, the bottom of each boring was backfilled with hydrated bentonite chips to prevent downward migration of fluids through the confining unit. Monitoring well KA-3 was constructed with the screened interval from 15 to 25 ft bgs, across alluvial-Chinle Formation contact.

The annular space around and 1 to 2 ft above the screen was filled with 10/20 Colorado silica sand. Approximately 2 ft of 3/8-inch bentonite chips were placed above the sand pack and properly hydrated. The casing, sand filter pack, and bentonite seal were placed inside the annulus as the augers were withdrawn from the soil boring. The surface completions were constructed with a traffic-rated, flush-mount 8-in diameter well vault set in a 2-ft diameter concrete pad. Once constructed, the monitoring wells were developed in accordance with procedures in Appendix C.

Once development was complete, each well was purged by bailing with a disposable polyethylene bailer. Prior to sampling, the wells were purged until a total of 3 well casing volumes of groundwater were removed, or the wells bailed dry. The temperature, specific conductivity, and pH were measured and logged at regular intervals using a YSI-556 water quality meter. These recorded values are included with the field notes in Appendix B. Further description of the disposable bailer purging/sampling technique is provided in Appendix C.

Once each well was purged, a ground water sample was collected and poured into the laboratory-prepared vials using disposable bottom emptying devices. Groundwater samples were submitted for analysis by EPA methods 8021B (BTEX and MTBE), and 8015B (TPH GRO, DRO and MRO). Samples were slowly poured into 40-milliliter (mL) glass vials and were preserved with mercuric chloride. The samples were then placed on ice and hand-delivered under standard chain-of-custody procedures to HEAL in Albuquerque, New Mexico. Laboratory results are provided in Appendix E.

2.3 Site Survey

Upon completion of well installation, the wells were surveyed by a professional surveyor licensed in the State of New Mexico. The horizontal location of each well was surveyed to the nearest 0.1 ft, coordinates are New Mexico State Plane Grid, West Zone, North American Datum 83. The top of casing and ground surface elevations were surveyed to the nearest 0.01 ft; elevations are North American Vertical Datum 88, U.S. feet. The survey was tied into brass cap NMSHD 2765-11, which was used for the Ciniza control survey. See Figure 2 for survey data.

Investigation Derived Waste Management

During advancement of the 3 soil borings, cuttings from each boring were placed in 55-gallon drums and stored on-site pending the results of laboratory analysis of submitted samples. Drill cuttings will be properly disposed of at Ciniza refinery's on-site landfarm. NMED will be notified in writing once the cuttings have been removed to the landfarm.

3.0 SUMMARY OF DATA

3.1 Site Geology and Hydrogeology

As indicated in the boring logs in Appendix D, sediments consisting of various combinations of clay, silt, and sand are present from ground surface to 25 ft bgs. From ground surface to approximately 7 ft bgs, sediments are reddish, poorly cemented, poorly graded sand to sandy lean clay, and are dry to moist. Sand is fine- to medium-grained, and subangular to subrounded. From 6 to 10 ft bgs, sediments grade into dark red to dark brown lean clay to lean clay with sand. These clays contain 5 to 15% fine sand, are poorly cemented, and are moist.

Boring KA-3 is the only boring deeper than 10 ft bgs (total depth = 25 ft bgs). Sediments from 10 to 12.5 ft bgs in KA-3 are the same as those encountered in borings KA-1 and KA-2 between 7 and 10 ft bgs. From 12.5 to 18 ft bgs, sediments consist of lenses of poorly graded sand with varying percentages of clay and silt interbedded with lenses of sandy lean clay. These varying lenses are reddish to brown, wet (especially within fractures), and poorly to moderately cemented. The sand in these lenses is fine- to medium-grained and subangular to subrounded.

Dark red to reddish grey, highly fractured mudstone was encountered at 18-25 ft bgs. Fracturing and moisture content decreased with depth. This mudstone is the upper portion of the Chinle Formation. The contact between the alluvial deposits and the Chinle in boring KA-3 was difficult to determine due to the low induration of the mudstone and therefore the boring was advanced 8 ft into the Chinle. A simple cross section (Appendix D), based on previous site borings MW-4, GWM-1, and OW-12, illustrates the screened interval of KA-3 across the alluvial-Chinle contact.

Total depth (25 ft bgs) was reached in boring KA-3 at 14:33 on June 11, 2007. Depth to water (DTW) was measured in KA-3 on the morning of June 12, prior to well development, at 12.5 ft bgs. DTW was measured at 9.50 ft bgs in both KA-1 and KA-2 on the morning of June 12. Prior to purging and sampling on the morning of June 21, DTW was measured in KA-1, KA-2, and KA-3 at 8.22 ft bgs, 8.54 ft bgs, and 8.50 ft bgs, respectively.

3.2 Soil Screening/Analysis

Soil screening readings for VOCs are provided on the boring logs presented in Appendix D and are summarized in Table 1. The highest field screening reading of 137.4 ppmv was observed in the sample collected at 10 ft bgs in boring KA-2, which is above the NMED action level of 100 ppmv. Results of the remaining field screening readings in borings KA-1, KA-2, and KA-3 were below 100 ppmv.

Results of the analytical testing performed on collected soil samples are presented below and are summarized in Table 2; a copy of the laboratory report is included in Appendix E.

Boring KA-1

Benzene, toluene, ethylbenzene, total xylenes, MTBE, and TPH-GRO were not detected in the three analytical samples submitted from KA-1. Total TPH (GRO+DRO+MRO) was detected in sample KA1@1 at 99 milligrams per kilogram (mg/kg). Total TPH results for each of the three samples from KA-1 were below 100 mg/kg, the NMED standard for the confirmation of a release of petroleum (NMED, 2005b).

Boring KA-2

Benzene, toluene, ethylbenzene, total xylenes, and MTBE were not detected at levels above the NMED Hazardous Waste Bureau soil screening levels that are considered the lowest concentrations of each compound that require corrective action (NMED, 2005). Total TPH was detected in sample KA2@9 at 400 mg/kg, which is above the NMED standard for total TPH. Results for total TPH in samples KA2@5 and KA2@10 were below NMED standards.

Boring KA-3

Benzene, toluene, ethylbenzene, total xylenes, and TPH-GRO were not detected in the four analytical samples submitted from KA-3. Total TPH was detected in sample KA3@10 at 460 mg/kg, which is above the NMED standard for total TPH. Total TPH levels in samples KA3@12.5, KA3@22.5, and KA3@25 are below NMED standards.

3.3 Groundwater Analysis

Results of the analytical testing performed on groundwater samples are summarized in Table 3; a copy of the laboratory report is included in Appendix E.

Monitoring Well KA-1

Benzene, toluene, ethylbenzene, total xylenes, MTBE, TPH-GRO, TPH-DRO, and TPH-MRO were not detected in KA-1.

Monitoring Well KA-2

Benzene was detected at 870 µg/L, which is above the NMWQCC regulatory limit of 10 µg/L. Total xylenes were detected at 860 µg/L, which is above the NMWQCC regulatory limit of 620 µg/L. MTBE was detected at 680 µg/L, which is above the NMWQCC regulatory limit of 100 µg/L. Toluene and ethylbenzene were not detected in KA-2 at levels above the NMWQCC regulatory limits of 750 µg/L. Total TPH was not detected at a level above the NMED standard of 100 mg/l in the samples collected from KA-2.

Monitoring Well KA-3

Benzene, toluene, ethylbenzene, and total xylenes were not detected in well KA-3. MTBE was detected at 150 µg/L, which is above the NMWQCC regulatory limit of 100 µg/L. TPH-GRO was detected in the sample collected from KA-3 at 0.16 mg/L. TPH-DRO and TPH-MRO were not detected in KA-3.

4.0 SUMMARY

- A total of 3 soil borings, 2 borings to 10 feet (ft) below ground surface (bgs) and 1 boring to 25 ft bgs, were advanced adjacent to the API separator;

- Soil screening readings and lithologic information were collected at 5-ft intervals or less in each boring using a 5-ft continuous sampler;

- Soil samples were collected at specified intervals from each boring for analysis by EPA methods 8021B (BTEX and MTBE), and 8015B (TPH-GRO, DRO and MRO). Analytical results were above the NMED standard for total TPH at 9 ft bgs in boring KA-2 and 10 ft bgs in boring KA-3;

- Each boring was converted to a 2-in diameter monitoring well, developed, and sampled for analysis by EPA methods 8021B (BTEX and MTBE), and 8015B (TPH GRO and DRO). Benzene, total xylenes, and MTBE were detected at levels above regulatory limits in well KA-2. MTBE was detected above regulatory limits in well KA-3.

5.0 LIMITATIONS

The scope of work for this report was intended to provide a limited investigation related to the presence of hazardous materials at the referenced site. This assessment was not intended to be comprehensive, identify all potential concerns, or eliminate the possibility of using this information with some degree of risk.

This report may be used only by the client and only for the purposes stated, and within a reasonable time from its issuance, but in no event later than one year from the date of the report. Land use, site conditions (both off and on site) or other factors may change over time and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify Kleinfelder of such intended use. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party and client agrees to defend, indemnify, and hold harmless Kleinfelder from any claim or liability associated with such unauthorized use or non-compliance.

It should be recognized that definition and evaluation of environmental conditions is a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies may reduce the inherent uncertainties associated with environmental conditions. If the client wishes to further reduce the uncertainty associated with this study, Kleinfelder should be notified for additional consultation. No warranty, expressed or implied, is made.

6.0 REFERENCES

Kleinfelder, 2007. Work Plan for Monitoring Well Installation, Ciniza Refinery, Jamestown, New Mexico, Proposal No. 83817, May 24, 2007.

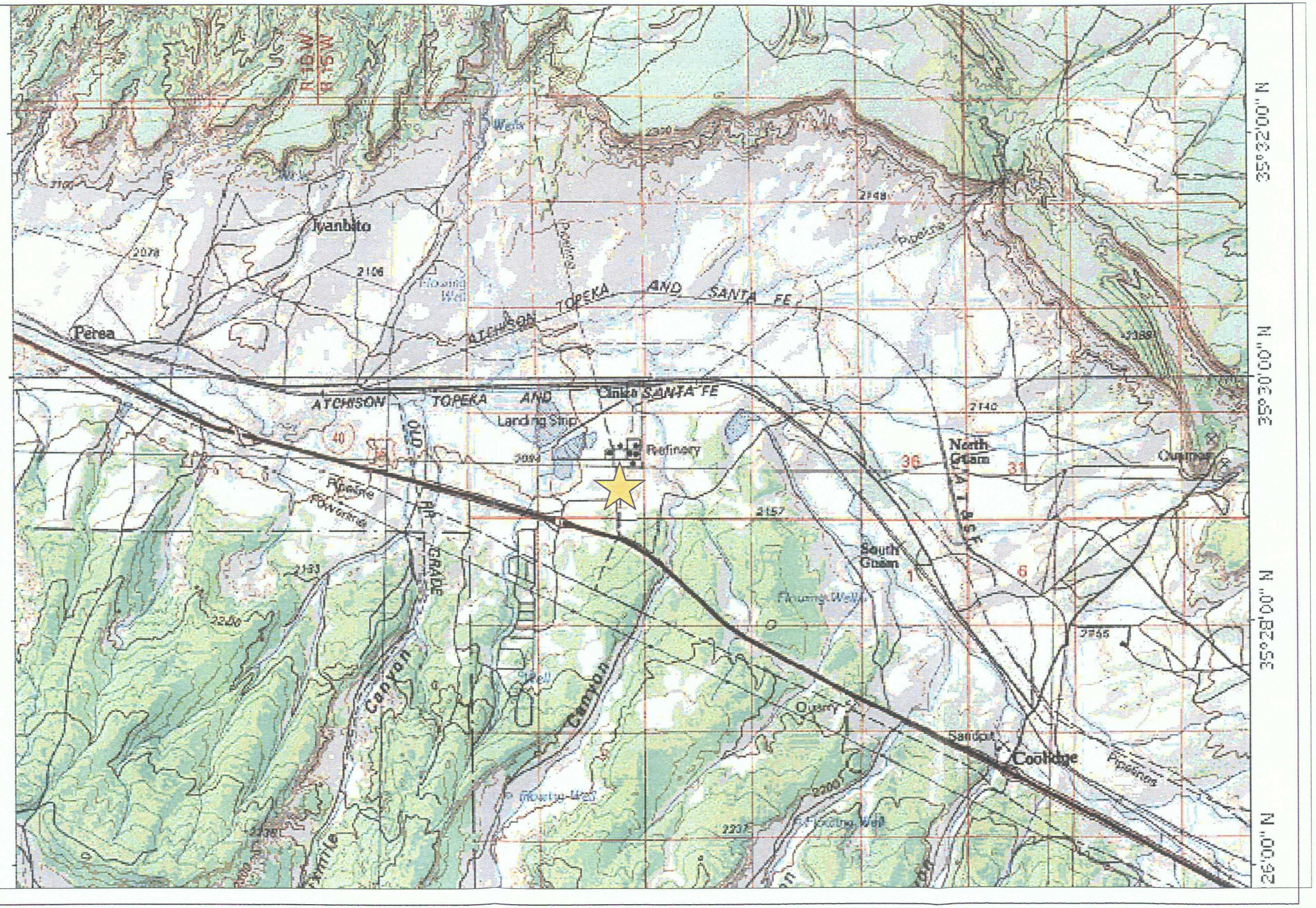
New Mexico Environment Department, Groundwater Quality Bureau 2005. Technical Background Document for Development of Soil Screening Levels, August, 2005.

New Mexico Environment Department, Hazardous Waste Bureau 2007. Work Plan for Monitoring Well Installation around the new API Separator, HWB-GRCC-07-001 Giant Refining Company, Ciniza Refiner NMED ID# NMD000333211, March 23, 2007.

New Mexico Environment Department, Petroleum Storage Tank Bureau 2000. Guidelines for Corrective Action, March 13, 2000.

FIGURES

= SITE LOCATION
35d 29.41'N, 108d 25.80'W



Source: Map created with TOPO! 2003 National Geographic

Scale
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 miles

KLEINFELDER	
Drawn By: E. Loescher	Date: July 2007
Project No.: 84679	Filename: 84679_01_1.dwg
Scale: as noted	Drawing Category: A

SITE LOCATION MAP
Ciniza Refinery
Jamestown, New Mexico

FIGURE
1

G:\Environ\Cornet Work Folder\84679 Ciniza Refinery\4.0\Drilling and GWM Report\Figures\84679_01_1.dwg

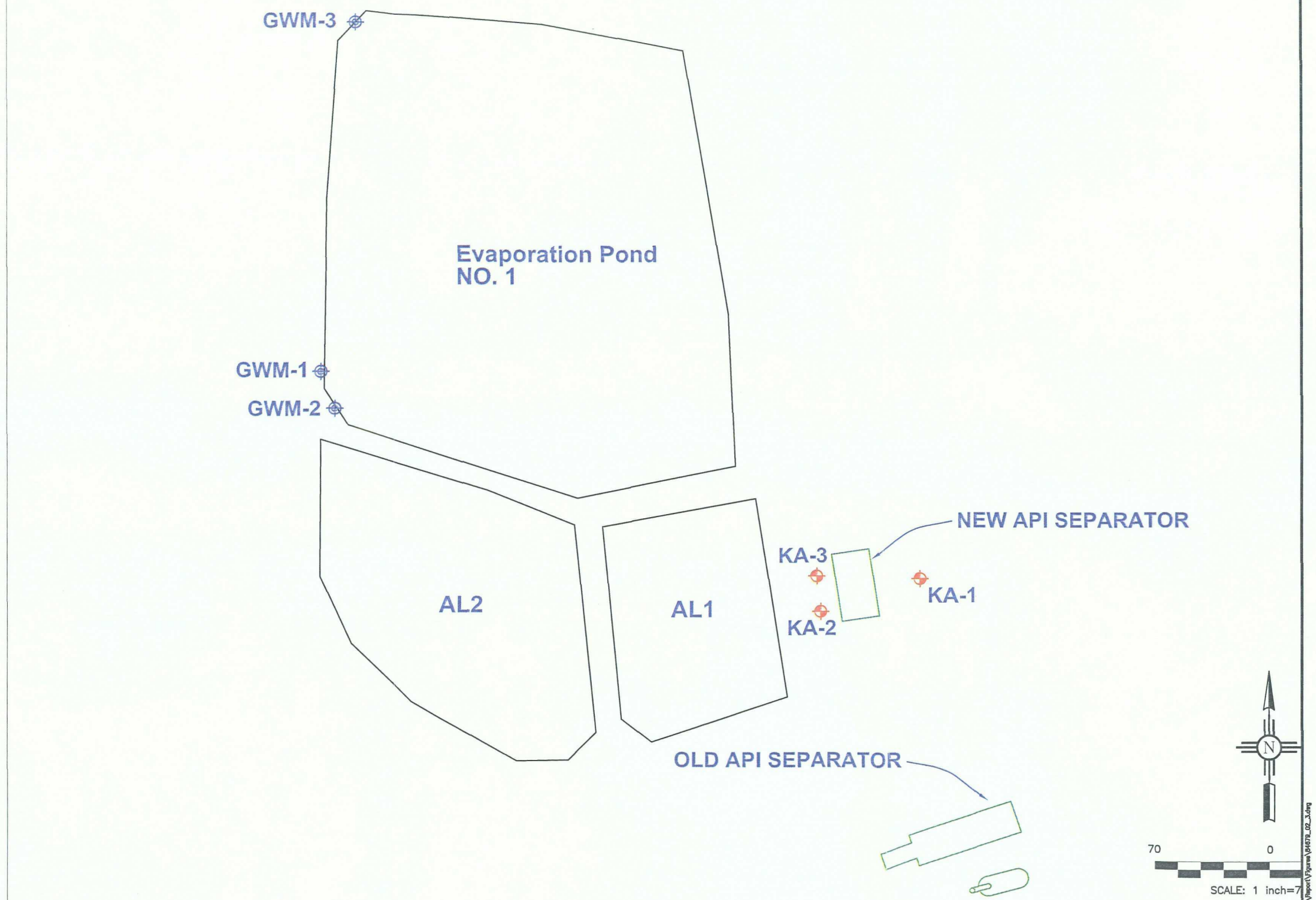
SURVEY DATA

Well ID	Northing	Easting	Elevation
KA-1	1634585.32	2545715.50	6918.08
KA-2	1634559.86	2545648.22	6917.28
KA-3	1634583.87	2545645.49	6917.17

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 PERFORMED BY LYNN ENGINEERING & SURVEYING, INC.
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-1 = Monitoring Well Location
- GWM-1 = Existing Monitoring Well Location
- AL1 = Aeration Lagoon



KLEINFELDER	
Drawn By: J. Hernandez	Date: July 2007
Project No.: 84679	Drawing No.: 84679_02_3
Scale: 1" = 70'	Drawing Category: A

SITE PLAN
Ciniza Refinery
Jamestown, New Mexico

FIGURE
2

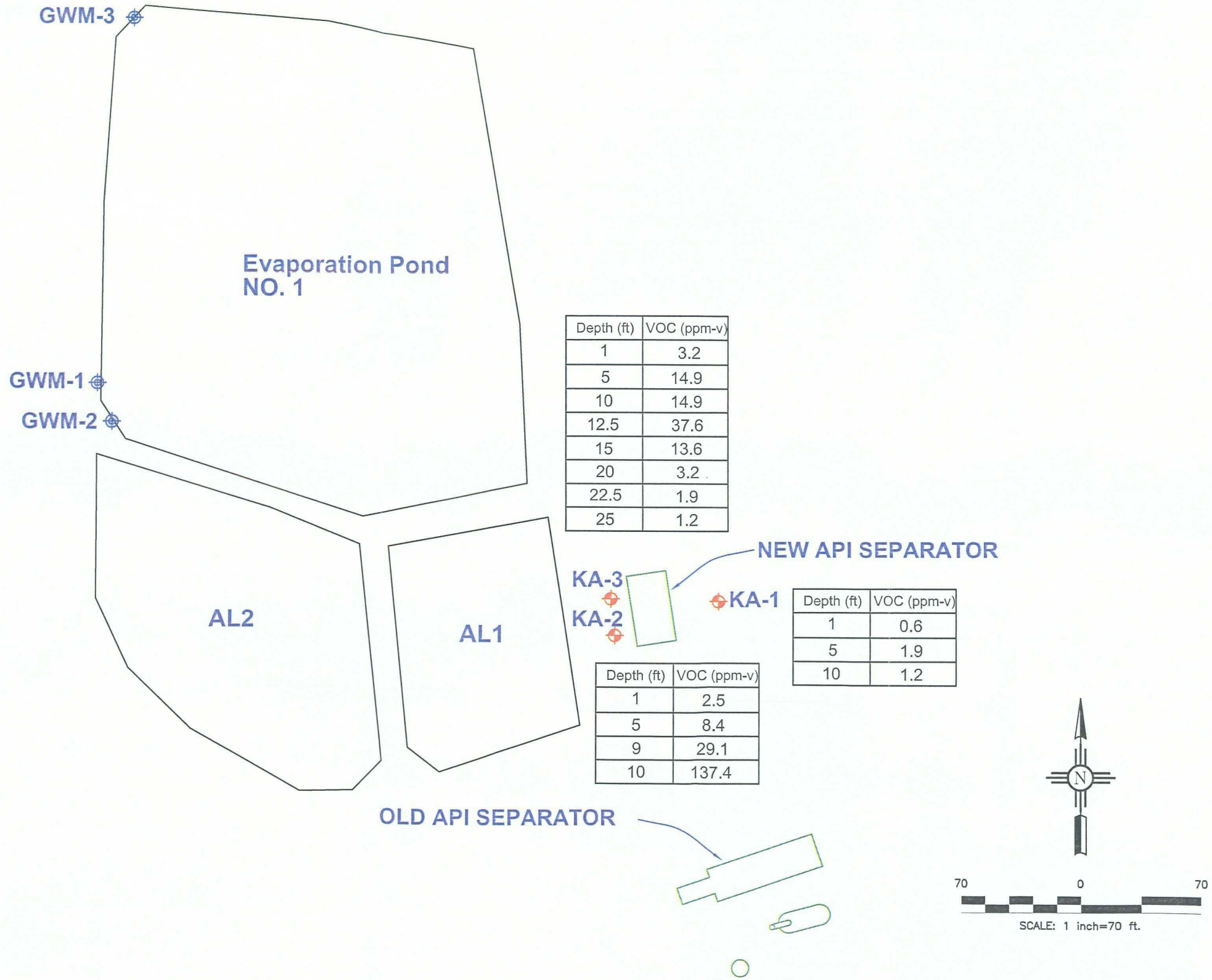
G:\Vinton\Current Work Folder\84679\AU\Report\Figures\84679_02_3.dwg

LEGEND

KA-1 = Monitoring Well Location

GWM-1 = Existing Monitoring Well Location

AL1 = Aeration Lagoon



Depth (ft)	VOC (ppm-v)
1	3.2
5	14.9
10	14.9
12.5	37.6
15	13.6
20	3.2
22.5	1.9
25	1.2

Depth (ft)	VOC (ppm-v)
1	0.6
5	1.9
10	1.2

Depth (ft)	VOC (ppm-v)
1	2.5
5	8.4
9	29.1
10	137.4

KLEINFELDER

Drawn By: J. Hernandez	Date: July 2007
Project No.: 84679	Drawing No.: 84679_03_2
Scale: 1" = 70'	Drawing Category: A

FIELD SCREENING RESULTS
Ciniza Refinery
Jamestown, New Mexico

FIGURE
3

G:\Environ\Current Work Folder\84679\A-01\Report\Figures\84679_03_2.dwg

LEGEND

KA-1 = Monitoring Well

GWM-1 = Previous Monitoring Well Location

AL1 = Aeration Lagoon

B [1] = Benzene (mg/kg)

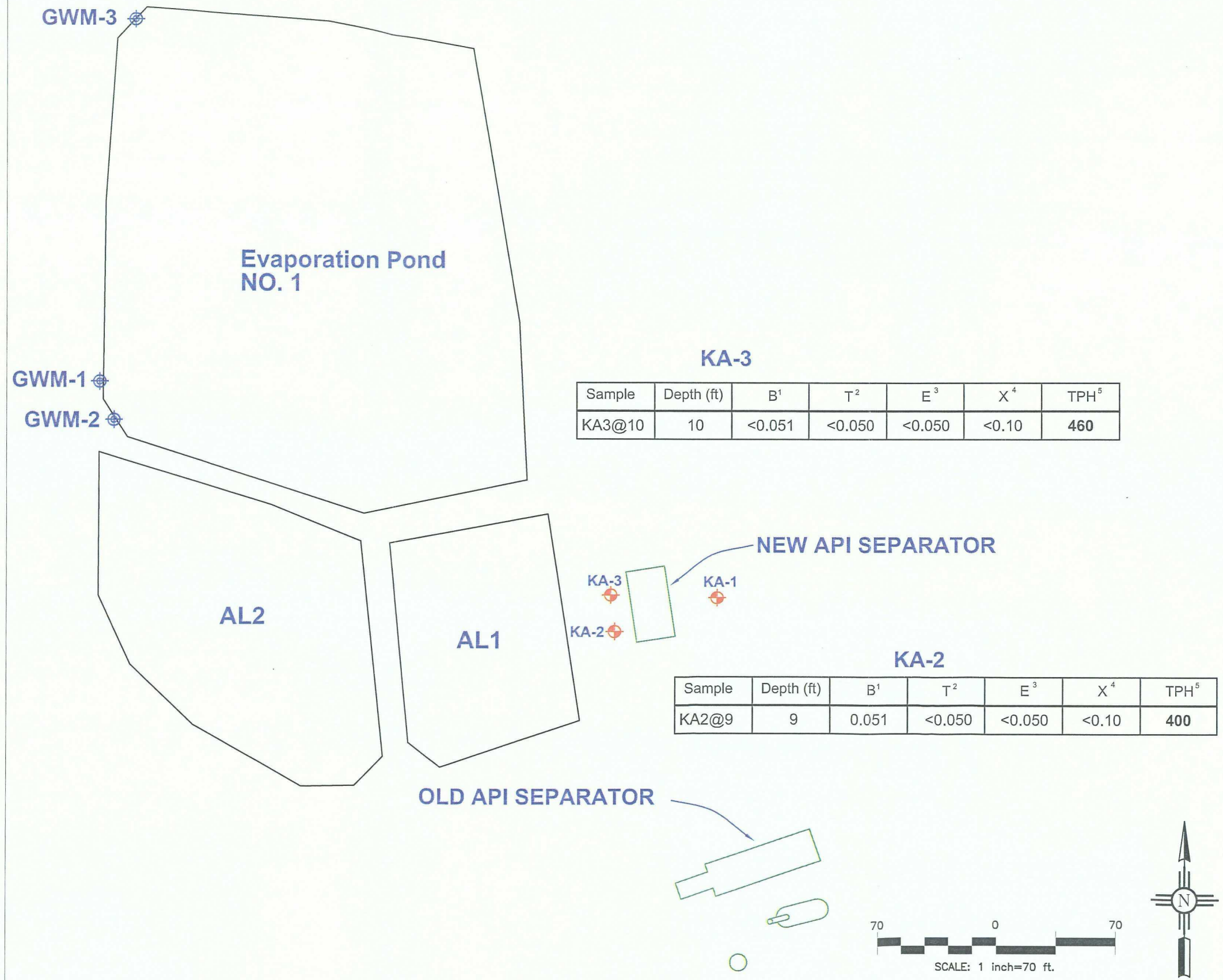
T [2] = Toluene (mg/kg)

E [3] = Ethylbenzene (mg/kg)

X [4] = Total Xylene (mg/kg)

TPH [5] = Total Petroleum Hydrocarbon (mg/kg)

Note: Only samples with reconcentrations above standards presented. See Table 2



KA-3

Sample	Depth (ft)	B[1]	T[2]	E[3]	X[4]	TPH[5]
KA3@10	10	<0.051	<0.050	<0.050	<0.10	**460**

KA-2

Sample	Depth (ft)	B[1]	T[2]	E[3]	X[4]	TPH[5]
KA2@9	9	0.051	<0.050	<0.050	<0.10	**400**

KLEINFELDER

Drawn By: J. Hernandez	Date: July 2007
Project No.: 84679	Drawing No.: 84679_04_2
Scale: 1" = 70'	Drawing Category: A

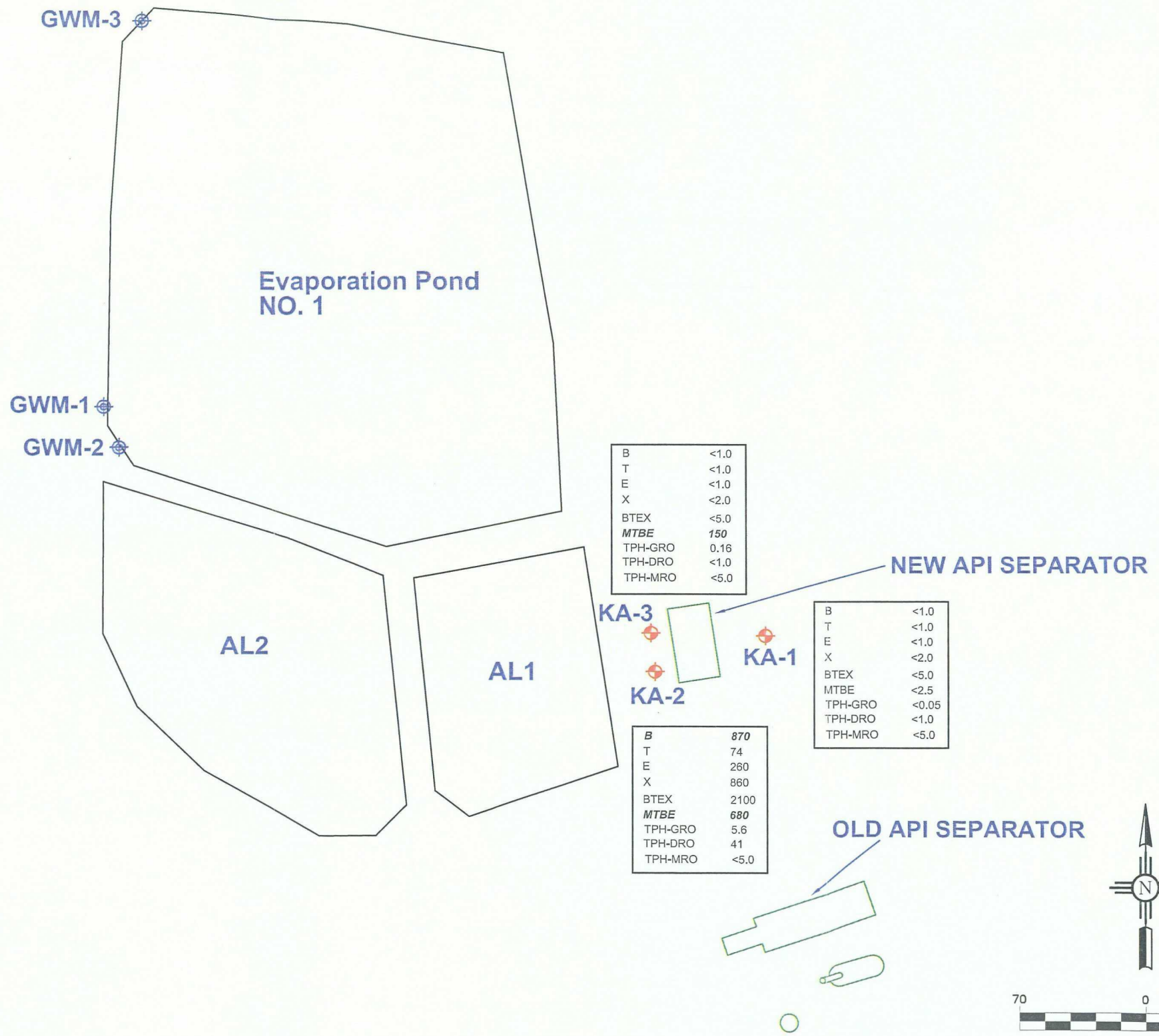
SOIL ANALYTICAL RESULTS
Ciniza Refinery
Jamestown, New Mexico

FIGURE
4

G:\Environ\Current Work Folder\84679\4.0\Report\Figures\84679_04_2.dwg

LEGEND

KA-1	= Monitoring Well
GWM-1	= Existing Monitoring Well Location
AL1	= Aeration Lagoon
B	= Benzene (ug/L)
T	= Toluene (ug/L)
E	= Ethylbenzene (ug/L)
X	= Total Xylenes (ug/L)
BTEX	= Benzene + Toluene + Ethylbenzene + Total Xylenes (ug/L)
MTBE	= Benzene + Toluene + Ethylbenzene + Total Xylenes (ug/L)
TPH-GRO	= Total Petroleum Hydrocarbon, Gasoline Range Organics (mg/kg)
TPH-DRO	= Total Petroleum Hydrocarbon, Diesel Range Organics (mg/kg)
TPH-MRO	= Total Petroleum Hydrocarbon, Motor Oil range Organics (mg/kg)
NOTE:	Values in BOLD exceed the NMWQCC standard



KLEINFELDER	
Drawn By: J. Hernandez	Date: July 2007
Project No.: 84679	Drawing No.: 84679_05_2
Scale: 1" = 70'	Drawing Category: A

GROUNDWATER ANALYTICAL RESULTS
Ciniza Refinery
Jamestown, New Mexico

FIGURE
5

G:\Environ\Current Work Folder\84679\VA\Report\Figures\84679_05_2.dwg

TABLES

Table 1
Soil Field Screening Results
Ciniza Refinery, Jamestown, New Mexico

Boring Number	Date	Depth[1]	VOC[2]
KA-1	6/12/2007	1	0.6
		5	1.9
		10	1.2
KA-2	6/11/2007	1	2.5
		5	8.4
		9	29.1
		10	**137.4**
KA-3	6/11/2007	1	3.2
		5	14.9
		10	14.9
		12.5	37.6
		15	13.6
		20	3.2
		22.5	1.9
		25	1.2

[1] Depth measurements are provided in feet below ground surface

[2] Heated Headspace readings were taken with a Thermo 580B organic vapor meter; the instrument was calibrated once per day (at a minimum) with 250 parts per million concentration isobutylene. Heated Headspace readings of Volatile Organic Compounds (VOCs) are provided in parts per million by volume

Table 2
Soil Sample Laboratory Analytical Results
Ciniza Refinery, Jamestown, New Mexico

Sample ID	Date Collected	Depth	B[1]	T[2]	E[3]	X[4]	BTEX[5]	MTBE[6]	Total TPH[7]	TPH-GRO[8]	TPH-DRO[9]	TPH-MRO[10]
KA1@1	6/12/2007	1	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	99	<5	47	52
KA1@5	6/12/2007	5	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	<65	<5	<10	<50
KA1@10	6/12/2007	10	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	<65	<5	<10	<50
KA2@5	6/12/2007	5	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	40	<5	40	<50
KA2@9	6/11/2007	9	0.051	<0.050	<0.050	<0.10	0.051	<0.10	**400**	<5	240	160
KA2@10	6/11/2007	10	<0.050	<0.050	0.058	0.19	0.25	<0.10	10	10	<10	<50
KA3@10	6/11/2007	10	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	**460**	<5	240	220
KA3@12.5	6/11/2007	12.5	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	<65	<5	<10	<50
KA3@22.5	6/11/2007	22.5	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	<65	<5	<10	<50
KA3@25	6/11/2007	25	<0.050	<0.050	<0.050	<0.10	<0.25	<0.10	<65	<5	<10	<50
NMED GWQB SSL			3.32	252	128	102	--	--	100	--	--	--

Depths in Feet below ground surface

[1] benzene, mg/kg

[2] toluene, mg/kg

[3] ethylbenzene, mg/kg

[4] total xylenes, mg/kg

[5] BTEX = benzene + toluene + ethylbenzene + total xylenes by EPA Method 8021B, mg/kg

[6] Methyl tert-Butyl Ether by EPA Method 8021B, mg/kg

[7] Total TPH = GRO+DRO+MRO

[8] TPH-GRO = total petroleum hydrocarbons - gasoline range organics by EPA Method 8015B, mg/kg

[9] TPH-DRO = total petroleum hydrocarbons - diesel range organics by EPA Method 8015B, mg/kg

[10] TPH-MRO = total petroleum hydrocabons - motor oil range organics by EPA Method 8015B, mg/kg

GWQB Soil Screening Levels are considered the lowest levels of each compound requiring response action, in mg/kg (NMED 2005)

Shaded values exceed the NMED standard for the confirmation of a release of petroleum of 100 mg/kg (ppm)

Table 3
Groundwater Sample Laboratory Analytical Results
Ciniza Refinery, Jamestown, New Mexico

Sample ID	Date Collected	B[2]	T[3]	E[4]	X[5]	BTEX[6]	MtBE[7]	TPH - GRO[8]	TPH - DRO[9]	TPH - MRO[10]
KA-1	6/21/2007	<1.0	<1.0	<1.0	<2.0	<5.0	<2.5	<0.050	<1.0	<5.0
KA-2	6/21/2007	**870**	74	260	**860**	2,100	**680**	5.6	41	<5.0
KA-3	6/21/2007	<1.0	<1.0	<1.0	<2.0	<5.0	**150**	0.16	<1.0	<5.0
NMWQCC[1] Standard		***10***	***750***	***750***	***620***	-	***100***	--	--	--

[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 Petroleum Hydrocarbons, Gasoline Range Organics (mg/L)*

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

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

APPENDIX A

Health and Safety Plan Signatory Page

ACKNOWLEDGMENT OF INSTRUCTION

All Kleinfelder personnel are required to sign the following acknowledgment of instruction form prior to conducting project activities. This acknowledgment is not a waiver. It is the primary method used in compiling environmental experience and contaminant exposure records for Kleinfelder personnel. Upon written request, a copy of your environmental work record will be provided by the Corporate Safety and Health Manager.

I understand that this project involves the investigation of a project site with potential petroleum hydrocarbon contamination. I have read this Safety and Health Plan and have received instructions for safe work practices, personal protective equipment and air monitoring requirements. I further understand that if I encounter unanticipated contamination I am to leave the site and immediately notify the Project Manager and Corporate Safety and Health Manager of conditions discovered.

PROJECT NAME: Ciniza Refinery

KLEINFELDER PROJECT NO. 83817

Name (Please Print)	Signature	Date
LUCERO, BRIAN	Brian Lucero	06/11/07
LARRY FOLK		6/11/07
David Starnes		6-11-07
LUCERO, BRIAN	Brian Lucero	06/12/07
LARRY FOLK		6/17/07
DAVID STARNES		6-17-07

PERSONAL PROTECTIVE EQUIPMENT UTILIZED:

_X_ LEVEL D _____ LEVEL D MODIFIED _____ LEVEL C

SAFETY BRIEFING PERFORMED BY: LUCERO, BRIAN **DATE:** 06/11/07
LUCERO, BRIAN ⟹ 06/12/07

PETROLEUM CONTAMINANT(S): Standard HC + H_2S

AIR MONITORING RESULTS (Attach separate page if required.): N/A

ACKNOWLEDGMENT OF INSTRUCTION

All Kleinfelder personnel are required to sign the following acknowledgment of instruction form prior to conducting project activities. This acknowledgment is not a waiver. It is the primary method used in compiling environmental experience and contaminant exposure records for Kleinfelder personnel. Upon written request, a copy of your environmental work record will be provided by the Corporate Safety and Health Manager

I understand that this project involves the investigation of a project site with potential petroleum hydrocarbon contamination. I have read this Safety and Health Plan and have received instructions for safe work practices, personal protective equipment and air monitoring requirements. I further understand that if I encounter unanticipated contamination I am to leave the site and immediately notify the Project Manager and Corporate Safety and Health Manager of conditions discovered.

PROJECT NAME: Ciniza Refinery

KLEINFELDER PROJECT NO. 84679

Name (Please Print)	Signature	Date
Tim Lynn		6/21/7
Bruce Butler		6/21/07
LUCERO, BRIAN		06/21/07

PERSONAL PROTECTIVE EQUIPMENT UTILIZED:

_X_ LEVEL D ____ LEVEL D MODIFIED ____ LEVEL C

SAFETY BRIEFING PERFORMED BY: LUCERO, BRIAN DATE: 06/21/07

PETROLEUM CONTAMINANT(S): Refined + Unrefined HCs, H_2S

AIR MONITORING RESULTS (Attach separate page if required.): N/A

APPENDIX B

Field Notes

06/11/07 84679 BRL
2
Cinza Refinery
Monitor Well Install

Name	Signature	Initials	Position
LUCERO, BRIAN	Brian Lucero	BRL	Field Geologist

06/11/07 84679 BRL
3
Cinza Refinery
monitor well install

0730 Brian Lucero (Kleinfelder) on-site from 4:30. Dave Starnes and Lavary Tallo (Spectrum) already on-site. B. Lucero to meet w/ Jim Lieb (Cinza Refinery) re: excavation and hot works permits and locations of borings.

0749 Have secured vehicle permits for drilling, Spectrum support truck, and for Kleinfelder vehicle. Per J. Lieb, will be OK to bring gas-powered vehicle on-site (HASP states only diesel powered vehicles may be operated on-site). J. Lieb is completing excavation and hot works permits. B. Lucero & Spectrum personnel have signed-in for refinery training.

0843 Training complete. Points to note: H2S monitors are required at all times on-site. Emergency alarm is a steam whistle: (x2) 5-second blasts mean to safely stop work and walk to muster area at south end

06/11/07 84679 Ciniza Refinery Monitor Well Install BSJ

cont of refinery; (x4) 5-second blasts means to evacuate immediately; (x3) 5-second blasts means all clear. Per direction from Jim Lieb, will wait w/ vehicles until he is ready for vs. J. Lieb will accompany personnel to API area in order to locate borings.

0913 Have reviewed HASP w/ Spectrum personnel. Have also given H_2S meters to Spectrum personnel and instructed how to use.

0934 Have calibrated Thermo model 580B PID using 250 ppm Iso-butylene span gas. 4-gas meter (MSA Pasepart) was factory calibrated on 02/11/06 and does not require recalibration until 02/11/07.

0946 on-site at API w/ Jim Lieb to locate borings.

1012 Have discussed boring locations with J. Lieb and walked site - cannot locate KA-1 close to API, will have to locate ~40-45 ft off east side of API. Call to Justin Ball (Kleinfelder) to inform - J. Ball to contact NMED about proposed change in location.

1115 J. Lieb on site w/ electrical diagram. Will locate first two borings out of roadway roughly btwn lamp posts. Locations have been cleared by J. Lieb and Bill Chojacky (Ciniza). Will still hand-clear first five feet of each boring. Per discussion w/ J. Ball, NMED has approved change in location of KA-3 as well as change in surface completion size (specified as 4-ft by 4-ft, will complete w 2-ft by 2-ft). Spectrum has been on stand-by since 0730 (until 1115).

1125 Preparing to set-up on KA-2 (TD = 10 ft bgs). Note: weather is cloudy and there is a 50% chance of rain forecast - the refinery does not have established lightning protocols will follow LAS Alamos National

06/11/07 — 84679 — Cinaga Refinery — Monitor Well Install — BKJ — 6

06/12/07 — 84679 — Cinaga Refinery — Monitor well Install — FHJ — 7

cont	Laboration protocol (Thunder w/in 10 seconds of lightning = 30 min stop work, monitor + reassess).
1135	CI-gas meter on and monitoring. Hot works permit approved and on-site. J. Heb has secured excavation permit for today and for 06/12/07.
~~1145~~	~~Begin hand clearing first 5-ft of~~
1145 06/11/07	KA-2.
1215	Have hand-cleared first 5-ft of KA-2, probed bottom - hole is clear. Preparing to TD @ 10 ft bgs. No noticeable HC odor 0-5 ft,
1225	@ TD (10 ft bgs) in KA-2 - no noticeable groundwater. Cuttings from ~8-10 ft bgs are moist but saturated material is not evident. Per discussion w/ J. Ball, will set 5-ft screen from 5-10 ft bgs, despite there being no water.
1733	Preparing to build well w/ screen from 4.5-9.5 ft. Have backfilled bottom 0.5 ft w/ bentonite chips.
1301	Well is in place. Have poured 10/20 sand to 3.5 ft bgs and bentonite chips to 1.5 ft bgs. Spectrum is preparing to cement vault in place.
1312	Vault is cemented in place. Dullum are cleaning augers and bits in order to pull forward to KA-3 (TD = 25 ft).
1317	Preparing to move rig onto KA-3
1324	Rig is on KA-3, preparing to start hand-clearing first five feet of hole.
1345	Have ~~first 5 ft~~ hand-cleared KA-3 to five feet bgs, preparing to advance bore-hole using augers.
1404	@ 15 ft bgs, hit saturated layer of poorly-graded sand w/ clay from 12.5 ft to ~ 14 ft bgs. 14-15 ft = sandy clay, moist - assume to be weathered.
1420	15-18 ft bgs as above w/ sandy intervals; intervals are wet 18-20 ft has appearance of highly fractured sandstone - borehole filled w/ water ~18 ft bgs.

06/11/07 — 84679 — Conoco Refinery — Monitor Well Install — BKJ

1433 at 27.5 ft bgs – augered extra 2.5 ft to accomodate 2.5 ft sump in order to set 10-ft screen 15-25 ft bgs, according to work plan.

1441 Beginning to set well in KA-3.

1500 Have well in place w/ ~6-in of bentonite in bottom of hole, 10/20 sand to 14 ft bgs. Beginning to pull augers in order to continue adding 10/20.

1506 Have 10/20 sand to 13 ft bgs, augers at 12 ft bgs. Began pouring 3/8-in bentonite chips.

1520 Have pulled remaining augers – well capped ~6-in (0.5 ft) in the hole while pulling last 10 ft of augers. Will pour bentonite to 11 ft bgs, then grout to ~1 ft bgs.

1543 Have poured bentonite chips to 11 ft bgs, drillers are mixing grout in order to grout to ~1 ft bgs.

1600 Have grouted to 1 ft bgs, mixing concrete in order to install vault.

1615 Vault cemented in place, drillers are cleaning site and preparing to

06/11/07 — 84679 — Conoco Refinery — Monitor Well Install — BKJ — 9

cont move rig. KA-2 is dry; have not tagged DTW in KA-3, will develop KA-3 in A.M. on 06/12/07 after cement completion has set in place. Preparing to move rig onto KA-1 – will position rig, unhook trailer from support truck, cover materials, and leave site for the day.

1627 Rig is positioned on KA-1 and will stay on-site tonight. KA-2 has a drum placed over it, KA-3 is marked-off using cones.

1649 Have signed-out two vehicles, all personnel off-site.

1730 Per discussion w/ J. Ball, will collect analytical samples at 9 ft bgs and 10 ft bgs in KA-2, and at 10 ft bgs, 12.5 ft bgs, 22.5 ft bgs, and 25 ft bgs in KA-3.

Summary

Drilled and installed well KA-2 (TD = 10 ft bgs, screened from 4.5-9.5 ft bgs) and KA-3 (TD = 27.5 ft bgs,

cont next page

06/11/07
10

84679
Ciniza Refinery
Monitor well install

BRF

Summary cont'd screened from 5-25 ft bgs). Wells built w/ 0.010-slot screen and 10/20 sand. Soil/rock Samples collected ~~and~~ for analysis by EPA methods 8021B (BTEX and MTBE) and 8015B (TPH-GRO and DRO): KA2@7 and KA2@10; and KA3@10, KA3@12.5, KA3@22.5, and KA3@25.

TDL
06/11/07

06/12/07

84679
Ciniza Refinery
Monitor Well Install

BRF

11

0735 Bill Ware (Kleinfelder), Dave Starnes and Larry Hillo (Spectrum) on-site.

0755 Have signed-in vehicles and spoken to Jim Lee - excavation permit for today is not yet complete. Will move to site and begin setup while waiting for permit.

0801 at API.

0823 Excavation permit on-site, preparing to begin hand clearing first five feet of KA-1 (TD = 10 ft). Spectrum on standby for one hour (0735 - 0833).

0850 Have hand-cleared first five feet, preparing to TD using augers. No noticeable HC odor or staining in first five feet. Note: performed tailgate H+S meeting at 0810 Topic - refinery safety.

0855 Have work permit on-site.

0905 @ 10 ft in KA-1. No noticeable HC staining or odor, no saturated material. Per Justin Bell (Kleinfelder) will hand auger KA-1 w/ screen ~ 5-10 ft bgs

06/12/07 84679 TSF

Ciniza Refinery

Monitor Well Install

0930 Tag bottom of hole - bottom of hole is wet. Drillers will place ~0.5 ft of bentonite chips in bottom of hole.

0945 Well is installed. Have 10/20 sand to 3.5 ft bgs (1 ft above screen), and 3/8-in. bentonite chips to 1 ft bgs. Driller is rigging down and preparing to cement vault in place.

1005 Vault cemented in place, drillers preparing to move rig off KA-1.

~~0905~~ 13:25 6/12/07 Per discussion w/ J. Ball, will collect analytical samples at 1 ft, 5 ft, 10 ft in KA-1, and will collect sample at 5 ft in KA-2.

1023 Tagged DTW in KA-3 at 12.5 ft bgs, @ 1015. D. Stames has bailed ~5 gal out of well, water is muddy (turbid). Per discussion w/ J. Ball, will develop until water clears, or for up to 2 hours.

1052 Have bailed ~15 gal from KA-3, water is slightly turbid.

1110 D. Stames has bailed ~38 gal

06/12/07 84679 TSF

Ciniza Refinery

Monitor Well Install

13

1117 from KA-3, water has cleared and is only slightly cloudy. DTW after development = 16 ft bgs. Well was purged prior to bailing last 3 gal. Tagged DTW in KA-2, DTW = 9.5 ft bgs, tagged TD @ 10 ft bgs. Tagged DTW in KA-1 @ 9.5 ft bgs, TD = 10 ft.

1123 Waste drums have been labelled per discussion w/ J. Ball, KA-1 and KA-2 will have to be developed prior to sampling. There is currently insufficient water to develop either well.

1138 All personnel leaving site.

1200 All personnel through gate, Spectrum off-site.

1205 Was not able to contact Jim Lieb (Ciniza) prior to leaving site - was in meeting w/ NMED. Have left voicemail re: staged IDW drums. B. Lucero to ABQ.

1536 Samples delivered to Hall Environmental Lab.

see summary next page

96/12/07 84679 BRJ

Ciniza Refinery
Monitor Well Install

Summary

Drilled and installed well KA-1 (TD = 10 ft bgs, screened from 4.5-9.5 ft bgs). Well was built using 0.010-in slotted PVC screen (2-in. diameter) and 10/20 sand. Samples collected for analysis by EPA methods 8021B and 8015B GRO+DRO: KA2@5, KA1@1, KA1@5, and KA1@10.

BRJ
96/12/07

06/12/07 — 8467.09 — BRJ — 06/12/07 — BRJ — 15

Ciniza Refinery
Monitor Well Install

Summary
Drilled and installed well KA-1 (TD = 10 ft bgs, screened from 4.5-9.5 ft bgs). Well was built using 0.010-in. slotted PVC screen (2-in. diameter) and 10/20 sand. Samples collected for analysis by EPA methods 8021B and 8015B GRO+DRO: KA2@5, KA1@1, KA1@5 and KA1@10.

06/12/07

Ciniza Refinery
Groundwater Monitoring

0452 B. Lucero @ KA office for water quality meter and interface probe.
0520 leaving for refinery.
0710 @ refinery.
0722 Lyon Engineering (surveyors) on-site. Will get vehicle passes and proceed to conference room for safety training.
0741 In conference room, have scanned vehicle passes. Have given surveyors Nomex coveralls, safety glasses, and H_2S meters. Surveyors are Tim Lyon and Bruce Buttler.
0830 Have completed refinery training, will have Jim Lieb (Ciniza) escort personnel to API and to existing wells GMW-1, GMW-2, GMW-3.
0847 @ API.
0851 Tag DTW in GMW-2 - dry, 6 TOC TD = 20.16 ft
0854 Tag DTW in GMW-1 @ 20.69 ft bTOC, TD = 46.3 ft bTOC, no product.

Ciniza Refinery
Groundwater Monitoring

0703 Tag DTW in GWM-3 - dry, TD = 17.98 ft bTOC.

0913 Have uncovered KA-1, KA-2, and KA-3 to allow for equilibration.

0915 Tag DTW in ~~KA-3~~ KA-2 @ 8.5 ft ~~bTOC~~ Brf 06/21/07, TD = 26.65, no product.

0918 Tag DTW in ~~KA-2~~ KA-3 @ 8.54 ft bTOC, Brf 06/21/07, TD = 9.9 ft bTOC, no product.

0921 Tag DTW in KA-1 @ 8.20 ft bTOC, TD = 9.97 ft bTOC, no product.

0925 Preparing to develop KA-1 and KA-2. Volume in 2-in casing:
$[(2/12) \div 2]^2 \times \pi = 0.022$ ft³/ft
0.022 ft³/ft × 7.48 gal/ft³ = 0.16 gal/ft
Vol. in KA-1:
(9.97 − 8.22) × 0.16 = 0.28 gal
Vol. in ~~KA-3~~ KA-2 Brf 06/21/07:
(9.9 − 8.54) × 0.16 = 0.22 gal
Vol in ~~KA-3~~ KA-3 Brf 06/21/07:
(26.65 − 8.5) × 0.16 = 2.9 gal

0939 after bailing ~0.33 gal from ~~KA-3~~ KA-2 Brf 06/21/07, well has ~~failed~~ bailed dry. Will allow well to recharge while

Ciniza Refinery
Groundwater Monitoring

cont bailing KA-1 and ~~KA-2~~ KA-3 Brf 06/21/07, then sample. Lynn Engineering personnel are surveying wells. Took water quality parameters (Temp, pH, DO, Specific Conductance, and ORP) at 0.33 gal.

0952 After bailing ~1 gal from KA-1, well has bailed dry. Took water quality parameters at 0.33 and 0.66 gal. Water quality parameters are being monitored and recorded using a YSI model 556 MPS meter.

0955 Preparing to purge ~~KA-2~~ KA-3 Brf 06/21/07 in order to sample.

1000 Lynn Engineering off-site to locate survey markers using Gallup in order to tie-in survey of wells to state plane coordinates.

1030 Have collected analytical samples from ~~KA-2~~ KA-3 06/21/07 after purging 9 gal. Sample ID = KA-2. Recorded water quality parameters at 1, 2, 3, 4, 5, 6, 7, 8, 9 gal. Collected (X4) 40-ml VOA vials for analysis by CPA

Ciniza Refinery
Groundwater Monitoring

1. cont methods 8015B (TPH GRO + DRO) and 8021B (BTEX + MtBE). Water is turbid, red-brown, contains trace fines, no Hydrocarbon odor, no sheen.

1049 Tag DTW in KA-2 at 9.35 ft bTOC. Will attempt to collect sufficient water to sample, then monitor recovery while surveyors work on case there is sufficient recovery to purge additional.

1100 Have collected (X4) 40-ml VOAs from KA-2 to be used if well does not recover to support additional purging. Water is turbid, red-tan, contains trace fines, no HC odor, slight sheen.

1105 Tag DTW in KA-1 at 9.08 ft bTOC, well collect sample for same purpose as that collected from KA-2 Lynn

1113 Engineering on-site.

1213 Per Tim Lynn, survey is complete, coordinates will be emailed 07

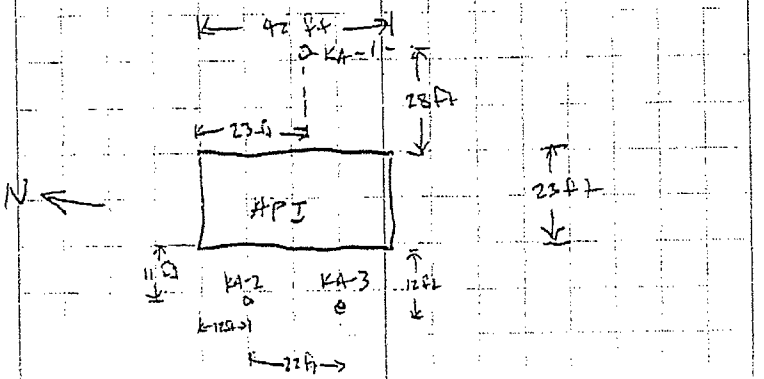
Ciniza Refinery
Groundwater Monitoring

cont faxed to Justin Ball (Kleinfelder).

Lynn Engineering off-site.

1220 Have collected (X2) 40-ml VOAs from KA-1 to be used if well does not recover to support additional purging. Water is turbid, red-brown, contains trace fines, no HC odor or sheen. Will allow wells to recover until ~1100, re-tag, then continue to bail or leave site.

1125 Measuring distance btwn wells:



1200 Tag DTW in KA-1 at 9.45 ft, insufficient to continue bailing, will use samples collected at 1120

Ciniza Refinery
Groundwater Monitoring

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

1205 Tag DTW in KA-2 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 clearing API area.

1213 B. Lucero to MBQ.

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.

TSF 04/21/07

APPENDIX C

Field Operating Procedures

Field Operating Procedures

Soil-Sampling Procedure – Before collecting each soil sample, clean the continuous sampler or split-spoon sampler and other soil sampling tools with a solution of Alconox and clean tap water. Then rinse the sampler with additional distilled water. Use new disposable latex gloves for all soil-sampling procedures to minimize the potential for cross contamination.

A degreed geologist will first collect samples with a sampler for field screening and laboratory analysis. Once these samples have been secured and preserved as required, the geologist will document percent recovery of the interval targeted for sampling and log the sample in accordance with American Society Testing and Materials (ASTM) standard D 2488-00 (ASTM, 2000) for the description and identification of soils, visual-manual procedure.

Collect field-screen soil samples by the heated-headspace method collected in accordance with the SOP below and analyze them with a Rae Systems, Model PGM-761S photo-ionization detector (PID), or equivalent. Daily calibrate the PID to 100-parts per million (ppm) using isobutylene span gas as specified in the users' manual. Collect the samples used for field-screening purposes from each distinct lithologic unit and obviously stained areas. At a minimum, obtain one field-screen sample from each 5-foot (ft) section of soil, where the quantity of soil obtained during sampling allows.

Collect the second soil sample(s) for possible laboratory analyses in laboratory-supplied glassware. Place each sample on ice in a cooler until selection of samples for laboratory analyses is made. Selected samples will remain in the cooler, which will be maintained at a temperature of 4° Celsius (C) or less and under the custody of the sampler until properly relinquished. Use chain-of-custody documentation to follow the samples until they are delivered to the laboratory.

Heated-Headspace Screening Method (per NMED, 2000) – Equipment needed for soil screening includes clean 0.5- to 1-liter or 16-ounce jars, aluminum foil, and a flame ionization detector (FID), PID, detector tubes, or other acceptable field instruments. Use best judgment in choosing a field instrument. Factors to consider include, but are not limited to, the age of the underground storage tank system, soil characteristics, and extent of contaminant degradation.

Calibrate field-screening instruments in the field following the manufacturer's instructions. If the temperature is below 60° Fahrenheit (F) or 15°C, a thermometer and water bath will also be needed to warm up the samples. The container for the water bath must be large enough to hold the sample jar, heat source, and deionized water. It is also acceptable to warm up the sample using heated air inside a vehicle. However, care should be taken to keep the sample

out of direct sunlight since hydrocarbons can be oxidized by ultraviolet radiation. The use of a portable gas chromatograph is optional.

Following are the steps for the heated headspace method:

1. Fill a 0.5-liter/16-ounce or larger clean, glass jar half full of soil sample; plastic bags or other non-glass containers are not acceptable.

2 Seal top of jar with clean aluminum foil and lid ring or equivalent.

3 Ensure that the sample is at 15°C to 25°C, or approximately 60°F to 80°F. A warm water bath or heated air inside a vehicle should be used if necessary to raise sample temperature to the acceptable range. Samples are to be protected from direct sunlight in order to prevent photo destruction of the volatiles.

4. Aromatic hydrocarbon vapor concentrations should be allowed to develop in the headspace of the sample jar for 5 to 10 minutes. During the initial stages of headspace development, vigorously shake the sample for one minute.

5. Immediately pierce the foil seal with the probe of an FID, a PID, or colorimetric tubes and record the highest (peak) measurement. The instrument should be able to accurately detect total aromatic hydrocarbons (TAHs) between 0 and 1000 parts per million (ppm).

Sample Collection for Methanol Extraction (per NMED, 2000) – This section applies to samples collection for volatile constituents analyses.

1. Soil samples can be collected from a backhoe bucket (for tank removals) or from a split-spoon sampler (for soil borings or monitoring wells). Avoid placing pebbles or other large particles in the sample.

   If soil samples are collected from a backhoe bucket, ensure that the samples are representative of the area being sampled. Scrape off the top 6 inches of soil in the bucket and fill the syringe supplied by the laboratory with 10 to 15 cm^3 of soil. The syringe should be marked to indicate whether the correct amount of soil has been collected.

   For soil borings or monitoring well installations, soil samples should be collected from a split-spoon sampler using a syringe.

2. Extract the soil sample with methanol using one of the two extraction procedures described below. In both procedures, work should be completed quickly to avoid losses of volatile compounds from the sample. In addition, sample bottles should be labeled, chain-of-custody

documentation filled out, and sample bottles placed on ice for transport to the laboratory. For each sample, two bottles should be collected and extracted for volatile analysis.

Unscrew the cap on the sample bottle and quickly push the sample into the bottle with the syringe plunger, being careful not to get soil particles on the rim of the bottle. Quickly replace the cap and tighten securely.

If the methanol is provided in a vial separate from the sample bottle, unscrew the cap on the sample bottle and quickly push the sample into the bottle with the syringe plunger, being careful not to get soil particles on the rim of the bottle. Open the vial containing the methanol and pour it into the sample bottle, being careful not to spill any methanol. Quickly replace the cap and tighten securely. Gently agitate the sample to immerse the soil in the methanol. Excessive agitation may cause undue volatilization.

3. For each sampling location at the site, collect a dry-weight sample in a bottle supplied by the laboratory. At least 20 grams of soil should be collected (the bottle must be at least half full with soil). Label the sample to correspond with the labeling on the matching field-preserved sample. This sample is used to measure moisture content and does not need any special preservation. Fill out the necessary chain-of-custody documentation to indicate that the soil sample is for moisture analysis only.

Monitoring Well Installation – Groundwater monitoring wells will be constructed with 2-inch outer diameter, Schedule 40, flush-joint, threaded polyvinyl chloride (PVC) casing and screen. The well construction will consist of a threaded PVC bottom plug and flush-joint, threaded, 0.010- or 0.020-inch factory-slotted well screen. The remainder of the well will be constructed with the appropriate length of flush-joint, threaded PVC blank casing to the ground surface. A 2-inch-diameter expanding, locking top PVC plug will be placed at the top of the well. Be careful to keep the PVC in the center of the hollow-stem auger (HSA) as the HSA is being removed and annular materials are being emplaced.

The sand filter pack, consisting of Colorado silica sand No. 10-20 or equivalent, will be placed approximately 1 to 2 ft above the top of the screened interval. The sand pack will be followed by a ⅜-inch bentonite chip seal for a minimum thickness of approximately 2 ft, with the remainder of the annulus backfilled with a Portland cement/bentonite grout. The casing, sand filter pack, and bentonite seal and cement grout will be placed inside the annulus as the augers are withdrawn from the boring. Surface finishing of the wells will include installing a traffic-rated utility bolt-down manholes with a concrete apron (2-foot minimum diameter) installed at each wellhead.

Monitoring Well Development - Develop monitoring wells in accordance with the following procedures:

1. Decontaminate monitoring well development equipment in accordance with our decontamination SOP before any development activities are initiated.

2. Collect water-level measurements in accordance with our groundwater sampling SOP.

3. Calculate well volumes.

4. Assemble well-development equipment, depending on the development method used (e.g., bailer or pump), and initiate development activities.

5. Measure field parameters (e.g., temperature, pH, specific conductance) after each well volume and record in a field logbook or on a field data sheet.

6. As the purged water clears, place a weighted bailer in the well and lowered until it is near the top of the screen or water surface. Alternately raise and lower the bailer through the vertical distance of 1 to 2 ft; the velocity of the motion will depend upon the tightness of the formation in which the well is installed.

7. After surging the well a few times at a given depth, move the bailer deeper by 1 or 2 ft; repeat steps 6 and 7 until the bailer has been lowered to the bottom of the screened section of the well.

8. Raise the bailer out of the well and purge the well of sediment that may have accumulated due to the surging.

9. Repeat steps 5 through 8 until the purged water remains clear and field parameters have stabilized.

10. If the well is pumped to dryness or near dryness, allow the water level to sufficiently recover (to the static level) before initiating the next development period.

11. Document all field decisions in a field log book.

Groundwater Sampling by Bailing – Before sampling groundwater, use the interface probe to measure the depth to groundwater and to check for the presence of LNAPL. After measuring the depth to groundwater, purge each groundwater monitoring well to allow fresh groundwater from the aquifer to enter the well. Attempt to remove a minimum of three well volumes of groundwater

from each well using either disposable bailers or a small electric pump until either the parameters of temperature, conductivity, pH, and turbidity have stabilized, or the well becomes dry.

Wear new disposable latex gloves for each sampling event to minimize the possibility of cross contamination. Collect groundwater samples in laboratory-prepared glassware using the appropriate preservative and keep on ice until submitting to the laboratory. Submit groundwater samples under chain-of-custody procedures to the selected laboratory.

Groundwater Sampling Using Low-Flow Techniques – Low-flow purging <1 L/min (0.26 gpm), low-flow sampling <300 mL/min (0.3 L/min, or 0.1 gpm), and monitoring indicator parameters for stability in a closed flow-through cell:

1. SLOWLY lower the pump to the *middle* of the well's screened area (a dedicated system is recommended). Securely fasten the power cable and sample tubing at the top of the well. Connect the power source, controller box, gas source, etc., to the pumping equipment.

2. Connect the sample tubing to the water entry point of the closed flow-through cell.

   Closed Flow-Through Cell

   Air pockets may exist in the upper neck of each port hole that has a probe inserted into it – this is not a problem. Make sure that the probe's sensors are completely submerged in water during use.

   Avoid exposing the flow-through cell to extreme heat and sun in the summer and freezing temperatures in the winter.

3. Set up and calibrate all indicator parameter instruments and place each probe into its respective port of the closed flow-through cell.

4. Set the pump controller to the desired purging rate (i.e., <1 L/min). Do *not* use a valve to reduce the flow from a pump; valves can cause an "orifice" effect that can cause a sample agitation and alteration.

5. Record the "purging time start" and begin purging the well at 1 L/min or less. During purging, the water level in the well should not decrease significantly and should stabilize after purging for a few minutes. If the water level continues to decline while purging, decrease the purging rate if possible. Record the "purging flow rate" as an average. Use a graduated beaker, cylinder, calibrated bucket or other device to measure the flow rate while purging and sampling.

6a. Purge the well until you have taken at least three consecutive readings that are within the following ranges for the following indicator parameters:

Dissolved Oxygen	+/-0.2 mg/L
Specific Conductance	+/-5.0 µmhos/cm for values <1000 µmhos/cm +/-10.0 µmhos/cm for values >1000 µmhos/cm
pH	+/-0.1 pH units
Temperature	+/-0.1 °C
Turbidity	<5 ntu (*required* if metals samples will not be filtered; *recommended* if sorptive compounds or elements are collected; *optional*, but recommended, if other compounds or elements are collected)
E_h (*optional*)	+/- 30 mV

Readings should be collected about every 2 minutes or 0.5 well volumes or more apart.

Stable dissolved oxygen, specific conductance, and turbidity readings are considered the most reliable parameters for indicating that stagnant water has been replaced by formation water. You may adjust the +/- ranges and which indicator parameters you use to indicate that stagnant water has been replaced by formation water to reflect site-specific data, geochemistry, and hydrogeologic conditions.

Turbidity stabilization readings below 5 ntu are required if you will not be filtering metals samples. In addition, monitor turbidity stabilization when collecting sorptive, hydrophobic, or high octanol-water partition coefficient (K_{ow}) compounds or elements.

OR

6b. Purge the well until the readings for indicator parameters listed above (or well-specific indicator parameters) vary within +/-10% over three or more consecutive readings, spaced about 2 minutes or 0.5 well volumes or more apart.

7. Record the final three stable readings for each indicator parameter in the field log book.

8. Record the "volume purged," "purging time stop," "purged dry (Y/N)," and any problems purging.

9. Collect samples as described in the sample collection procedure. Record "sample flow rate" as an average, "time sample collected," and any other pertinent information related to the sampling event.

Investigation-Derived Waste Management – Place soil boring cuttings identified through field-screening procedures to contain 100 ppm or greater volatile organic compounds (VOCs) in 55-gallon drums and dispose at a regulated disposal facility. Assuming that there is adequate physical space on site, thin-spread on site cuttings that are identified as containing less than 100 ppm VOCs. Should there not be sufficient space to dispose of cuttings on site, they will be containerized, manifested, and transported to an off-site regulated facility.

Place groundwater that does not contain LNAPLs generated from well development and purging on an impervious surface and allow it to evaporate. Place groundwater that contains LNAPLs in 55-gallon drums and dispose at a regulated disposal facility.

Documentation – Document fieldwork in a field book and take photograph. Describe soil in accordance with ASTM standard D 2488-00 (ASTM, 2000) and document on a boring log. Include in the field book an as-built drawing of the monitoring well(s). If available, contaminant screening results and groundwater quality results obtained in the field may be stored in automatic data loggers contained within the field instrumentation.

Decontamination – Decontaminate the drill rig and down-hole drilling equipment with a steam cleaner before mobilizing to the Site. Also decontaminate the down-hole equipment between boring locations. Decontaminate all sampling and measuring equipment that will or may come in contact with the sample with a water/detergent wash, tap water rinse, and deionized water rinse.

References

ASTM, 2000. Designation D 2488-00, "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

NMED, 2000. "Guidelines for Corrective Action," March 13, 2000.

APPENDIX D

Boring Logs and Subsurface Cross Section A-A'

KLEINFELDER

Monitoring Well Log

Date	Project Number	Project	Well No.
Started: 6/12/2007 Completed: 6/12/2007 Backfilled: 6/12/2007	84679	Ciniza Refinery Monitor Well Install	KA-1
Rig Type: CME 75	Elevation:	Logged By: B. Lucero	
Latitude:	Longitude:	Location:	

Sample Type: CS - 3.5" I.D. Continuous Sampler; D - Disturbed Sample; G - Grab Sample; SPT - 2" O.D. 1.38" I.D. Tube Sample; ST - 3" O.D. Thin-Walled Shelby Tube; U - 3 " O.D. 2.42" I.D. Ring Sample

Groundwater

Depth (ft)	Hour	Date
9.5	11:10:00 AM	6/12/2007
8.22	9:21:00 AM	6/21/2007

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 CONST.
0			G		0.6 ppm	KA1@1	CLAYEY SAND (SC) - fine to medium grained, subangular to subrounded, red brown to dark red, dry to moist, poorly cemented, sand content decreasing with depth, no hydrocarbon odor Note: Borehole was hand augered from ground surface to 5 ft bgs.	Vault; Bentonite cement grout; 2" Sch. 40 PVC casing
5			CS		1.9 ppm	KA1@5	5.0' SANDY LEAN CLAY (CL) - fine to medium grained, subangular to subrounded sand, red brown to dark red, moist, poorly cemented, 30-35% sand, no staining or hydrocarbon odor	10/20 Sand; 0.010" Slot Screen (4.5-9.5'); End Cap; 3/8" Bent. chips
▽							7.0' SANDY LEAN CLAY (CL) - fine to medium grained, subangular to subrounded sand, dark red, moist, poorly cemented, 10-20% sand, sand content decreasing with depth, no hydrocarbon odor	
▽ 10					1.2 ppm	KA1@10	10.0'	

Total Depth 10.0'

Additional Groundwater Measurements

Depth (ft)	Hour	Date

Depth (ft)	Hour	Date

Depth (ft)	Hour	Date

KLEINFELDER

Monitoring Well Log

Date	Project Number	Project	Well No.
Started: 6/11/2007	84679	Ciniza Refinery Monitor Well Install	KA-2
Completed: 6/11/2007			
Backfilled: 6/11/2007	Rig Type: CME 75	Elevation:	Logged By: B. Lucero
Latitude:	Longitude:	Location:	

Sample Type: CS - 3.5" I.D. Continuous Sampler; D - Disturbed Sample; G - Grab Sample; SPT - 2" O.D. 1.38" I.D. Tube Sample; ST - 3" O.D. Thin-Walled Shelby Tube; U - 3 " O.D. 2.42" I.D. Ring Sample

Groundwater

Depth (ft)	Hour	Date
9.5	11:10:00 AM	6/12/2007
8.54	9:18:00 AM	6/21/2007

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 CONST.
	0					2.5 ppm		SANDY LEAN CLAY (CL) - fine to coarse grained, subangular to subrounded sand, reddish gray, dry to moist, poorly cemented, 30-35% sand, no hydrocarbon odor Note: Borehole was hand augered from ground surface to 5 ft bgs.	Vault
				G					3/8" Bentonite chips
									2" Sch 40 PVC Casing
	5					8.4 ppm	KA2@5	5.0'	
								6.0' SANDY LEAN CLAY (CL) - fine to coarse grained, subangular to subrounded, reddish gray, dry to moist, poorly cemented, 25-30% sand decreasing with depth, no hydrocarbon odor	0.010" Slot Screen (4.5-9.5)
				CS					
▼						79.1 ppm	KA2@9	SANDY LEAN CLAY (CL) - dark red, moist to very moist, poorly cemented, 5-15% fine to medium grained sand, substantial hydrocarbon staining at 9 feet bgs, noticable hydrocarbon odor	10/20 Sand
▽									End Cap
	10					37.4 ppm	KA2@10	10.0'	3/8" Bentonite chips

Total Depth 10.0'

Additional Groundwater Measurements

Depth (ft)	Hour	Date

Depth (ft)	Hour	Date

Depth (ft)	Hour	Date

KLEINFELDER

Monitoring Well Log

Sheet 1 of 1

Date	Project Number	Project	Well No.
Started: 6/11/2007	84679	Ciniza Refinery Monitor Well Install	KA-3
Completed: 6/11/2007			
Backfilled: 6/11/2007	Rig Type: CME 75	Elevation:	Logged By: B. Lucero
Latitude:	Longitude:	Location:	

Sample Type: CS - 3.5" I.D. Continuous Sampler; D - Disturbed Sample; G - Grab Sample; SPT - 2" O.D. 1.38" I.D. Tube Sample; ST - 3" O.D. Thin-Walled Shelby Tube; U - 3 " O.D. 2.42" I.D. Ring Sample

Groundwater

Depth (ft)	Hour	Date
12.5	10:15:00 AM	6/12/2007
8.5	9:15:00 AM	6/21/2007

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 CONST.
	0					3.2 ppm		SANDY LEAN CLAY (CL) - fine to coarse grained, subangular to subrounded sand, redish tan to tan, dry to moist, poorly cemented, 30-35% sand, no hydrocarbon odor	Vault
				G				Note: Borehole was hand augered from ground surface to 5 ft bgs.	
	3.0'							SANDY LEAN CLAY (CL) - fine to coarse grained, subangular to subrounded sand, dark red, dry to moist, poorly cemented, 20-25% sand decreasing with depth, no hydrocarbon odor	
	5					14.9 ppm			
	6.0'							SANDY LEAN CLAY (CL) - fine to medium grained, subangular to subrounded sand, red brown to dark brown with gray hydrocarbon staining, moist, poorly cemented, 10-15% sand, grey hydrocarbon staining at 9 feet bgs, at 9-10 ft bgs noticable hydrocarbon odor	Bentonite cement grout
▼				CS					2" Sch 40 PVC Casing
	10					14.9 ppm	KA3@10		
▽				CS		37.6 ppm	KA3@12.5		3/8" Bentonite chips
	12.5'							POORLY GRADED SAND WITH CLAY (SP-SC) - fine to medium grained, red brown to dark red, wet, poorly cemented, 10-15% clay and silt, no noticable hydrocarbon odor	
	14.0'							SANDY LEAN CLAY (CL) - fine to medium grained sand, subangular to subrounded, dark red, moist, poorly cemented, 25-30% sand, no hydrocarbon odor	
	15.0'							SANDY LEAN CLAY (CL) - with intervals of poorly graded sand with clay (SP-SC) at 16 ft bgs and 17.5 ft bgs fine to medium grained sand, red brown to dark red, wet, poorly cemented, 10-15% clay and silt, no hydrocarbon odor	
	15					13.6 ppm			
				CS					
	18.0'							MUDSTONE (CHINLE FORMATION) - weathered, highly fractured dark red to reddish gray with light gray reduction spots, wet in fractures, moderately to well cemented, no noticable hydrocarbon odor	0.010" Slot Screen (15-25ft)
	20					3.2 ppm			
	22.0'							MUDSTONE (CHINLE FORMATION) - minor to trace fractures dark red to reddish gray with light gray reduction spots, dry to moist, moderately to well cemented, no noticable hydrocarbon odor	10/20 Sand
				CS		1.9 ppm	KA3@22.5		
	25					1.2 ppm	KA3@25		End Cap
	25.0'								

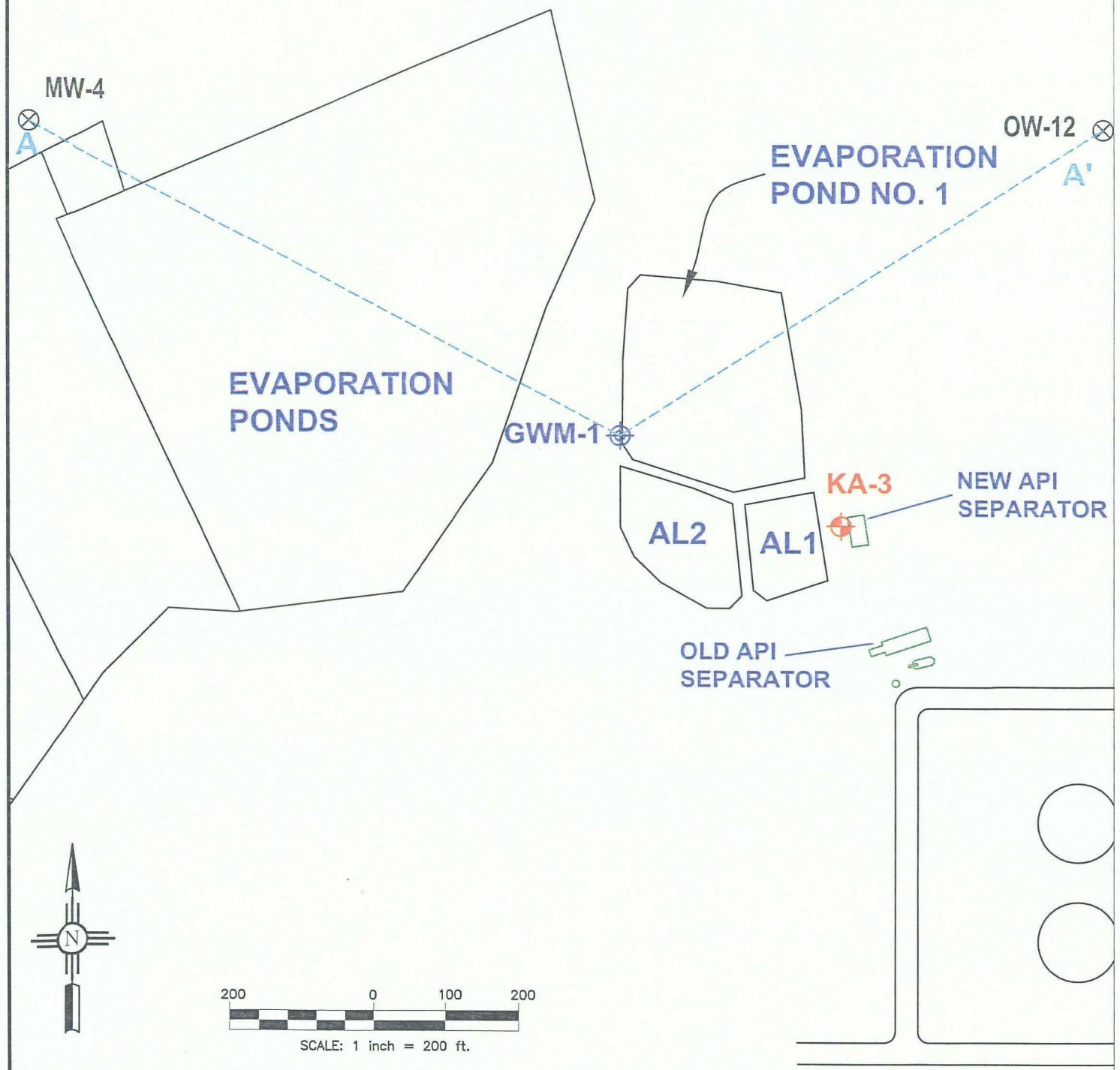
Total Depth 25.0'

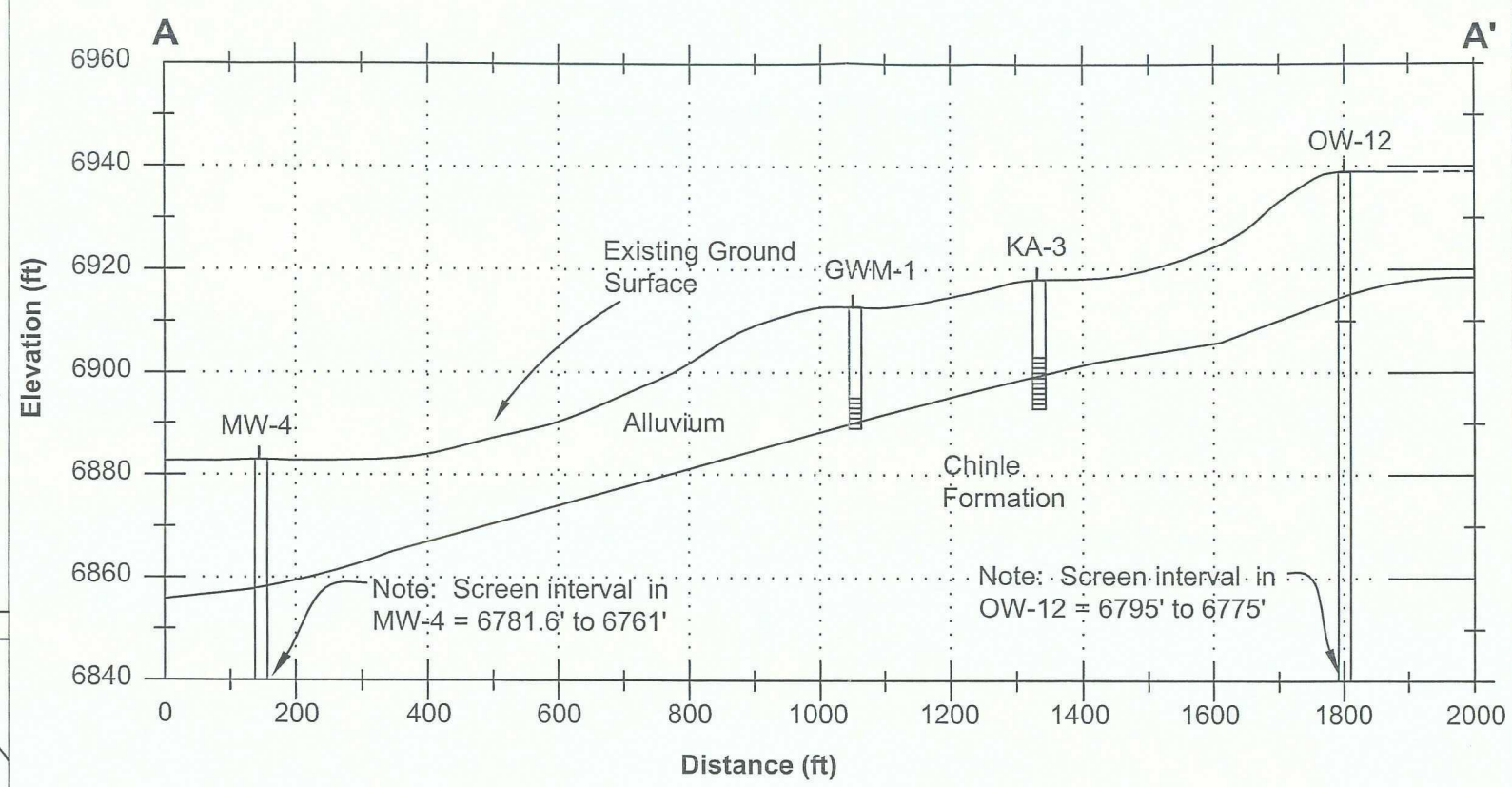
Additional Groundwater Measurements

Depth (ft)	Hour	Date

Depth (ft)	Hour	Date

Depth (ft)	Hour	Date





LEGEND

- KA-1 = Monitoring Well
- GWM-1 = Existing Monitoring Well Location
- MW-4 = Existing Monitoring Well Location
- ---- = Cross Section Line
- AL1 = Aeration Lagoon

NOTES:

1. Strata lines are based upon interpolation between borings and may not represent actual subsurface conditions.
2. Borehole KA-3 has been projected onto the cross-section line.
3. Locations of SWM units, aeration lagoons, evaporation ponds and old API separators are taken from a drawing provided by Giant Refining Co. entitled "Refinery Monitor Well Locations", Drawing No. Z-02-155, dated 10/20/1997.

KLEINFELDER	
Drawn By: C. Vallejo	Date: July 2007
Project No.: 84679	Drawing No.: 84679_06_0
Scale: As Referenced	Drawing Category: B

SUBSURFACE CROSS-SECTION A-A'
Ciniza Refinery
Jamestown, New Mexico

FIGURE
D-1

Q:\Environ\Current Work Folder\84679\4-0\Report\Figures\84679_06_0.dwg

APPENDIX E

Analytical Laboratory Report

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Tuesday, June 19, 2007

Justin Ball
Kleinfelder
8300 Jefferson, NE Suite B
Albuquerque, NM 87113

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

RE: Ciniza Refinery Monitor Well Install

Order No.: 0706176

Dear Justin Ball:

Hall Environmental Analysis Laboratory, Inc. received 11 sample(s) on 6/12/2007 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: *19-Jun-07*

CLIENT:	Kleinfelder	Client Sample ID:	KA2 @ 9
Lab Order:	0706176	Collection Date:	6/11/2007 8:00:00 PM
Project:	Ciniza Refinery Monitor Well Install	Date Received:	6/12/2007
Lab ID:	0706176-01	Matrix:	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	240	10		mg/Kg	1	6/15/2007 1:40:00 PM
Motor Oil Range Organics (MRO)	160	50		mg/Kg	1	6/15/2007 1:40:00 PM
Surr: DNOP	96.6	61.7-135		%REC	1	6/15/2007 1:40:00 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/16/2007 1:24:55 PM
Surr: BFB	132	84-138		%REC	1	6/16/2007 1:24:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/16/2007 1:24:55 PM
Benzene	0.051	0.050		mg/Kg	1	6/16/2007 1:24:55 PM
Toluene	ND	0.050		mg/Kg	1	6/16/2007 1:24:55 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/16/2007 1:24:55 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/16/2007 1:24:55 PM
Surr: 4-Bromofluorobenzene	97.1	68.2-109		%REC	1	6/16/2007 1:24:55 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: *19-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	KA2 @ 10
Lab Order:	0706176	**Collection Date:**	6/11/2007 8:00:00 PM
Project:	Ciniza Refinery Monitor Well Install	**Date Received:**	6/12/2007
Lab ID:	0706176-02	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2007 12:29:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2007 12:29:12 PM
Surr: DNOP	94.1	61.7-135		%REC	1	6/14/2007 12:29:12 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	10	5.0		mg/Kg	1	6/15/2007 12:48:48 AM
Surr: BFB	124	84-138		%REC	1	6/15/2007 12:48:48 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2007 12:48:48 AM
Benzene	ND	0.050		mg/Kg	1	6/15/2007 12:48:48 AM
Toluene	ND	0.050		mg/Kg	1	6/15/2007 12:48:48 AM
Ethylbenzene	0.058	0.050		mg/Kg	1	6/15/2007 12:48:48 AM
Xylenes, Total	0.19	0.10		mg/Kg	1	6/15/2007 12:48:48 AM
Surr: 4-Bromofluorobenzene	95.5	68.2-109		%REC	1	6/15/2007 12:48:48 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: *19-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	KA3 @ 10
Lab Order:	0706176	**Collection Date:**	6/11/2007 8:00:00 PM
Project:	Ciniza Refinery Monitor Well Install	**Date Received:**	6/12/2007
Lab ID:	0706176-03	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	240	10		mg/Kg	1	6/15/2007 1:04:59 PM
Motor Oil Range Organics (MRO)	220	50		mg/Kg	1	6/15/2007 1:04:59 PM
Surr: DNOP	99.9	61.7-135		%REC	1	6/15/2007 1:04:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/15/2007 2:49:33 AM
Surr: BFB	151	84-138	S	%REC	1	6/15/2007 2:49:33 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2007 2:49:33 AM
Benzene	ND	0.050		mg/Kg	1	6/15/2007 2:49:33 AM
Toluene	ND	0.050		mg/Kg	1	6/15/2007 2:49:33 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2007 2:49:33 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/15/2007 2:49:33 AM
Surr: 4-Bromofluorobenzene	105	68.2-109		%REC	1	6/15/2007 2:49:33 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	KA3 @ 12.5
Lab Order:	0706176	**Collection Date:**	6/11/2007 8:00:00 PM
Project:	Ciniza Refinery Monitor Well Install	**Date Received:**	6/12/2007
Lab ID:	0706176-04	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2007 1:04:18 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2007 1:04:18 PM
Surr: DNOP	93.5	61.7-135		%REC	1	6/14/2007 1:04:18 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/15/2007 3:19:41 AM
Surr: BFB	123	84-138		%REC	1	6/15/2007 3:19:41 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2007 3:19:41 AM
Benzene	ND	0.050		mg/Kg	1	6/15/2007 3:19:41 AM
Toluene	ND	0.050		mg/Kg	1	6/15/2007 3:19:41 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2007 3:19:41 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/15/2007 3:19:41 AM
Surr: 4-Bromofluorobenzene	95.2	68.2-109		%REC	1	6/15/2007 3:19:41 AM

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-Jun-07*

CLIENT:	Kleinfelder	Client Sample ID:	KA3 @ 22.5
Lab Order:	0706176	Collection Date:	6/11/2007 8:00:00 PM
Project:	Ciniza Refinery Monitor Well Install	Date Received:	6/12/2007
Lab ID:	0706176-05	Matrix:	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2007 1:39:37 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2007 1:39:37 PM
Surr: DNOP	92.4	61.7-135		%REC	1	6/14/2007 1:39:37 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/15/2007 4:49:54 AM
Surr: BFB	121	84-138		%REC	1	6/15/2007 4:49:54 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2007 4:49:54 AM
Benzene	ND	0.050		mg/Kg	1	6/15/2007 4:49:54 AM
Toluene	ND	0.050		mg/Kg	1	6/15/2007 4:49:54 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2007 4:49:54 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/15/2007 4:49:54 AM
Surr: 4-Bromofluorobenzene	95.3	68.2-109		%REC	1	6/15/2007 4:49:54 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: *19-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	KA3 @ 25
Lab Order:	0706176	**Collection Date:**	6/11/2007 8:00:00 PM
Project:	Ciniza Refinery Monitor Well Install	**Date Received:**	6/12/2007
Lab ID:	0706176-06	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2007 2:50:11 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2007 2:50:11 PM
Surr: DNOP	89.2	61.7-135		%REC	1	6/14/2007 2:50:11 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/15/2007 5:20:01 AM
Surr: BFB	121	84-138		%REC	1	6/15/2007 5:20:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2007 5:20:01 AM
Benzene	ND	0.050		mg/Kg	1	6/15/2007 5:20:01 AM
Toluene	ND	0.050		mg/Kg	1	6/15/2007 5:20:01 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2007 5:20:01 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/15/2007 5:20:01 AM
Surr: 4-Bromofluorobenzene	94.8	68.2-109		%REC	1	6/15/2007 5:20:01 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: *19-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	KA2 @ 5
Lab Order:	0706176	**Collection Date:**	6/12/2007 10:30:00 AM
Project:	Ciniza Refinery Monitor Well Install	**Date Received:**	6/12/2007
Lab ID:	0706176-07	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	40	10		mg/Kg	1	6/14/2007 3:25:27 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2007 3:25:27 PM
Surr: DNOP	96.7	61.7-135		%REC	1	6/14/2007 3:25:27 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/15/2007 5:50:05 AM
Surr: BFB	122	84-138		%REC	1	6/15/2007 5:50:05 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/15/2007 5:50:05 AM
Benzene	ND	0.050		mg/Kg	1	6/15/2007 5:50:05 AM
Toluene	ND	0.050		mg/Kg	1	6/15/2007 5:50:05 AM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2007 5:50:05 AM
Xylenes, Total	ND	0.10		mg/Kg	1	6/15/2007 5:50:05 AM
Surr: 4-Bromofluorobenzene	94.4	68.2-109		%REC	1	6/15/2007 5:50:05 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: *19-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	KA1 @ 1
Lab Order:	0706176	**Collection Date:**	6/12/2007 10:30:00 AM
Project:	Ciniza Refinery Monitor Well Install	**Date Received:**	6/12/2007
Lab ID:	0706176-08	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	47	10		mg/Kg	1	6/15/2007 12:29:59 PM
Motor Oil Range Organics (MRO)	52	50		mg/Kg	1	6/15/2007 12:29:59 PM
Surr: DNOP	99.4	61.7-135		%REC	1	6/15/2007 12:29:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/16/2007 3:58:09 PM
Surr: BFB	129	84-138		%REC	1	6/16/2007 3:58:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/16/2007 3:58:09 PM
Benzene	ND	0.050		mg/Kg	1	6/16/2007 3:58:09 PM
Toluene	ND	0.050		mg/Kg	1	6/16/2007 3:58:09 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/16/2007 3:58:09 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/16/2007 3:58:09 PM
Surr: 4-Bromofluorobenzene	99.9	68.2-109		%REC	1	6/16/2007 3:58:09 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: *19-Jun-07*

CLIENT:	Kleinfelder	Client Sample ID:	KA1 @ 5
Lab Order:	0706176	Collection Date:	6/12/2007 10:30:00 AM
Project:	Ciniza Refinery Monitor Well Install	Date Received:	6/12/2007
Lab ID:	0706176-09	Matrix:	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2007 4:00:50 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2007 4:00:50 PM
Surr: DNOP	96.9	61.7-135		%REC	1	6/14/2007 4:00:50 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/16/2007 5:28:23 PM
Surr: BFB	127	84-138		%REC	1	6/16/2007 5:28:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/16/2007 5:28:23 PM
Benzene	ND	0.050		mg/Kg	1	6/16/2007 5:28:23 PM
Toluene	ND	0.050		mg/Kg	1	6/16/2007 5:28:23 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/16/2007 5:28:23 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/16/2007 5:28:23 PM
Surr: 4-Bromofluorobenzene	98.2	68.2-109		%REC	1	6/16/2007 5:28:23 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: *19-Jun-07*

CLIENT:	Kleinfelder	Client Sample ID:	KA1 @ 10
Lab Order:	0706176	Collection Date:	6/12/2007 10:30:00 AM
Project:	Ciniza Refinery Monitor Well Install	Date Received:	6/12/2007
Lab ID:	0706176-10	Matrix:	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/14/2007 4:36:26 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/14/2007 4:36:26 PM
Surr: DNOP	92.6	61.7-135		%REC	1	6/14/2007 4:36:26 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/16/2007 6:28:48 PM
Surr: BFB	127	84-138		%REC	1	6/16/2007 6:28:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/16/2007 6:28:48 PM
Benzene	ND	0.050		mg/Kg	1	6/16/2007 6:28:48 PM
Toluene	ND	0.050		mg/Kg	1	6/16/2007 6:28:48 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/16/2007 6:28:48 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/16/2007 6:28:48 PM
Surr: 4-Bromofluorobenzene	98.6	68.2-109		%REC	1	6/16/2007 6:28:48 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: *19-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	MeOH Blank
Lab Order:	0706176	**Collection Date:**	
Project:	Ciniza Refinery Monitor Well Install	**Date Received:**	6/12/2007
Lab ID:	0706176-11	**Matrix:**	MEOH BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/16/2007 6:58:55 PM
Surr: BFB	126	84-138		%REC	1	6/16/2007 6:58:55 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	6/16/2007 6:58:55 PM
Benzene	ND	0.050		mg/Kg	1	6/16/2007 6:58:55 PM
Toluene	ND	0.050		mg/Kg	1	6/16/2007 6:58:55 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/16/2007 6:58:55 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/16/2007 6:58:55 PM
Surr: 4-Bromofluorobenzene	98.4	68.2-109		%REC	1	6/16/2007 6:58:55 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 Monitor Well Install **Work Order:** 0706176

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8015									
Sample ID: MB-13175		*MBLK*			Batch ID:	13175	Analysis Date:		6/14/2007 8:25:42 AM
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-13175		*LCS*			Batch ID:	13175	Analysis Date:		6/14/2007 9:00:23 AM
Diesel Range Organics (DRO)	36.64	mg/Kg	10	73.3	64.6	116			
Sample ID: LCSD-13175		*LCSD*			Batch ID:	13175	Analysis Date:		6/14/2007 9:35:06 AM
Diesel Range Organics (DRO)	38.89	mg/Kg	10	77.8	64.6	116	5.95	17.4	
Method: SW8015									
Sample ID: 0706176-04A MSD		*MSD*			Batch ID:	R23993	Analysis Date:		6/15/2007 4:19:51 AM
Gasoline Range Organics (GRO)	26.67	mg/Kg	5.0	107	69.5	120	5.72	11.6	
Sample ID: 0706176-08A MSD		*MSD*			Batch ID:	R24015	Analysis Date:		6/16/2007 4:58:15 PM
Gasoline Range Organics (GRO)	28.05	mg/Kg	5.0	98.1	69.5	120	4.43	11.6	
Sample ID: 5ML RB-III		*MBLK*			Batch ID:	R23993	Analysis Date:		6/15/2007 2:19:22 AM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	R24015	Analysis Date:		6/15/2007 8:56:45 AM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: 2.5UG GRO LCS-III		*LCS*			Batch ID:	R23993	Analysis Date:		6/15/2007 1:49:08 AM
Gasoline Range Organics (GRO)	25.54	mg/Kg	5.0	102	69.5	120			
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID:	R24015	Analysis Date:		6/16/2007 7:54:32 AM
Gasoline Range Organics (GRO)	25.72	mg/Kg	5.0	103	69.5	120			
Sample ID: 0706176-04A MS		*MS*			Batch ID:	R23993	Analysis Date:		6/15/2007 3:49:49 AM
Gasoline Range Organics (GRO)	28.24	mg/Kg	5.0	113	69.5	120			
Sample ID: 0706176-08A MS		*MS*			Batch ID:	R24015	Analysis Date:		6/16/2007 4:28:12 PM
Gasoline Range Organics (GRO)	29.32	mg/Kg	5.0	103	69.5	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 Monitor Well Install **Work Order:** 0706176

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 0706176-04A MSD		*MSD*			Batch ID:	R23993	Analysis Date:	6/15/2007 4:19:51 AM	
Methyl tert-butyl ether (MTBE)	0.3695	mg/Kg	0.10	90.1	67.9	135	3.87	28	
Benzene	0.2508	mg/Kg	0.050	89.6	62.7	114	4.67	27	
Toluene	1.618	mg/Kg	0.050	80.9	68.2	121	4.92	19	
Ethylbenzene	0.3194	mg/Kg	0.050	79.8	71.4	115	6.07	10	
Xylenes, Total	1.874	mg/Kg	0.10	81.5	65	135	5.68	13	
Sample ID: 0706176-08A MSD		*MSD*			Batch ID:	R24015	Analysis Date:	6/16/2007 4:58:15 PM	
Methyl tert-butyl ether (MTBE)	0.3737	mg/Kg	0.10	91.1	67.9	135	0.587	28	
Benzene	0.2882	mg/Kg	0.050	103	62.7	114	3.24	27	
Toluene	1.801	mg/Kg	0.050	90.1	68.2	121	1.20	19	
Ethylbenzene	0.3612	mg/Kg	0.050	90.3	71.4	115	1.02	10	
Xylenes, Total	2.184	mg/Kg	0.10	94.9	65	135	1.33	13	
Sample ID: 5ML RB-III		*MBLK*			Batch ID:	R23993	Analysis Date:	6/15/2007 2:19:22 AM	
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: b 51		*MBLK*			Batch ID:	R24015	Analysis Date:	6/16/2007 10:54:44 AM	
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: 2.5UG GRO LCS-III		*LCS*			Batch ID:	R23993	Analysis Date:	6/15/2007 1:49:08 AM	
Methyl tert-butyl ether (MTBE)	0.3779	mg/Kg	0.10	92.2	67.9	135			
Benzene	0.2908	mg/Kg	0.050	104	62.7	114			
Toluene	1.893	mg/Kg	0.050	94.6	68.2	121			
Ethylbenzene	0.3704	mg/Kg	0.050	92.6	71.4	115			
Xylenes, Total	2.134	mg/Kg	0.10	92.8	65	135			
Sample ID: 100NG BTEX LCS-II		*LCS*			Batch ID:	R24015	Analysis Date:	6/16/2007 8:24:31 AM	
Methyl tert-butyl ether (MTBE)	0.8662	mg/Kg	0.10	86.6	67.9	135			
Benzene	0.9544	mg/Kg	0.050	95.4	62.7	114			
Toluene	0.9538	mg/Kg	0.050	95.4	68.2	121			
Ethylbenzene	0.9266	mg/Kg	0.050	92.7	71.4	115			
Xylenes, Total	2.756	mg/Kg	0.10	91.9	65	135			
Sample ID: 0706176-04A MS		*MS*			Batch ID:	R23993	Analysis Date:	6/15/2007 3:49:49 AM	
Methyl tert-butyl ether (MTBE)	0.3841	mg/Kg	0.10	93.7	67.9	135			
Benzene	0.2628	mg/Kg	0.050	93.9	62.7	114			
Toluene	1.700	mg/Kg	0.050	85.0	68.2	121			
Ethylbenzene	0.3394	mg/Kg	0.050	84.8	71.4	115			
Xylenes, Total	1.984	mg/Kg	0.10	86.2	65	135			
Sample ID: 0706176-08A MS		*MS*			Batch ID:	R24015	Analysis Date:	6/16/2007 4:28:12 PM	

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 Monitor Well Install **Work Order:** 0706176

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 0706176-08A MS		*MS*			**Batch ID:** R24015		Analysis Date:	6/16/2007 4:28:12 PM	
Methyl tert-butyl ether (MTBE)	0.3759	mg/Kg	0.10	91.7	67.9	135			
Benzene	0.2977	mg/Kg	0.050	106	62.7	114			
Toluene	1.823	mg/Kg	0.050	91.1	68.2	121			
Ethylbenzene	0.3649	mg/Kg	0.050	91.2	71.4	115			
Xylenes, Total	2.213	mg/Kg	0.10	96.2	65	135			

Qualifiers:

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

CHAIN-OF-CUSTODY RECORD

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

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

Client: Kleinfelder West, Inc
Project Name: Ciniza Refinery Monitor Well Install
Address: 8300 Jefferson Blvd NE Ste B
Project #: 84679 Task
Albuquerque, NM 87113
Project Manager: Justin Ball
Phone #: (505) 344-7373
Sampler: Lucero, Brian
Fax #: (505) 344-1771
Sample Temperature: 9°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative Method	HEAL No. 07061760	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
06/11/07	2000	Soil	KA2@9	X1 4-oz jar X2 vial			X2	1	1		2										
06/11/07	2000	Soil	KA2@10	X1 4-oz jar X2 vial			X2	2	1		2										
06/11/07	2000	Soil	KA3@10	X1 4-oz jar X2 vial			X2	3	1		2										
06/11/07	2000	Soil	KA3@12.5	X1 4-oz jar X2 vial			X2	4	1		2										
06/11/07	2000	Soil	KA3@22.5	X1 4-oz jar X2 vial			X2	5	1		2										
06/11/07	2000	Soil	KA3@25	X1 4-oz jar X2 vial			X2	6	1		2										
06/12/07	1030	Soil	KA2@5	X1 4-oz jar X2 vial			X2	7	1		2										
06/12/07	1030	Soil	KA1@1	X1 4-oz jar X2 vial			X2	8	1		2										
06/12/07	1030	Soil	KA1@5	X1 4-oz jar X2 vial			X2	9	1		2										
06/12/07	1030	Soil	KA1@10	X1 4-oz jar X2 vial			X2	10	1		2										
06/12/07	N/A	N/A	~~Soil~~ Methanol Trip Blank	X2 vial			X2	11													

ANALYSIS REQUEST

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
06/12/07	1536	Brian Lucero	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
			6/12/07 1536

Remarks:

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Thursday, June 28, 2007

Justin Ball
Kleinfelder
8300 Jefferson, NE Suite B
Albuquerque, NM 87113

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

RE: Ciniza Refinery, Gallup

Order No.: 0706324

Dear Justin Ball:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 6/21/2007 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: 28-Jun-07 07/02/07

CLIENT:	Kleinfelder	Client Sample ID: ~~KA-2~~ KA-3	
Lab Order:	0706324	Collection Date:	6/21/2007 10:30:00 AM
Project:	Ciniza Refinery, Gallup	Date Received:	6/21/2007
Lab ID:	0706324-01	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	6/27/2007 5:52:19 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/27/2007 5:52:19 PM
Surr: DNOP	108	58-140		%REC	1	6/27/2007 5:52:19 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.16	0.050		mg/L	1	6/28/2007 1:00:13 PM
Surr: BFB	95.1	79.2-121		%REC	1	6/28/2007 1:00:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	150	120		µg/L	50	6/27/2007 4:25:14 PM
Benzene	ND	1.0		µg/L	1	6/28/2007 1:00:13 PM
Toluene	ND	1.0		µg/L	1	6/28/2007 1:00:13 PM
Ethylbenzene	ND	1.0		µg/L	1	6/28/2007 1:00:13 PM
Xylenes, Total	ND	2.0		µg/L	1	6/28/2007 1:00:13 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2007 1:00:13 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/28/2007 1:00:13 PM
Surr: 4-Bromofluorobenzene	87.2	70.2-105		%REC	1	6/28/2007 1:00:13 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	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: 28-Jun-07

KA-2 KAF 07/02/07

CLIENT: Kleinfelder
Client Sample ID: ~~KA-3~~

Lab Order: 0706324
Collection Date: 6/21/2007 11:00:00 AM

Project: Ciniza Refinery, Gallup
Date Received: 6/21/2007

Lab ID: 0706324-02
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: SCC
Diesel Range Organics (DRO)	41	1.0		mg/L	1	6/27/2007 6:27:34 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/27/2007 6:27:34 PM
Surr: DNOP	122	58-140		%REC	1	6/27/2007 6:27:34 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	5.6	0.50		mg/L	10	6/28/2007 1:32:52 PM
Surr: BFB	115	79.2-121		%REC	10	6/28/2007 1:32:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	680	25		µg/L	10	6/28/2007 1:32:52 PM
Benzene	870	10		µg/L	10	6/28/2007 1:32:52 PM
Toluene	74	10		µg/L	10	6/28/2007 1:32:52 PM
Ethylbenzene	260	10		µg/L	10	6/28/2007 1:32:52 PM
Xylenes, Total	860	20		µg/L	10	6/28/2007 1:32:52 PM
1,2,4-Trimethylbenzene	610	10		µg/L	10	6/28/2007 1:32:52 PM
1,3,5-Trimethylbenzene	150	10		µg/L	10	6/28/2007 1:32:52 PM
Surr: 4-Bromofluorobenzene	109	70.2-105	S	%REC	10	6/28/2007 1:32:52 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: *28-Jun-07*

CLIENT:	Kleinfelder	**Client Sample ID:**	KA-1
Lab Order:	0706324	**Collection Date:**	6/21/2007 11:20:00 AM
Project:	Ciniza Refinery, Gallup	**Date Received:**	6/21/2007
Lab ID:	0706324-03	**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	6/27/2007 7:37:29 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/27/2007 7:37:29 PM
Surr: DNOP	120	58-140		%REC	1	6/27/2007 7:37:29 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/27/2007 5:27:50 PM
Surr: BFB	96.3	79.2-121		%REC	1	6/27/2007 5:27:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	6/27/2007 5:27:50 PM
Benzene	ND	1.0		µg/L	1	6/27/2007 5:27:50 PM
Toluene	ND	1.0		µg/L	1	6/27/2007 5:27:50 PM
Ethylbenzene	ND	1.0		µg/L	1	6/27/2007 5:27:50 PM
Xylenes, Total	ND	2.0		µg/L	1	6/27/2007 5:27:50 PM
1,2,4-Trimethylbenzene	1.0	1.0		µg/L	1	6/27/2007 5:27:50 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2007 5:27:50 PM
Surr: 4-Bromofluorobenzene	89.0	70.2-105		%REC	1	6/27/2007 5:27:50 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: *28-Jun-07*

CLIENT:	Kleinfelder	Client Sample ID:	Trip Blank
Lab Order:	0706324	Collection Date:	
Project:	Ciniza Refinery, Gallup	Date Received:	6/21/2007
Lab ID:	0706324-04	Matrix:	TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/27/2007 5:57:45 PM
Surr: BFB	95.8	79.2-121		%REC	1	6/27/2007 5:57:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	6/27/2007 5:57:45 PM
Benzene	ND	1.0		µg/L	1	6/27/2007 5:57:45 PM
Toluene	ND	1.0		µg/L	1	6/27/2007 5:57:45 PM
Ethylbenzene	ND	1.0		µg/L	1	6/27/2007 5:57:45 PM
Xylenes, Total	ND	2.0		µg/L	1	6/27/2007 5:57:45 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2007 5:57:45 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2007 5:57:45 PM
Surr: 4-Bromofluorobenzene	87.4	70.2-105		%REC	1	6/27/2007 5:57:45 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, Gallup **Work Order:** 0706324

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8015									
Sample ID: MB-13262		*MBLK*			Batch ID:	13262	Analysis Date:	6/27/2007 1:10:07 PM	
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-13262		*LCS*			Batch ID:	13262	Analysis Date:	6/27/2007 1:45:10 PM	
Diesel Range Organics (DRO)	5.722	mg/L	1.0	114	74	157			
Sample ID: LCSD-13262		*LCSD*			Batch ID:	13262	Analysis Date:	6/27/2007 2:20:34 PM	
Diesel Range Organics (DRO)	5.745	mg/L	1.0	115	74	157	0.392	23	
Method: SW8015									
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	R24153	Analysis Date:	6/27/2007 9:15:37 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	R24163	Analysis Date:	6/28/2007 9:59:41 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID:	R24153	Analysis Date:	6/27/2007 10:57:56 PM	
Gasoline Range Organics (GRO)	0.5052	mg/L	0.050	101	80	115			
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID:	R24163	Analysis Date:	6/28/2007 11:29:57 AM	
Gasoline Range Organics (GRO)	0.4870	mg/L	0.050	97.4	80	115			

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, Gallup **Work Order:** 0706324

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	R24153	Analysis Date:	6/27/2007 9:15:37 AM	
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5						
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID:	R24163	Analysis Date:	6/28/2007 9:59:41 AM	
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5						
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	R24153	Analysis Date:	6/27/2007 11:57:52 PM	
Methyl tert-butyl ether (MTBE)	22.31	µg/L	2.5	112	51.2	138			
Benzene	21.32	µg/L	1.0	107	85.9	113			
Toluene	21.33	µg/L	1.0	107	86.4	113			
Ethylbenzene	21.45	µg/L	1.0	107	83.5	118			
Xylenes, Total	63.41	µg/L	2.0	106	83.4	122			
1,2,4-Trimethylbenzene	22.59	µg/L	1.0	113	83.5	115			
1,3,5-Trimethylbenzene	22.07	µg/L	1.0	110	85.2	113			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	R24163	Analysis Date:	6/28/2007 11:59:59 AM	
Methyl tert-butyl ether (MTBE)	21.70	µg/L	2.5	109	51.2	138			
Benzene	21.38	µg/L	1.0	107	85.9	113			
Toluene	20.71	µg/L	1.0	104	86.4	113			
Ethylbenzene	20.80	µg/L	1.0	104	83.5	118			
Xylenes, Total	61.60	µg/L	2.0	102	83.4	122			
1,2,4-Trimethylbenzene	21.91	µg/L	1.0	110	83.5	115			
1,3,5-Trimethylbenzene	21.49	µg/L	1.0	107	85.2	113			

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

CHAIN-OF-CUSTODY RECORD

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

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

Client: Kleinfelder West, Inc
Address: 8300 Jefferson Blvd NE
Albuquerque, NM 87113
Phone #: (505) 344-7373
Fax #: (505) 344-1711

Project Name: Ciniza Refinery, Gallup
Project #: 84679 Task
Project Manager: Justin Ball
Sampler: Lucero, Brian
Sample Temperature: 2

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
								0706324
06/21/07	1030	GW	~~KA-2~~ KA-3 (Bmg 07/02/07)	(x4) 40-ml	X			1
06/21/07	1100	GW	~~KA-3~~ KA-2 (Bmg 07/02/07)	(x4) 40-ml	X			2
06/21/07	1120	GW	KA-1 (Bmg 07/02/07)	(x4) 40-ml	X			3
06/21/07		W	Trip Blank	(x2) 40-ml				4

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
X		X														
X		X														
X		X														
X		X														

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
06/21/07	1455	Brian Lucero	
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
			6/21/07 1455

Remarks: