NM2 - ___10_____

MONITORING REPORTS YEAR(S):

__2007-2010___

Western Refining
LOGISTICS

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2010 JUN -9 P 1:09

June 3, 2010

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Certified Mail: 7006 0100 0002 9205 1416

RE: Annual Sampling at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

Dear Mr. Jones,

Please find enclosed the 2010 Annual Sampling Report for Western Refining Southwest, Incorporated's Bisti Landfarm, permit number NM-02-0010. I would like to request a meeting to discuss elevated chloride concentrations reported in the vadose zone, as well as initial results of a separate delineation investigation. I will contact you next week to schedule an appointment.

If you have any questions or require additional information, please do not hesitate to contact me at (505) 632-4077 or at Bill.Robertson@wnr.com.

Sincerely,
Western Refining

Bill Robertson

Safety, Environmental & Regulatory Manager

COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental Inc.
2243 Main Avenue, Suite 3
Durango, Colorado 81301
T 970.385.1096 / F 970.385.1873

June 3, 2010

Mr. Bill Robertson
Western Refining Southwest, Incorporated
111 CR 4990
Bloomfield, NM 87413

RE: Annual Sampling at Western Refining's Centralized Surface Waste Management Facility
NM-02-0010
Bisti Landfarm
San Juan County, New Mexico

Dear Mr. Robertson:

On March 4, 2010, LT Environmental (LTE) collected annual samples from Western Refining Southwest, Incorporated's (Western's) Bisti Landfarm, permit number NM-02-0010, located in the northwest quarter of the southeast quarter of Section 16, Township 25 North, Range 12 West in San Juan County, NM. The Bisti Landfarm was permitted in February 1998 under 711 Permit NM-02-0010 to Giant Industries, Arizona (Giant). Giant disposed of impacted soils at the landfarm resulting in three cells: the API Cell, the Crude Cell (containing material originating from Pettigrew, East Line, Bisti and West Line) and Cell 1, which was operational from 1998 until 2004 and is currently inactive (Figure 1). Western procured the landfarm from Giant in June of 2007.

Annual sampling consisted of vadose and treatment zone monitoring. Discrete vadose zone samples were taken from each of the two active cells (API and Crude Cells) to be analyzed for heavy metals, general chemistry, benzene, toluene, ethyl-benzene and total xylenes (BTEX), chlorides and total petroleum hydrocarbons (TPH). Three vadose zone samples were also collected from inactive Cell 1 and analyzed for chlorides. Vadose zone samples were collected from 3 to 4 feet below the original ground surface. The number of vadose zone samples taken within each cell was dependent on the size of the cell. See Figure 1 for sampling locations.

Treatment zones in the API and Crude Cells were composite sampled by placing four discrete samples into a one-gallon plastic bag. The soil within the bag was thoroughly mixed before filling glass sampling jars provided by the laboratory. Treatment zone samples were analyzed for TPH and chlorides.

All samples were placed on ice and sent to a laboratory for analysis. Samples were labeled with the date and time of collection, sample name, collector's name and parameters to be analyzed. The samples will be shipped to a laboratory in a sealed cooler via bus before designated holding times expired. Proper chain-of-custody (COC) procedures were followed, with logs documenting the date and time sampled, sample number, type of sample, sampler's name, preservative used, analyses required and sampler's signatures.

Results of laboratory analysis from vadose zone samples are presented in Table 1 and compared to background sampling. Complete laboratory reports are also attached. The majority of analytes were low in concentration or not detected. However, chloride was detected in elevated concentrations in the vadose zone from beneath the Pettigrew portion of the API Cell. The chloride concentration in that sample was 2300 mg/kg. Sample 3 (S3) from Cell 1 contained a chloride concentration of 51 mg/Kg, which is higher than the practical quantitation limit of the original Baseline Sample (50).

The presence of elevated chloride concentrations has already been identified as problematic at the landfarm. A Release Response Plan was approved by the New Mexico Oil Conservation Division (NMOCD) and has been initiated. Results are being evaluated in a written report to be submitted to the NMOCD, and a proposal for remedial action is forthcoming.

The treatment zone sampling results are shown in Table 2. The API Cell sample contained 82 mg/Kg TPH and 170 mg/Kg of chloride. The Crude Cell sample contained 200 mg/Kg TPH and 11 mg/Kg of chloride. These concentrations can be expected in impacted soil undergoing treatment at the landfarm.

Please contact me at (970) 946-1093 with any questions that may arise.

Sincerely,

LT ENVIRONMENTAL, INC.

Ashley L. Ager
Senior Geologist/Office Manager

FIGURES

Figure 1 – Site Map

TABLES

Table 1 – Vadose Zone Soil Analytical Results
Table 2 – Treatment Zone Soil Analytical Results

ATTACHMENT

Laboratory Reports

FIGURE

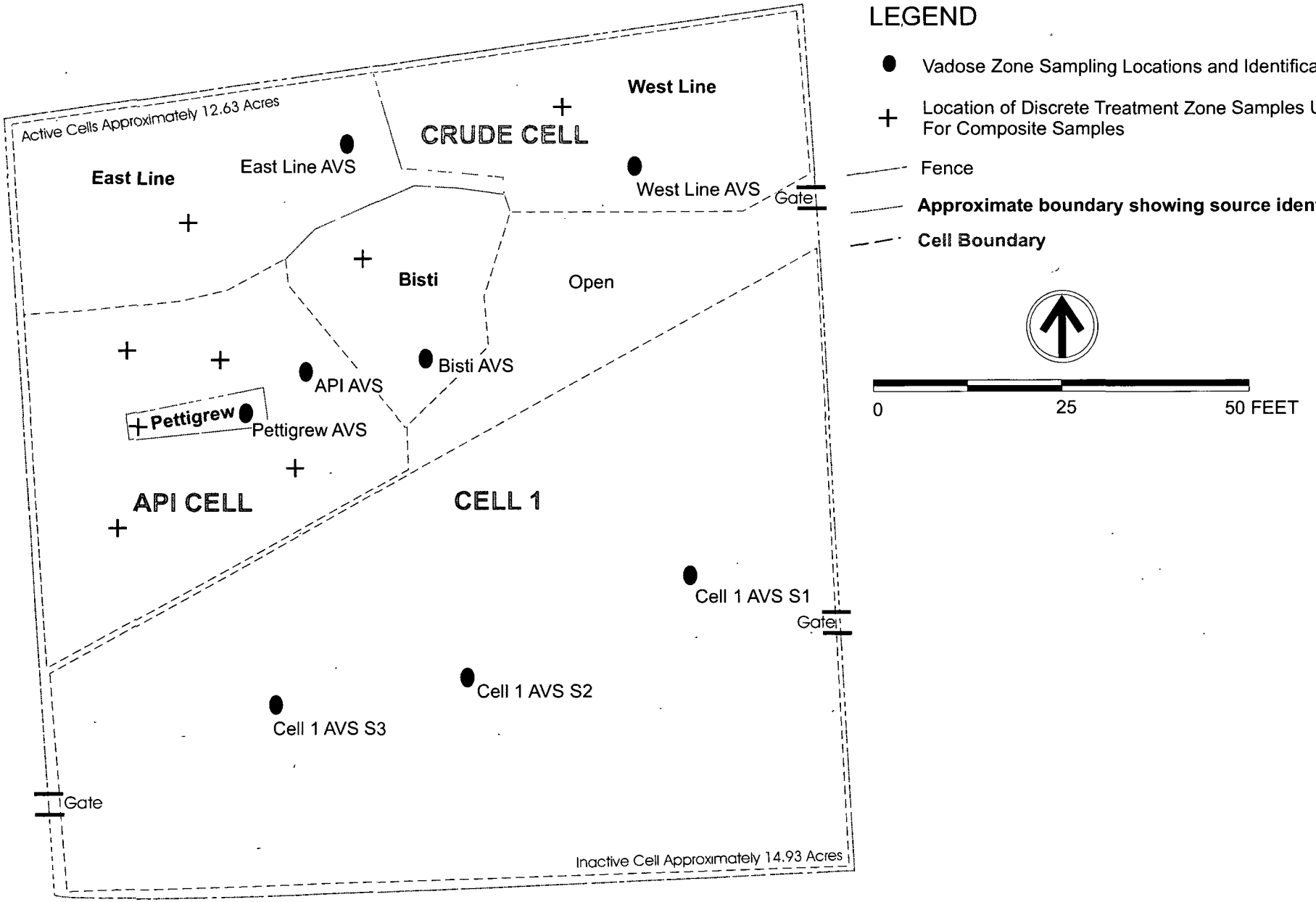


FIGURE 1
SITE MAP SHOWING SAMPLE LOCATIONS
BISTI LANDFARM
WESTERN REFINING SOUTHWEST, INC

05/2010

TABLES

TABLE 1
ANNUAL VADOSE ZONE SOIL ANALYTICAL RESULTS
BISTI LANDFARM
WESTERN REFINING SOUTHWEST, INC.

		SAMPLE ID								
	UNITS	BASELINE	Westline AVS	Bisti AVS	Eastline AVS	Pettigrew AVS	API AVS	Cell 1 AVS S1	Cell 1 AVS S2	Cell 1 AVS S3
DATE	mg/Kg	3/27/1998	3/4/2010	3/4/2010	3/4/2010	3/4/2010	3/4/2010	3/4/2010	3/4/2010	3/4/2010
SAMPLE DEPTH	mg/Kg	NA	3' 8"	3' 5"	3' 7"	3' 6"	3' 8"	3' 5"	3' 4"	3'
DRO	mg/Kg	<50	< 10	< 10	< 10	< 10	< 10	NA	NA	NA
MRO	mg/Kg	NA	< 50	< 50	< 50	< 50	< 50	NA	NA	NA
GRO	mg/Kg	NA	< 5	< 5	< 5	< 5	< 5	NA	NA	NA
BENZENE	mg/Kg	<0 05	< 0.050	< 0 050	< 0 050	< 0.050	< 0.050	NA	NA	NA
TOLUENE	mg/Kg	<0 05	< 0.050	< 0 050	< 0 050	< 0.050	< 0 050	NA	NA	NA
ETHYLBENZENE	mg/Kg	<0 05	< 0.050	< 0 050	< 0.050	< 0.050	< 0.050	NA	NA	NA
XYLENES	mg/Kg	<0 05	< 0.10	< 0 10	< 0.10	< 0.10	< 0 10	NA	NA	NA
CHLORIDE	mg/Kg	< 50	13	9 4	< 7 5	**2300**	4.7	23	37	**51**
SULFATE	mg/Kg	140	30	14	22	29	83	NA	NA	NA
MERCURY	mg/Kg	< 0.50	< 0 033	< 0 033	< 0.033	< 0 033	< 0 033	NA	NA	NA
ARSENIC	mg/Kg	2 8	< 13	< 13	< 13	< 13	< 13	NA	NA	NA
BARIUM	mg/Kg	180	87	44	78	130	44	NA	NA	NA
CADMIUM	mg/Kg	< 1.3	< 0 5	< 0 5	< 0 5	< 0 5	< 0.5	NA	NA	NA
CHROMIUM	mg/Kg	< 5 0	2 5	2.2	2.1	1.9	1 5	NA	NA	NA
LEAD	mg/Kg	6 8	2 5	2.5	2.5	2.1	2.1	NA	NA	NA
SELENIUM	mg/Kg	< 2 5	< 13	< 13	< 13	< 13	< 13	NA	NA	NA
SILVER	mg/Kg	< 1 3	< 1 3	< 1.3	< 1.3	< 1 3	< 1 3	NA	NA	NA
ALKALINITY	mg/Kg	NA	87	70	76	31	65	NA	NA	NA
BICARBONATE	mg/Kg	110	107	86	93	38	80	NA	NA	NA
CARBONATE	mg/Kg	26	< 5	< 5	< 5	< 5	< 5	NA	NA	NA

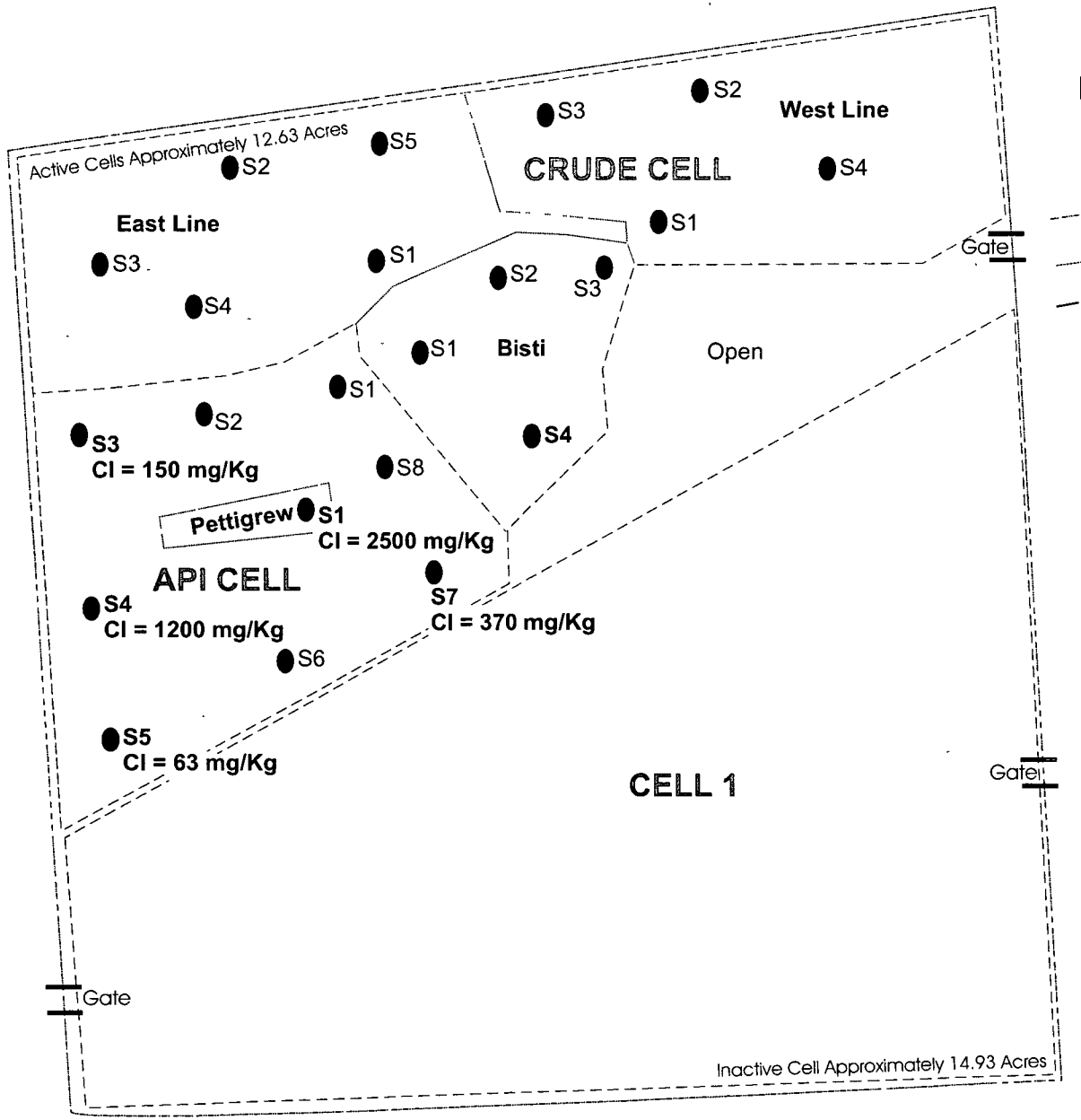
Notes
DRO - Diesel Range Organics
MRO - Motor Oil Range Organics
GRO - Gasoline Range Organics
NA - Not Analyzed

TABLE 2
ANNUAL TREATMENT ZONE SOIL ANALYTICAL RESULTS
BISTI LANDFARM
WESTERN REFINING SOUTHWEST, INC.

SAMPLE ID	DATE	TPH DRO (mg/Kg)	TPH MRO (mg/Kg)	TPH GRO (mg/Kg)	CHLORIDE (mg/Kg)
API Treatment Zone Composite	3/4/2010	29	53	< 5.0	170
Crude Treatment Zone Composite	3/4/2010	120	80	< 5.0	11

Notes:
TPH - Total Produced Hydrocarbons
DRO - Diesel Range Organics
MRO - Motor Oil Range Organics
GRO - Gasoline Range Organics
All units in milligams per kilogram (mg/kg)

ATTACHMENT



LEGEND

- Vadose Zone Sampling Locations - Delineation
- Fence
- **Approximate boundary showing source identitiy**
- **Cell Boundary**

0 25 50 FEET

FIGURE 1
SITE MAP SHOWING SAMPLE LOCATIONS
BISTI LANDFARM
WESTERN REFINING SOUTHWEST, INC

LTE

05/2010

TABLE 1
VADOSE ZONE CELL DELINEATION ANALYTICAL RESULTS
BISTI LANDFARM
WESTERN REFINING

SAMPLE ID	DATE	SAMPLE DEPTH	TPH			BTEX				CHLORIDE
			DRO	MRO	GRO	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	
Baseline	3/27/1998	6"	< 50	NA	NA	< 0.05	< 0.05	< 0.05	< 0.05	< 50
Westline S1	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	16
Westline S2	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	12
Westline S3	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	< 1.5
Westline S4	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	2.6
Eastline S1	3/4/2010	3' 4"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	< 1.5
Eastline S2	3/4/2010	3' 7"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	2.5
Eastline S3	3/4/2010	3' 5"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	50
Eastline S4	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	6.3
Eastline S5	3/4/2010	3' 8"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	2.4
Bisti S1	3/4/2010	3' 5"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	8.6
Bisti S2	3/4/2010	3' 8"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	< 7.5
Bisti S3	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	5.9
Bisti S4	3/4/2010	3' 6"	**35**	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	9.1
Pettigrew S1	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	**2500**
API S1	3/4/2010	3' 8"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	6.5
API S2	3/4/2010	3' 8"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	10
API S3	3/4/2010	4'	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	**150**
API S4	3/4/2010	3' 6"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	**1200**
API S5	3/4/2010	3' 4"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	**63**
API S6	3/4/2010	3' 7"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	42
API S7	3/4/2010	3' 5"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	**370**
API S8	3/4/2010	3' 5"	< 10	< 50	< 5	< 0.05	< 0.05	< 0.05	< 0.1	4.1

Notes

TPH - Total Petroleum Hydrocarbons

DRO - Diesel Range Organics

MRO - Motor Oil Range Organics

GRO - Gasoline Range Organics

BTEX - benzene, toluene, ethylbenzene, xylenes

All units in milligams per kilogram (mg/kg)

Bisti Landfarm Proposed Sampling Schedule

	Month	Sample Type	Sample Number	Analysis
Vadose Zone				
Annual Sampling (711 Rules)	March			
API Cell		Discrete	1	BTEX, TPH, Cl, anions, cations, metals
Crude Cell		Discrete	4	BTEX, TPH, Cl, anions, cations, metals
Quarterly Sampling (711 Rules)	June, Sept, Dec			
Cell 1				
API Cell		Discrete	1	BTEX, TPH
Crude Cell		Discrete	4	BTEX, TPH
Bi-annual Sampling (19.15.36 Rules)	March, Sept			
Cell 1		Discrete	3	chloride
API Cell		Discrete	1	chloride
Crude Cell		Discrete	4	chloride
Treatment Zone (19.15.36 Rules)				
Bi-annual Sampling	March, Sept			
API Cell		Composite	1	TPH, Chloride
Crude Cell		Composite	1	TPH, Chloride

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Monday, March 22, 2010

Bill Robertson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Annual Vadose Bisti Landfarm

Order No.: 1003168

Dear Bill Robertson:

Hall Environmental Analysis Laboratory, Inc. received 8 sample(s) on 3/6/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Westline AVS
Lab Order:	1003168	**Collection Date:**	3/4/2010 1:25:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/12/2010 7:09:48 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/12/2010 7:09:48 AM
Surr: DNOP	84.0	61.7-135		%REC	1	3/12/2010 7:09:48 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/12/2010 12:20:10 AM
Surr: BFB	97.2	65.9-118		%REC	1	3/12/2010 12:20:10 AM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	3/12/2010 12:20:10 AM
Toluene	ND	0.050		mg/Kg	1	3/12/2010 12:20:10 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/12/2010 12:20:10 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/12/2010 12:20:10 AM
Surr: 4-Bromofluorobenzene	104	64.7-120		%REC	1	3/12/2010 12:20:10 AM
EPA METHOD 300.0: ANIONS						Analyst: **LJB**
Chloride	13	7.5		mg/Kg	5	3/15/2010 3:27:19 AM
Sulfate	30	7.5		mg/Kg	5	3/15/2010 3:27:19 AM
EPA METHOD 7471: MERCURY						Analyst: **RAGS**
Mercury	ND	0.033		mg/Kg	1	3/10/2010 2:05:48 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **SNV**
Arsenic	ND	13		mg/Kg	5	3/16/2010 11:32:04 AM
Barium	87	0.50		mg/Kg	5	3/19/2010 6:15:53 PM
Cadmium	ND	0.50		mg/Kg	5	3/16/2010 11:32:04 AM
Chromium	2.6	1.5		mg/Kg	5	3/16/2010 11:32:04 AM
Lead	2.5	1.3		mg/Kg	5	3/16/2010 11:32:04 AM
Selenium	ND	13		mg/Kg	5	3/16/2010 11:32:04 AM
Silver	ND	1.3		mg/Kg	5	3/16/2010 11:32:04 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Bisti AVS
Lab Order:	1003168	**Collection Date:**	3/4/2010 2:50:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/12/2010 8:59:00 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/12/2010 8:59:00 AM
Surr: DNOP	98.7	61.7-135		%REC	1	3/12/2010 8:59:00 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/12/2010 12:50:29 AM
Surr: BFB	102	65.9-118		%REC	1	3/12/2010 12:50:29 AM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	3/12/2010 12:50:29 AM
Toluene	ND	0.050		mg/Kg	1	3/12/2010 12:50:29 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/12/2010 12:50:29 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/12/2010 12:50:29 AM
Surr: 4-Bromofluorobenzene	107	64.7-120		%REC	1	3/12/2010 12:50:29 AM
EPA METHOD 300.0: ANIONS						Analyst: **LJB**
Chloride	9.4	7.5		mg/Kg	5	3/15/2010 4:19:32 AM
Sulfate	14	7.5		mg/Kg	5	3/15/2010 4:19:32 AM
EPA METHOD 7471: MERCURY						Analyst: **RAGS**
Mercury	ND	0.033		mg/Kg	1	3/10/2010 2:07:39 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **SNV**
Arsenic	ND	13		mg/Kg	5	3/16/2010 11:48:37 AM
Barium	44	0.50		mg/Kg	5	3/16/2010 11:48:37 AM
Cadmium	ND	0.50		mg/Kg	5	3/16/2010 11:48:37 AM
Chromium	2.2	1.5		mg/Kg	5	3/16/2010 11:48:37 AM
Lead	2.5	1.3		mg/Kg	5	3/16/2010 11:48:37 AM
Selenium	ND	13		mg/Kg	5	3/16/2010 11:48:37 AM
Silver	ND	1.3		mg/Kg	5	3/16/2010 11:48:37 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	East Line AVS
Lab Order:	1003168	**Collection Date:**	3/4/2010 2:12:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-03	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/12/2010 9:34:58 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/12/2010 9:34:58 AM
Surr: DNOP	93.6	61.7-135		%REC	1	3/12/2010 9:34:58 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/12/2010 1:20:42 AM
Surr: BFB	98.5	65.9-118		%REC	1	3/12/2010 1:20:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	3/12/2010 1:20:42 AM
Toluene	ND	0.050		mg/Kg	1	3/12/2010 1:20:42 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/12/2010 1:20:42 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/12/2010 1:20:42 AM
Surr: 4-Bromofluorobenzene	105	64.7-120		%REC	1	3/12/2010 1:20:42 AM
EPA METHOD 300.0: ANIONS						Analyst: **LJB**
Chloride	ND	7.5		mg/Kg	5	3/15/2010 4:36:56 AM
Sulfate	22	7.5		mg/Kg	5	3/15/2010 4:36:56 AM
EPA METHOD 7471: MERCURY						Analyst: **RAGS**
Mercury	ND	0.033		mg/Kg	1	3/10/2010 2:09:30 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **SNV**
Arsenic	ND	13		mg/Kg	5	3/16/2010 11:53:20 AM
Barium	78	0.50		mg/Kg	5	3/16/2010 11:53:20 AM
Cadmium	ND	0.50		mg/Kg	5	3/16/2010 11:53:20 AM
Chromium	2.1	1.5		mg/Kg	5	3/16/2010 11:53:20 AM
Lead	2.5	1.3		mg/Kg	5	3/16/2010 11:53:20 AM
Selenium	ND	13		mg/Kg	5	3/16/2010 11:53:20 AM
Silver	ND	1.3		mg/Kg	5	3/16/2010 11:53:20 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Pettigrew AVS
Lab Order:	1003168	**Collection Date:**	3/4/2010 3:19:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-04	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/12/2010 10:10:56 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/12/2010 10:10:56 AM
Surr: DNOP	86.2	61.7-135		%REC	1	3/12/2010 10:10:56 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/12/2010 1:50:57 AM
Surr: BFB	93.8	65.9-118		%REC	1	3/12/2010 1:50:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	3/12/2010 1:50:57 AM
Toluene	ND	0.050		mg/Kg	1	3/12/2010 1:50:57 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/12/2010 1:50:57 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/12/2010 1:50:57 AM
Surr: 4-Bromofluorobenzene	97.4	64.7-120		%REC	1	3/12/2010 1:50:57 AM
EPA METHOD 300.0: ANIONS						Analyst: **LJB**
Chloride	2300	150		mg/Kg	100	3/19/2010 7:58:46 PM
Sulfate	29	1.5		mg/Kg	1	3/15/2010 4:54:20 AM
EPA METHOD 7471: MERCURY						Analyst: **RAGS**
Mercury	ND	0.033		mg/Kg	1	3/10/2010 2:11:13 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **SNV**
Arsenic	ND	13		mg/Kg	5	3/16/2010 11:58:06 AM
Barium	130	0.50		mg/Kg	5	3/16/2010 11:58:06 AM
Cadmium	ND	0.50		mg/Kg	5	3/16/2010 11:58:06 AM
Chromium	1.9	1.5		mg/Kg	5	3/16/2010 11:58:06 AM
Lead	2.1	1.3		mg/Kg	5	3/16/2010 11:58:06 AM
Selenium	ND	13		mg/Kg	5	3/16/2010 11:58:06 AM
Silver	ND	1.3		mg/Kg	5	3/16/2010 11:58:06 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	API AVS
Lab Order:	1003168	**Collection Date:**	3/4/2010 3:27:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-05	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/12/2010 10:46:54 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/12/2010 10:46:54 AM
Surr: DNOP	89.4	61.7-135		%REC	1	3/12/2010 10:46:54 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/12/2010 2:21:07 AM
Surr: BFB	98.4	65.9-118		%REC	1	3/12/2010 2:21:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	3/12/2010 2:21:07 AM
Toluene	ND	0.050		mg/Kg	1	3/12/2010 2:21:07 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/12/2010 2:21:07 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/12/2010 2:21:07 AM
Surr: 4-Bromofluorobenzene	102	64.7-120		%REC	1	3/12/2010 2:21:07 AM
EPA METHOD 300.0: ANIONS						Analyst: **LJB**
Chloride	47	1.5		mg/Kg	1	3/15/2010 5:46:34 AM
Sulfate	83	1.5		mg/Kg	1	3/15/2010 5:46:34 AM
EPA METHOD 7471: MERCURY						Analyst: **RAGS**
Mercury	ND	0.033		mg/Kg	1	3/10/2010 2:12:57 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **SNV**
Arsenic	ND	13		mg/Kg	5	3/16/2010 12:05:31 PM
Barium	44	0.50		mg/Kg	5	3/16/2010 12:05:31 PM
Cadmium	ND	0.50		mg/Kg	5	3/16/2010 12:05:31 PM
Chromium	1.5	1.5		mg/Kg	5	3/16/2010 12:05:31 PM
Lead	2.1	1.3		mg/Kg	5	3/16/2010 12:05:31 PM
Selenium	ND	13		mg/Kg	5	3/16/2010 12:05:31 PM
Silver	ND	1.3		mg/Kg	5	3/16/2010 12:05:31 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Cell 1 AVS S1
Lab Order:	1003168	**Collection Date:**	3/4/2010 4:35:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-06	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LJB
Chloride	23	1.5		mg/Kg	1	3/15/2010 6:03:58 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Cell 1 AVS S2
Lab Order:	1003168	**Collection Date:**	3/4/2010 4:42:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-07	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LJB
Chloride	37	1.5		mg/Kg	1	3/15/2010 6:21:23 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Cell 1 AVS S3
Lab Order:	1003168	**Collection Date:**	3/4/2010 4:55:00 PM
Project:	Annual Vadose Bisti Landfarm	**Date Received:**	3/6/2010
Lab ID:	1003168-08	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LJB
Chloride	51	1.5		mg/Kg	1	3/15/2010 6:38:47 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Site Name: 1003168 **Report Date:** 03/15/10

Lab ID: C10030312-001 **Collection Date:** 03/04/10 13:25
Client Sample ID: Westline AVS **DateReceived:** 03/09/10
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Alkalinity, 1:1	87	mg/kg-dry		5		ASA10-3	03/12/10 16:03 / dvg
Bicarbonate, 1:1	107	mg/kg-dry		5		ASA10-3	03/12/10 16:03 / dvg
Carbonate, 1:1	ND	mg/kg-dry		5		ASA10-3	03/12/10 16:03 / dvg

Lab ID: C10030312-002 **Collection Date:** 03/04/10 14:50
Client Sample ID: Bisti AVS **DateReceived:** 03/09/10
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Alkalinity, 1:1	70	mg/kg-dry		5		ASA10-3	03/12/10 16:11 / dvg
Bicarbonate, 1:1	86	mg/kg-dry		5		ASA10-3	03/12/10 16:11 / dvg
Carbonate, 1:1	ND	mg/kg-dry		5		ASA10-3	03/12/10 16:11 / dvg

Lab ID: C10030312-003 **Collection Date:** 03/04/10 14:12
Client Sample ID: East Line AVS **DateReceived:** 03/09/10
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Alkalinity, 1:1	76	mg/kg-dry		5		ASA10-3	03/12/10 16:18 / dvg
Bicarbonate, 1:1	93	mg/kg-dry		5		ASA10-3	03/12/10 16:18 / dvg
Carbonate, 1:1	ND	mg/kg-dry		5		ASA10-3	03/12/10 16:18 / dvg

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

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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Site Name: 1003168 **Report Date:** 03/15/10

Lab ID: C10030312-004 **Collection Date:** 03/04/10 15:19
Client Sample ID: Pettigrew AVS **DateReceived:** 03/09/10
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Alkalinity, 1:1	31	mg/kg-dry		5		ASA10-3	03/12/10 16:26 / dvg
Bicarbonate, 1:1	38	mg/kg-dry		5		ASA10-3	03/12/10 16:26 / dvg
Carbonate, 1:1	ND	mg/kg-dry		5		ASA10-3	03/12/10 16:26 / dvg

Lab ID: C10030312-005 **Collection Date:** 03/04/10 15:27
Client Sample ID: API AVS **DateReceived:** 03/09/10
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
NON-METALS							
Alkalinity, 1:1	65	mg/kg-dry		5		ASA10-3	03/12/10 16:33 / dvg
Bicarbonate, 1:1	80	mg/kg-dry		5		ASA10-3	03/12/10 16:33 / dvg
Carbonate, 1:1	ND	mg/kg-dry		5		ASA10-3	03/12/10 16:33 / dvg

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

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QA/QC Summary Report

Client: Hall Environmental
Project: 1003168

Report Date: 03/15/10
Work Order: C10030312

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA10-3									Batch: 25515
Sample ID: LCS1	Laboratory Control Sample				Run: MANTECH_100312B				03/12/10 15:42
Alkalinity, 1:1	210	mg/kg	5.0	103	80	120			
Sample ID: LCS	Laboratory Control Sample				Run: MANTECH_100312B				03/12/10 15:51
Alkalinity, 1:1	54.3	mg/kg	5.0	100	80	120			
Sample ID: MB-25515	Method Blank				Run: MANTECH_100312B				03/12/10 15:56
Alkalinity, 1:1	1.0	mg/kg	0.3						
Bicarbonate, 1:1	1	mg/kg							
Carbonate, 1:1	ND	mg/kg							
Sample ID: C10030312-005ADUP	Sample Duplicate				Run: MANTECH_100312B				03/12/10 16:40
Alkalinity, 1:1	65.4	mg/kg-dry	5.0				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Annual Vadose Bisti Landfarm **Work Order:** 1003168

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions											
Sample ID: 1003168-01BMSD		*MSD*				Batch ID: **21651**		Analysis Date:		3/15/2010 4:02:07 AM	
Chloride	25 38	mg/Kg	7.5	15	12.71	84.5	53.9	146	17.9	20	
Sulfate	52.19	mg/Kg	7.5	30	30.2	73.3	66.7	119	24 9	20	R
Sample ID: MB-21651		*MBLK*				Batch ID: **21651**		Analysis Date:		3/15/2010 12:33:13 AM	
Chloride	ND	mg/Kg	1.5								
Sulfate	ND	mg/Kg	1.5								
Sample ID: LCS-21651		*LCS*				Batch ID: **21651**		Analysis Date:		3/15/2010 12:50:38 AM	
Chloride	15.06	mg/Kg	1.5	15	0	100	90	110			
Sulfate	30.57	mg/Kg	1.5	30	0	102	90	110			
Sample ID: 1003168-01BMS		*MS*				Batch ID: **21651**		Analysis Date:		3/15/2010 3:44:43 AM	
Chloride	30.38	mg/Kg	7.5	15	12.71	118	53.9	146			
Sulfate	67.03	mg/Kg	7.5	30	30.2	123	66.7	119			S
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-21601		*MBLK*				Batch ID: **21601**		Analysis Date:		3/11/2010 5:52:24 AM	
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-21601		*LCS*				Batch ID: **21601**		Analysis Date:		3/11/2010 6:28:38 AM	
Diesel Range Organics (DRO)	44.57	mg/Kg	10	50	0	89.1	64.6	116			
Sample ID: LCSD-21601		*LCSD*				Batch ID: **21601**		Analysis Date:		3/11/2010 7:04:50 AM	
Diesel Range Organics (DRO)	45.37	mg/Kg	10	50	0	90.7	64.6	116	1.79	17.4	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: MB-21591		*MBLK*				Batch ID: **21591**		Analysis Date:		3/11/2010 4:53:25 AM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-21591		*LCS*				Batch ID: **21591**		Analysis Date:		3/11/2010 2:52:04 AM	
Gasoline Range Organics (GRO)	24.65	mg/Kg	5.0	25	1.71	91.8	77.7	135			
Method: EPA Method 8021B: Volatiles											
Sample ID: MB-21591		*MBLK*				Batch ID: **21591**		Analysis Date:		3/11/2010 4:53:25 AM	
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: LCS-21591		*LCS*				Batch ID: **21591**		Analysis Date:		3/13/2010 5:07:36 AM	
Benzene	0.9411	mg/Kg	0.050	1	0	94.1	78.8	132			
Toluene	0.9154	mg/Kg	0.050	1	0	91.5	78.9	112			
Ethylbenzene	0.9505	mg/Kg	0.050	1	0	95.1	69.3	125			
Xylenes, Total	2.811	mg/Kg	0.10	3	0	93.7	73	128			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Annual Vadose Bisti Landfarm **Work Order:** 1003168

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 7471: Mercury											
Sample ID: 1003168-05BMSD		*MSD*				Batch ID: **21594**		Analysis Date:		3/10/2010 2:16:26 PM	
Mercury	0.1512	mg/Kg	0.033	0.166	0.0046	88.4	75	125	3.85	20	
Sample ID: MB-21594		*MBLK*				Batch ID: **21594**		Analysis Date:		3/10/2010 1:38:50 PM	
Mercury	ND	mg/Kg	0.033								
Sample ID: LCS-21594		*LCS*				Batch ID: **21594**		Analysis Date:		3/10/2010 1:40:35 PM	
Mercury	0.1586	mg/Kg	0.033	0.167	0	95.2	80	120			
Sample ID: 1003168-05BMS		*MS*				Batch ID: **21594**		Analysis Date:		3/10/2010 2:14:41 PM	
Mercury	0.1455	mg/Kg	0.033	0.164	0.0046	85.9	75	125			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Annual Vadose Bisti Landfarm **Work Order:** 1003168

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 6010B: Soil Metals											
Sample ID: 1003168-01BMSD		*MSD*				Batch ID:	**21658**	Analysis Date:		3/16/2010 11:36:48 AM	
Arsenic	29.41	mg/Kg	13	24.41	0	120	75	125	0.355	20	
Cadmium	26.97	mg/Kg	0.50	24.41	0	110	75	125	1.58	20	
Chromium	29.72	mg/Kg	1.5	24.41	2.503	111	75	125	1.83	20	
Lead	29.99	mg/Kg	1.3	24.41	2.504	113	75	125	3.62	20	
Selenium	28.70	mg/Kg	13	24.41	0	118	75	125	5.42	20	
Silver	25.29	mg/Kg	1.3	24.41	0	104	75	125	0.221	20	
Sample ID: 1003168-01BMSD		*MSD*				Batch ID:	**21658**	Analysis Date:		3/19/2010 6:20:59 PM	
Barium	114.9	mg/Kg	0.50	24.41	87.08	114	75	125	0.552	20	
Sample ID: MB-21658		*MBLK*				Batch ID:	**21658**	Analysis Date:		3/16/2010 10:04:51 AM	
Arsenic	ND	mg/Kg	2.5								
Barium	ND	mg/Kg	0.10								
Cadmium	ND	mg/Kg	0.10								
Chromium	ND	mg/Kg	0.30								
Lead	ND	mg/Kg	0.25								
Selenium	ND	mg/Kg	2.5								
Silver	ND	mg/Kg	0.25								
Sample ID: MB-21658		*MBLK*				Batch ID:	**21658**	Analysis Date:		3/19/2010 6:02:37 PM	
Arsenic	ND	mg/Kg	2.5								
Barium	ND	mg/Kg	0.10								
Cadmium	ND	mg/Kg	0.10								
Chromium	ND	mg/Kg	0.30								
Lead	ND	mg/Kg	0.25								
Selenium	ND	mg/Kg	2.5								
Silver	ND	mg/Kg	0.25								
Sample ID: LCS-21658		*LCS*				Batch ID:	**21658**	Analysis Date		3/16/2010 10:07:17 AM	
Arsenic	25.46	mg/Kg	2.5	25	0	102	80	120			
Barium	25.35	mg/Kg	0.10	25	0	101	80	120			
Cadmium	25.17	mg/Kg	0.10	25	0	101	80	120			
Chromium	25.40	mg/Kg	0.30	25	0	102	80	120			
Lead	25.56	mg/Kg	0.25	25	0	102	80	120			
Selenium	25.63	mg/Kg	2.5	25	0	103	80	120			
Silver	24.64	mg/Kg	0.25	25	0	98.6	80	120			
Sample ID: LCS-21658		*LCS*				Batch ID:	**21658**	Analysis Date:		3/19/2010 6:05:23 PM	
Arsenic	24.74	mg/Kg	2.5	25	0	98.9	80	120			
Barium	24.81	mg/Kg	0.10	25	0	99.2	80	120			
Cadmium	24.45	mg/Kg	0.10	25	0	97 8	80	120			
Chromium	24 92	mg/Kg	0.30	25	0	99.7	80	120			
Lead	24.70	mg/Kg	0.25	25	0	98.8	80	120			
Selenium	24.76	mg/Kg	2.5	25	0	99.0	80	120			
Silver	24.67	mg/Kg	0.25	25	0	98.7	80	120			
Sample ID: 1003168-01BMS		*MS*				Batch ID:	**21658**	Analysis Date:		3/16/2010 11:34:27 AM	
Arsenic	29.31	mg/Kg	13	24.1	0	122	75	125			
Cadmium	26.55	mg/Kg	0.50	24.1	0	110	75	125			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Annual Vadose Bisti Landfarm **Work Order:** 1003168

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 6010B: Soil Metals											
Sample ID: 1003168-01BMS		*MS*				Batch ID:	**21658**	Analysis Date:		3/16/2010 11:34:27 AM	
Chromium	29.18	mg/Kg	1.5	24.1	2.503	111	75	125			
Lead	28.92	mg/Kg	1.3	24.1	2.504	110	75	125			
Selenium	30.30	mg/Kg	13	24.1	0	126	75	125			S
Silver	25.24	mg/Kg	1.3	24.1	0	105	75	125			
Sample ID: 1003168-01BMS		*MS*				Batch ID:	**21658**	Analysis Date:		3/19/2010 6:18:25 PM	
Barium	114.3	mg/Kg	0.50	24.1	87.08	113	75	125			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING SOUT | Date Received: 3/6/2010

Work Order Number 1003168 | Received by: AMF

Checklist completed by: _____ 3/8/10 (Signature / Date) | Sample ID labels checked by: _____ (Initials)

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐		
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐	
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐		
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐		
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑		
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*	
Container/Temp Blank temperature?	**4.2°**	*<6° C Acceptable* If given sufficient time to cool.			

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Western Refining
Bill Robertson
Mailing Address: 111 CR 4990
Bloomfield, NM 87413
Phone #: 505 632 4035
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Annual Vadose Bisti Landfarm
Project #:
Project Manager: Ashley Ager
Sampler: Devin Hencmann
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1005142	BTEX + ~~MTBE + TMBs~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Soil Alkalinity	Chlorides 300.0			Air Bubbles (Y or N)
3.4.10	13:25	Soil	Westline AVS	4oz/3	NONE	1	X		X				X	X				X				
3.4.10	14:50	Soil	Bisti AVS	4oz/3	NONE	2	X		X				X	X				X				
3.4.10	14:12	Soil	EastLine AVS	4oz/3	NONE	3	X		X				X	X				X				
3.4.10	15:19	Soil	Pettigrew AVS	4oz/3	NONE	4	X		X				X	X				X				
3.4.10	15:27	Soil	API AVS	4oz/3	NONE	5	X		X				X	X				X				
3.4.10	16:35	Soil	Cell 1 AVS S1	4oz/3	NONE	6													X			
3.4.10	16:42	Soil	Cell 1 AVS S2	4oz/1	NONE	7													X			
3.4.10	16:55	Soil	Cell 1 AVS S3	4oz/1	NONE	8													X			

Date	Time	Relinquished by:	Received by:	Date	Time
3/5/10	11:00			3/4/10	10:10
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Please copy results to aager@itenv

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Wednesday, March 17, 2010

Bill Robertson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Bisti Landfarm Annual Treatment Zone Sampling

Order No.: 1003167

Dear Bill Robertson:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 3/8/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *17-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	API Treatment Zone Composite
Lab Order:	1003167	**Collection Date:**	3/4/2010 4:20:00 PM
Project:	Bisti Landfarm Annual Treatment Zone Samplin	**Date Received:**	3/8/2010
Lab ID:	1003167-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	29	10		mg/Kg	1	3/12/2010 10:52:07 PM
Motor Oil Range Organics (MRO)	53	50		mg/Kg	1	3/12/2010 10:52:07 PM
Surr: DNOP	112	61.7-135		%REC	1	3/12/2010 10:52:07 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/11/2010 11:19:22 PM
Surr: BFB	94.9	65.9-118		%REC	1	3/11/2010 11:19:22 PM
EPA METHOD 300.0: ANIONS						Analyst: **LJB**
Chloride	170	7.5		mg/Kg	5	3/15/2010 2:17:40 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *17-Mar-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Crude Treatment Zone Composite
Lab Order:	1003167	**Collection Date:**	3/4/2010 4:24:00 PM
Project:	Bisti Landfarm Annual Treatment Zone Samplin	**Date Received:**	3/8/2010
Lab ID:	1003167-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JB**
Diesel Range Organics (DRO)	120	10		mg/Kg	1	3/12/2010 11:28:23 PM
Motor Oil Range Organics (MRO)	80	50		mg/Kg	1	3/12/2010 11:28:23 PM
Surr: DNOP	105	61.7-135		%REC	1	3/12/2010 11:28:23 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/11/2010 11:49:46 PM
Surr: BFB	94.1	65.9-118		%REC	1	3/11/2010 11:49:46 PM
EPA METHOD 300.0: ANIONS						Analyst: **LJB**
Chloride	11	1.5		mg/Kg	1	3/15/2010 3:09:54 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Bisti Landfarm Annual Treatment Zone Samplin **Work Order:** 1003167

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions											
Sample ID: 1003167-01AMSD		*MSD*				Batch ID: **21651**		Analysis Date:		3/15/2010 2:52:29 AM	
Chloride	167.1	mg/Kg	7.5	15	174.2	-47.1	53.9	146	1.01	20	S
Sample ID: MB-21651		*MBLK*				Batch ID: **21651**		Analysis Date:		3/15/2010 12:33:13 AM	
Chloride	ND	mg/Kg	1.5								
Sample ID: LCS-21651		*LCS*				Batch ID: **21651**		Analysis Date:		3/15/2010 12:50:38 AM	
Chloride	15.06	mg/Kg	1.5	15	0	100	90	110			
Sample ID: 1003167-01AMS		*MS*				Batch ID: **21651**		Analysis Date:		3/15/2010 2:35:05 AM	
Chloride	168.8	mg/Kg	7.5	15	174.2	-35.8	53.9	146			S
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-21601		*MBLK*				Batch ID: **21601**		Analysis Date:		3/11/2010 5:52:24 AM	
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-21601		*LCS*				Batch ID: **21601**		Analysis Date:		3/11/2010 6:28:38 AM	
Diesel Range Organics (DRO)	44.57	mg/Kg	10	50	0	89.1	64.6	116			
Sample ID: LCSD-21601		*LCSD*				Batch ID: **21601**		Analysis Date:		3/11/2010 7:04:50 AM	
Diesel Range Organics (DRO)	45.37	mg/Kg	10	50	0	90.7	64.6	116	1.79	17.4	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: MB-21591		*MBLK*				Batch ID: **21591**		Analysis Date:		3/11/2010 4:53:25 AM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-21591		*LCS*				Batch ID: **21591**		Analysis Date:		3/11/2010 2:52:04 AM	
Gasoline Range Organics (GRO)	24.65	mg/Kg	5.0	25	1.71	91.8	77.7	135			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT** Date Received: **3/8/2010**

Work Order Number **1003167** Received by: **AMF**

Checklist completed by: _____ 3/8/10 Sample ID labels checked by: _____
Signature Date Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**4.2°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Western Refining
Bill Robertson
Mailing Address: 111 CR 4990
Bloomfield NM 87413
Phone #: 505-632-4035
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name:
Bisti Landfarm
Annual Treatment Zone Sampling
Project #:

Project Manager:
Ashley Ager
Sampler: Devin Henemann
On Ice: ☒ Yes ☐ No
Sample Temperature: 7.2 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1003047	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides 300.0				Air Bubbles (Y or N)
3/4/10	1620	Soil	API Treatment zone composite	1/4oz		1			X									X				
3/4/10	1624	Soil	Crude Treatment zone composite	1/4oz		2			X									X				

Analysis Request

Relinquished by:	Date	Time	Received by:	Date	Time
	3/5/10	1700		3/6/10	10:00

Remarks: Please forward results to:
aager@ltenv.com

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

Western Refining

WNR LISTED NYSE

RECEIVED

2010 JAN 7 AM 11 55

January 4, 2010

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

CERTIFIED MAIL: 7009 0820 0000 0482 9368

RE: Updated Facility Map
Western Refining's Centralized Surface Waste Management Facility
Bisti Landfarm: NM-02-0010

Dear Mr. Jones,

Western Refining (Western) submits an updated facility map for the Bisti Landfarm (NM-02-0010) located in Unit I of Section 16 of Township 25N, Range 12W in San Juan County, New Mexico following transfer of the facility from Giant Industries, Arizona to Western Refining Terminals, Incorporated. The current landfarm comprises 27.5 acres, including a 14.9-acre southernmost cell that is not currently operational (Cell 1). Within 12.6 acres directly north of Cell 1, there are two active cells (API and Crude Cells) and an open area. An updated map is enclosed.

Cell 1 was last sampled in 2004, and the results were used to request discontinued maintenance (disking) and permission to add possible subsequent lifts (see attached letter and NMOCD approval). Western understands that this area is required to be closed under NMOCD standards in effect at the time of a closure request. Additionally, if Western chooses to re-activate Cell 1, Western will comply with the revised rules set forth in 19.15.36 NMAC.

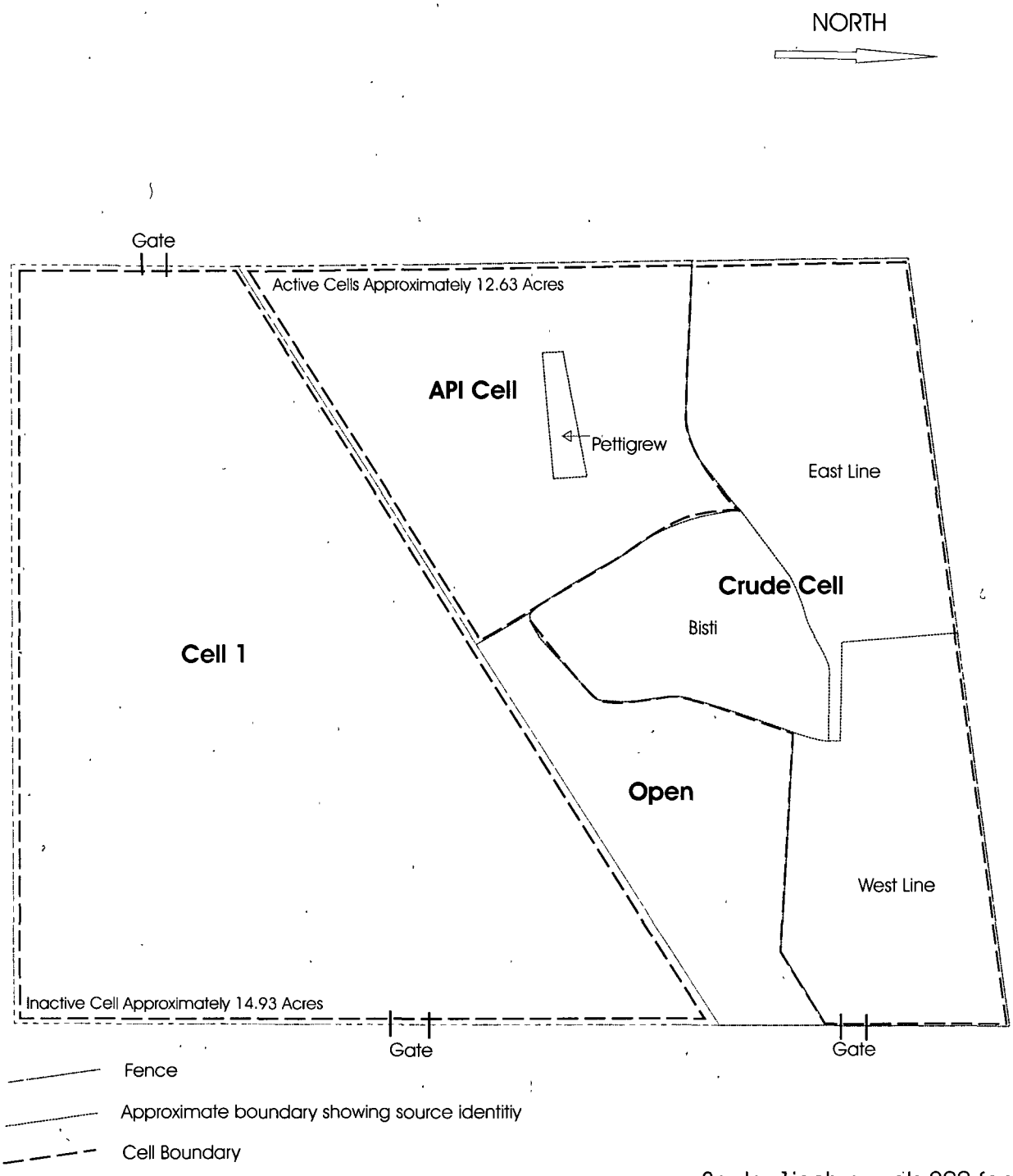
Please contact me at (505) 632-4044 or at ron.copple@wnr.com with any questions that may arise.

Sincerely,
Western Refining

Ron Copple

CC: Bill Robertson, Western Refining
Allen Hains, Western Refining
Ashley Ager, Lodestar Services
File

Attachments: Updated Map of Bisti Landfarm
Letter concerning sampling of Cell 1.



Scale: 1inch equals 200 feet

Lodestar Services, Inc PO Box 4465 Durango, CO 81302	**Western Refining** **Bisti Landfarm** **NM-02-0010**	Figure 1 Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

March 8, 2004

Mr. Timothy Kinney
Giant Industries Arizona, Inc.
111 County Road 4990
Bloomfield, NM 87413

RE: Approval for Discontinued Maintenance Status
Giant Industries Arizona, Inc., Permit NM-02-0010
NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM,
San Juan County, New Mexico.

Dear Mr. Kinney:

The New Mexico Oil Conservation Division (OCD) has received Loadstar Services, Inc. letter dated March 1, 2004 on behalf of Giant Industries Arizona, Inc. and has reviewed the analytical data concerning remediated soils within Cells 1. Based on the information provided, Cell 1 is hereby approved for discontinued maintenance status and the addition of another lift of contaminated soil. Note that with the addition of successive lifts Giant must resume maintenance and treatment zone monitoring. The treatment zone monitoring depth must be adjusted to reach the 2-3 foot zone below the original native ground surface. If Giant wants to move the soils from the facility, separate OCD authorization must be granted.

Please be advised that OCD approval does not relieve Giant of liability should their operation result in pollution of the ground water, surface water or the environment. In addition, OCD approval does not relieve Giant of the responsibility for compliance with other federal, state, local laws and/or regulations.

If you have any further questions please do not hesitate to contact me at (505) 476-3488.

Sincerely,

Martyne J. Kieling
Environmental Geologist

xc: Aztec OCD Office
Martin Nee, Loadstar Services, Inc., P.O. Box 3861 Farmington, NM 87499-3861

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

March 1, 2004

Ms. Martyne Kieling
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, 87505

RE: Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Ms. Kieling,

On February 9, 2004, Lodestar Services, Inc. collected a 5 point composite sample from Giant Industries Arizona, Inc.'s (Giant) landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. The sample was from material previously landfarmed within the original fifteen-acre cell. The intent of sample collection was to determine if the material within the original cell was of acceptable concentrations of hydrocarbons to discontinue disking and to add a subsequent lift in accordance with the New Mexico Oil Conservation Division (OCD) Rule 711.

Approximately 24 ounces of soil was collected at each of the locations shown on the attached Landfarm Cell Diagram. Soil was collected from approximately three inches beneath the top of the six inch thick lift. Each sample was immediately placed in a 1 gallon plastic bag and sealed. Once each of the five samples had been collected the material was thoroughly mixed and an eight ounce laboratory sample jar filled and sealed. The sample was then labeled with the sampler's initials, time, date and location, and placed on ice. The sample was then delivered to Envirotech Inc.'s laboratory in Farmington, NM following strict chain of custody procedures. The sample was analyzed for benzene, toluene, ethylbenzene, xylenes, (BTEX) and total petroleum hydrocarbons, by USEPA methods, 8021 and 8015, respectively.

The laboratory report is attached. The following laboratory results have been converted from micrograms per kilogram and milligrams per kilogram for comparison to NMOCD standards.

Analyte	Result	NMOCD Standard
Benzene	Not detected	10 ppm
Toluene	0.030 ppm	
Ethylbenzene	0.019 ppm	
Xylenes	0.332 ppm	
Total BTEX	0.381 ppm	50 ppm
Total Petroleum Hydrocarbons	8.1 ppm	100 ppm

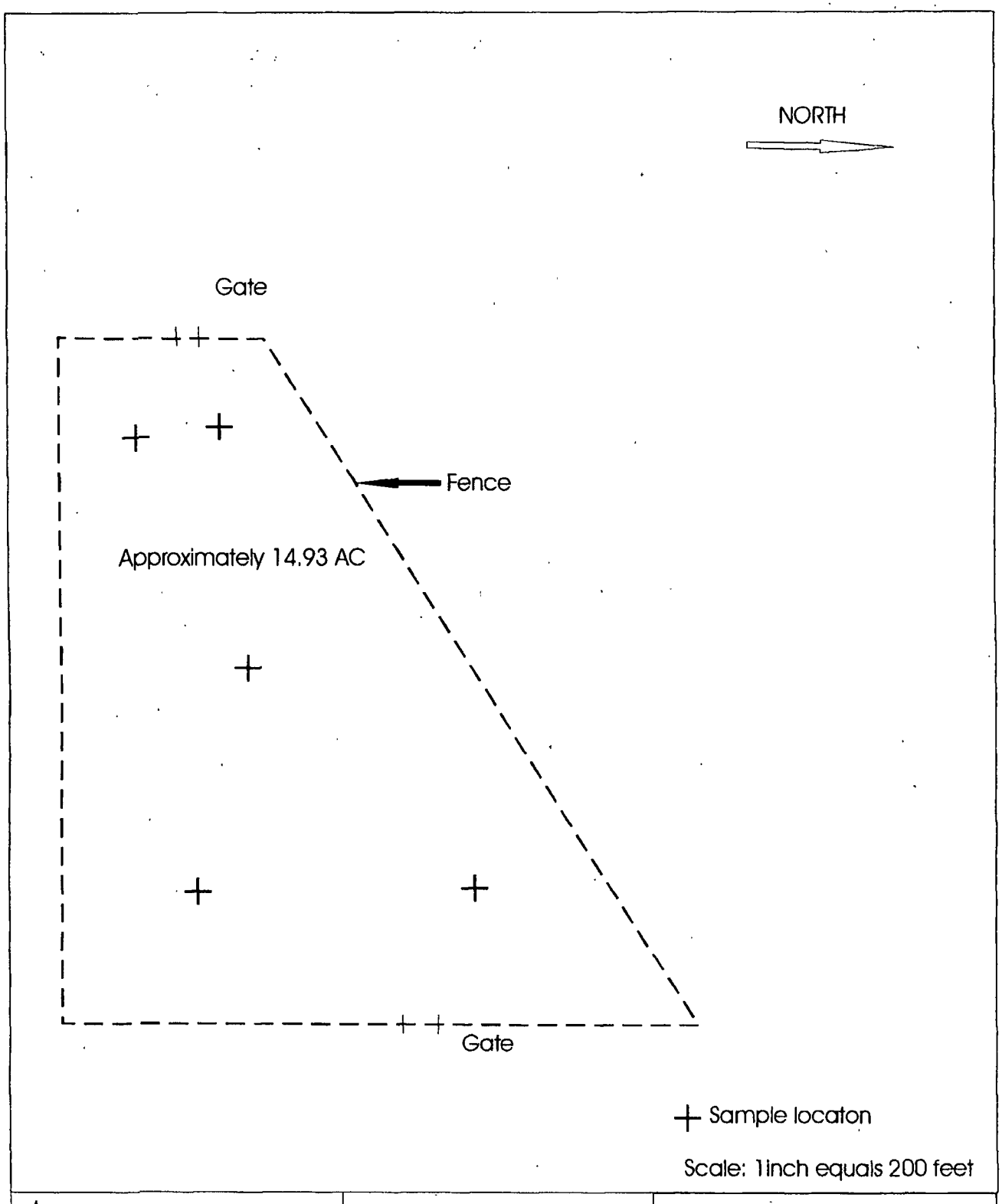
Based on the results of sampling presented above, Giant herein requests permission to discontinue disking the existing material and approval for the addition of future lifts. In the event that future lifts are added disking will resume.

We look forward to your approval of this proposed work. Should you have any questions or require additional information please do not hesitate to call me at (505) 334-2791 or Gary Winn (505) 632-4077.

Sincerely,

Martin Nee

Cc: Mr. Gary Winn, Giant Industries Arizona, Inc
Mr. Tim Kinney, Giant Industries Arizona, Inc.
File



Lodestar Services, Inc
PO Box 3861
Farmington, NM 87499

Landfarm Cell Diagram

Figure 1
Drawn By MJN 3/1/04
Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

February 13, 2004

Mr. Martin Nee
Lodestar Service
#26 CR 3500
Flora Vista, New Mexico 87415

Phone: (505) 334-2791
Cell: (505) 320-9675

Client No.: 97059-007

Dear Mr. Nee,

Enclosed are the analytical results for the sample collected from the location designated as "Bisti Land Farm". One soil sample was collected by Giant designated personnel on 2/09/04, and delivered to the Envirotech laboratory on 2/09/04 for Total Petroleum Hydrocarbons (TPH) per USEPA Method 8015 and BTEX per USEPA Method 8021.

The sample was documented on Envirotech Chain of Custody No. 11723 and assigned Laboratory Nos. 27817 (5 Pt. Composite) for tracking purposes.

The sample was analyzed on 2/12/04 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Christine M. Walters
Lab Coordinator / Environmental Scientist

enclosure

CMW/cmw

C:/files/labreports/giant/.wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Giant	Project #:	97059-007
Sample ID:	5 pt Composite	Date Reported:	02-12-04
Laboratory Number:	27817	Date Sampled:	02-09-04
Chain of Custody:	11723	Date Received:	02-09-04
Sample Matrix:	Soil	Date Analyzed:	02-12-04
Preservative:	Cool	Date Extracted:	02-09-04
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**30.5**	**1.7**
Ethylbenzene	**18.7**	**1.5**
p,m-Xylene	**287**	**2.2**
o-Xylene	**45.1**	**1.0**
Total BTEX	**381**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**95 %**
	1,4-difluorobenzene	**95 %**
	Bromochlorobenzene	**95 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bisti Land Farm.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	02-12-BTEX QA/QC	Date Reported:	02-12-04
Laboratory Number:	27816	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-12-04
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Det. Limit
Benzene	4.2776E-002	4.2905E-002	0.3%	ND	0.2
Toluene	4.8966E-002	4.9064E-002	0.2%	ND	0.2
Ethylbenzene	7.4036E-002	7.4259E-002	0.3%	ND	0.2
p,m-Xylene	6.8275E-002	6.8480E-002	0.3%	ND	0.2
o-Xylene	5.5866E-002	5.5978E-002	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	% Diff.	Accept Range	Detect. Limit
Benzene	41.2	40.7	1.2%	0 - 30%	1.8
Toluene	787	772	2.0%	0 - 30%	1.7
Ethylbenzene	418	409	2.0%	0 - 30%	1.5
p,m-Xylene	2,600	2,570	1.2%	0 - 30%	2.2
o-Xylene	927	911	1.7%	0 - 30%	1.0

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	41.2	50.0	91.1	99.9%	39 - 150
Toluene	787	50.0	836	99.8%	46 - 148
Ethylbenzene	418	50.0	467	99.8%	32 - 160
p,m-Xylene	2,600	100	2,690	99.6%	46 - 148
o-Xylene	927	50.0	975	99.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for samples 27816 - 27817, 27824 - 27825, 27829 - 27830.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Giant	Project #:	97059-007
Sample ID:	5 pt Composite	Date Reported:	02-12-04
Laboratory Number:	27817	Date Sampled:	02-09-04
Chain of Custody No:	11723	Date Received:	02-09-04
Sample Matrix:	Soil	Date Extracted:	02-09-04
Preservative:	Cool	Date Analyzed:	02-12-04
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**1.1**	**0.2**
Diesel Range (C10 - C28)	**7.0**	**0.1**
Total Petroleum Hydrocarbons	**8.1**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bisti Land Farm.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	02-12-TPH QA/QC	Date Reported:	02-12-04
Laboratory Number:	27815	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-12-04
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	04-29-03	1.8591E-002	1.8572E-002	**0.10%**	**0 - 15%**
Diesel Range C10 - C28	04-29-03	1.5507E-002	1.5492E-002	**0.10%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**ND**	**0.2**
Diesel Range C10 - C28	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**ND**	**ND**	**0.0%**	**0 - 30%**
Diesel Range C10 - C28	**6.5**	**6.4**	**1.5%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**ND**	**250**	**250**	**100%**	**75 - 125%**
Diesel Range C10 - C28	**6.5**	**250**	**256**	**99.8%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples 27815 - 27817, 27824 - 27825, 27829 - 27830.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

CHAIN OF CUSTODY RECORD

11723

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
Giant Land Farm	Bisti	
Sampler: MJN	Client No. Giant 97059-007	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX 8021	TPH 8015					Remarks
5pt Composite	2-9-04	1151	27817	Soil	1	✓	✓					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	2904	1350	Mark Walls	2/9/04	13:50
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

Western Refining

LOGISTICS

WNR LISTED NYSE

RECEIVED OCD

2010 JAN -6 A 11:31

January 4, 2010

Mr. Brad Jones
Solid Waste Management Facilities
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

CERTIFIED MAIL: 7009 0820 0000 0482 8675

RE: 4th Quarter 2009, Sampling at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

Dear Mr. Jones:

Please find enclosed the 4th Quarter 2009, sampling results at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

If you have any questions or require additional information, please do not hesitate to contact me at (505) 632-4077 or at Bill.Robertson@wnr.com.

Sincerely,
Western Refining

Bill Robertson
Safety, Environmental & Regulatory Manager

Attachments Analytical Report

Cc: Allen Hains, Western Refining
File

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

December 28, 2009

Mr. Bill Robertson
Western Refining, Southwest
111 CR 4990
Bloomfield, NM 87413

RE: Fourth Quarter Sampling at Western Refining's Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Mr. Robertson,

On December 4, 2009, Lodestar Services, Inc. collected fourth quarter samples from Western Refining's (Western's) Bisti Landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. One crude cell sample and one API cell sample was collected as shown on Figure 1. Each sample was collected using a hand powered auger from three feet beneath native ground surface. Samples were placed in eight-ounce glass jars and stored on ice during shipping to Hall Environmental Analysis Laboratories (HEAL) in Albuquerque, NM. Strict chain-of-custody procedures were followed during shipping. HEAL analyzed the samples for the following constituents: chlorides, total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, and xylenes (BTEX).

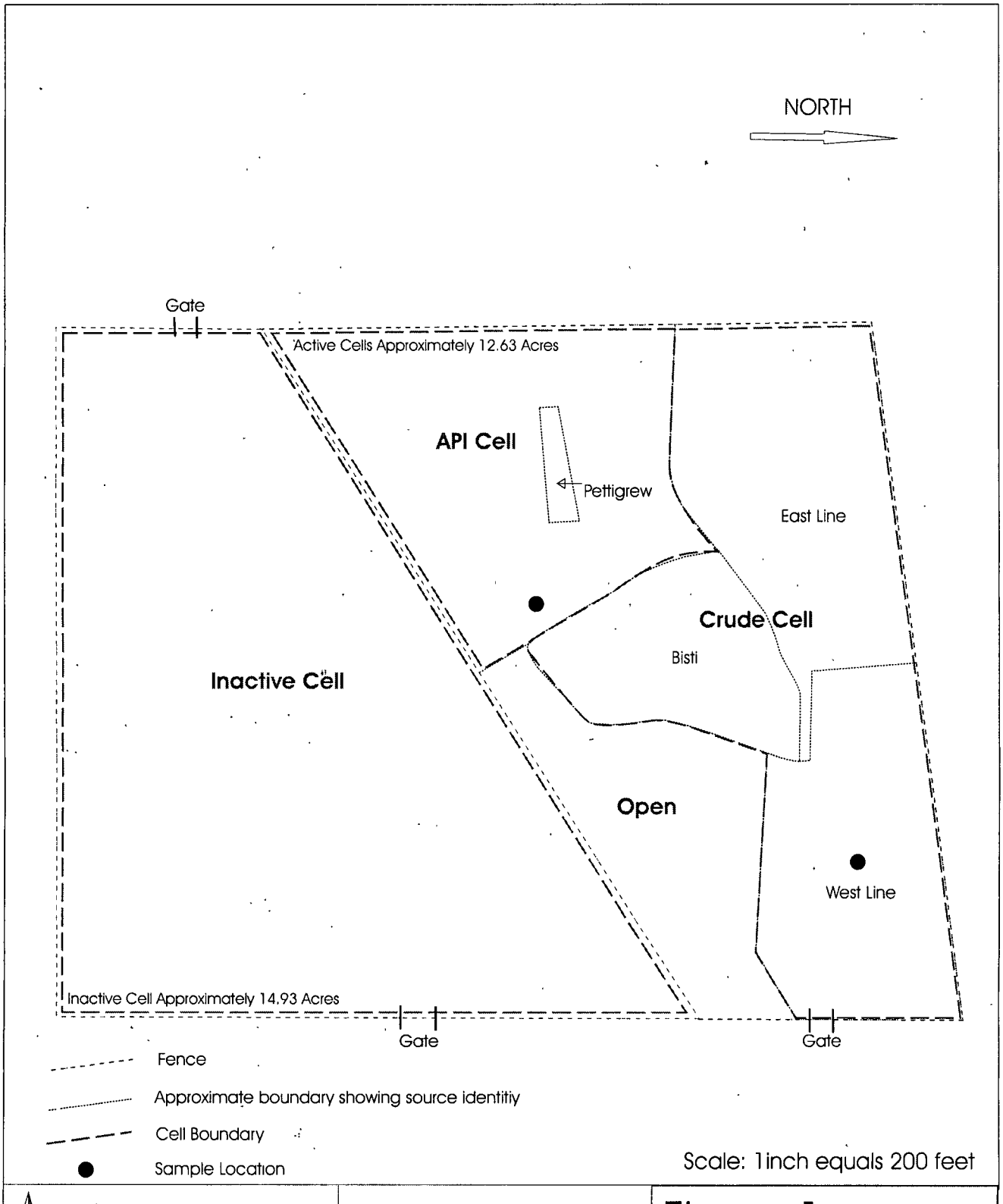
Concentrations of BTEX and TPH were not detected in either sample. Chloride concentrations were 20 mg/kg in the API Cell sample and 18 mg/kg in the Crude Cell sample. The complete laboratory report is included for your review. Analytical results are shown on the attached table and can be compared to the original baseline data collected on March 27, 1998.

Should you have any questions or require additional information please do not hesitate to call me at (970) 946-1093.

Respectfully Submitted,
Lodestar Services, Inc.

Ashley Ager

Cc. File



Lodestar Services, Inc
PO Box 4465
Durango, CO 81302

Landfarm Cell Diagram

Figure 1

Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

API Cell

	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter	2009 Annual	2009 2nd Quarter	2009 3rd Quarter	2009 4th Quarter
TPH (mg/kg)	nd	nd	nd	nd	31	nd	nd	nd	nd	nd	nd	nd
GRO	nd	nd	nd	nd	31	nd	nd	nd	nd	nd	nd	nd
DRO	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MRO	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BTEX (mg/kg)	nd	nd	nd	nd	0.686	nd	nd	nd	nd	nd	nd	nd
Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	nd	nd	nd	nd	0.064	nd	nd	nd	nd	nd	nd	nd
Ethyl-Benzene	nd	nd	nd	nd	0.082	nd	nd	nd	nd	nd	nd	nd
Xylenes	nd	nd	nd	nd	0.54	nd	nd	nd	nd	nd	nd	nd
Metals (mg/kg)												
Arsenic	0.187				2.5				nd			
Barium	47.1				130				81			
Cadmium	nd				nd				nd			
Calcium	2690				7300				740			
Chromium	0.305				4.4				2.9			
Lead	0.477				4.1				3.5			
Magnesium	863				1800				830			
Potassium	729				1300				680			
Selenium	nd				nd				nd			
Silver	nd				nd				nd			
Sodium	66.2				150				3600			
Mercury	nd				nd				nd			
Gen Chem												
Alkalinity (meq/l)	54.4				3500				1.9			
Bicarbonate (meq/l)	49.4				2900				1.9			
Carbonate (meq/l)	4.52				540				nd			
Sulfate (mg/kg)	81.7				nd				1600			
Chloride (mg/kg)	nd				660	180	37	68	4100	67	95	20

Crude Cell

	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter	2009 Annual	2009 2nd Quarter	2009 3rd Quarter	2009 4th Quarter
TPH (mg/kg)	nd	nd	nd	nd	nd	nd	nd	nd	520	nd	nd	nd
GRO	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DRO	nd	nd	nd	nd	nd	nd	nd	nd	250	nd	nd	nd
MRO	nd	nd	nd	nd	nd	nd	nd	nd	270	nd	nd	nd
BTEX (mg/kg)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethyl-Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Xylenes	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Metals (mg/kg)												
Arsenic	0.173				1.9				nd			
Barium	14.8				140				96			
Cadmium	nd				nd				nd			
Calcium	3530				2800				4500			
Chromium	0.248				3.7				4			
Lead	0.479				3.8				5.3			
Magnesium	957				1200				1100			
Potassium	806				1100				640			
Selenium	nd				nd				nd			
Silver	nd				nd				nd			
Sodium	69.7				nd				nd			
Mercury (mg/kg)	nd				nd				nd			
Gen Chem												
Alkalinity (meq/l)	791				1200				1.8			
Bicarbonate (meq/l)	731				880				1.8			
Carbonate (meq/l)	56.3				280				nd			
Sulfate (mg/kg)	68				690				860			
Chloride (mg/kg)	nd				110	540	2.1	35	4.3	5.4	14	18

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Thursday, December 17, 2009

Bill Robertson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: Western Bisti Landfarm

Order No.: 0912220

Dear Bill Robertson:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 12/10/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

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, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

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

Hall Environmental Analysis Laboratory, Inc.

Date: *17-Dec-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Crude Cell
Lab Order:	0912220	**Collection Date:**	12/4/2009 12:40:00 PM
Project:	Western Bisti Landfarm	**Date Received:**	12/10/2009
Lab ID:	0912220-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/14/2009 2:34:53 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/14/2009 2:34:53 PM
Surr: DNOP	96.7	61.7-135		%REC	1	12/14/2009 2:34:53 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/12/2009 3:37:12 AM
Surr: BFB	87.0	65.9-118		%REC	1	12/12/2009 3:37:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/12/2009 3:37:12 AM
Toluene	ND	0.050		mg/Kg	1	12/12/2009 3:37:12 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/12/2009 3:37:12 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/12/2009 3:37:12 AM
Surr: 4-Bromofluorobenzene	92.4	64.7-120		%REC	1	12/12/2009 3:37:12 AM
EPA METHOD 300.0: ANIONS						Analyst: **TAF**
Chloride	18	3.0		mg/Kg	10	12/17/2009 8:06:57 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Estimated value
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: *17-Dec-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	API Cell
Lab Order:	0912220	**Collection Date:**	12/4/2009 12:23:00 PM
Project:	Western Bisti Landfarm	**Date Received:**	12/10/2009
Lab ID:	0912220-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/14/2009 3:11:07 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/14/2009 3:11:07 PM
Surr: DNOP	94.3	61.7-135		%REC	1	12/14/2009 3:11:07 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/12/2009 4:07:25 AM
Surr: BFB	98.8	65.9-118		%REC	1	12/12/2009 4:07:25 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/12/2009 4:07:25 AM
Toluene	ND	0.050		mg/Kg	1	12/12/2009 4:07:25 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/12/2009 4:07:25 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/12/2009 4:07:25 AM
Surr: 4-Bromofluorobenzene	109	64.7-120		%REC	1	12/12/2009 4:07:25 AM
EPA METHOD 300.0: ANIONS						Analyst: **TAF**
Chloride	20	3.0		mg/Kg	10	12/17/2009 8:24:21 AM

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Estimated value	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: Western Refining Southwest, Inc.
Project: Western Bisti Landfarm **Work Order:** 0912220

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions											
Sample ID: MB-20874		*MBLK*				Batch ID:	**20874**	Analysis Date:	12/17/2009 7:32:08 AM		
Chloride	ND	mg/Kg	0.30								
Sample ID: LCS-20874		*LCS*				Batch ID:	**20874**	Analysis Date:	12/17/2009 7:49:32 AM		
Chloride	14.89	mg/Kg	0.30	15	0	99.3	90	110			
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-20846		*MBLK*				Batch ID:	**20846**	Analysis Date:	12/14/2009 9:43:41 AM		
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-20846		*LCS*				Batch ID:	**20846**	Analysis Date:	12/14/2009 10:19:55 AM		
Diesel Range Organics (DRO)	44.87	mg/Kg	10	50	0	89.7	64.6	116			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: MB-20842		*MBLK*				Batch ID:	**20842**	Analysis Date:	12/12/2009 5:38:38 AM		
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-20842		*LCS*				Batch ID:	**20842**	Analysis Date:	12/12/2009 4:37:50 AM		
Gasoline Range Organics (GRO)	25.94	mg/Kg	5.0	25	1.33	98.4	77.7	135			
Method: EPA Method 8021B: Volatiles											
Sample ID: MB-20842		*MBLK*				Batch ID:	**20842**	Analysis Date:	12/12/2009 5:38:38 AM		
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: LCS-20842		*LCS*				Batch ID:	**20842**	Analysis Date:	12/12/2009 5:08:17 AM		
Benzene	0.9175	mg/Kg	0.050	1	0.0165	90.1	78.8	132			
Toluene	0.9181	mg/Kg	0.050	1	0.0062	91.2	78.9	112			
Ethylbenzene	0.9758	mg/Kg	0.050	1	0	97.6	69.3	125			
Xylenes, Total	2.951	mg/Kg	0.10	3	0	98.4	73	128			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT** Date Received: **12/10/2009**

Work Order Number **0912220** Received by: **ARS**

Checklist completed by: _____ 12/10/09 Sample ID labels checked by: _____

Signature Date Initials

Matrix: Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace? No VOA vials submitted ☑		Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**0.2°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Western Refining
Bill Robertson
Mailing Address: 111 CR 4990
Bloomfield, NM
Phone #: (505) 632-8006
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Western Bisti Landfarm
Project #:
Project Manager: Bill Robertson
Sampler: Devin Hencmann
On Ice: ☒ Yes ☐ No
Sample Temperature: 0.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0911220	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides 300.1				Air Bubbles (Y or N)
12/4/09	1240	Soil	Crude Cell	4oz/2	NONE	1	X		X									X				
12/4/09	1223	Soil	API Cell	4oz/2	NONE	2	X		X									X				

Date	Time	Relinquished by:	Received by:	Date	Time
12/9/09	19:00			12/10/09	10:05
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks: Please copy results to ala@lodestarservices.com

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

Western Refining
LOGISTICS

WNR LISTED NYSE

RECEIVED OCD
2009 OCT 19 A 11:22

October 15, 2009

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Certified Mail # 7009 0820 0000 0482 8590

RE: Notice to Rescind Revised Sampling and Analysis Plan
Western Refining's Centralized Surface Waste Management Facility
Bisti Landfarm: NM-02-0010

Dear Mr. Jones,

Western Refining (Western) rescinds the Revised Sampling and Analysis Plan dated September 26, 2009 for the Bisti Landfarm (NM-02-0010) located in Unit I of Section 16 of Township 25N, Range 12W in San Juan County, New Mexico. As discussed with you during a conference call on October 14, 2009, Western will instead submit a response plan addressing migration of contaminants.

Please contact me at (505) 632-4044 or at ron.copple@wnr.com with any questions that may arise.

Sincerely,
Western Refining

Ron Copple

CC: Bill Robertson, Western Refining
Allen Hains, Western Refining
Ashley Ager, Lodestar Services
File

Western Refining

LOGISTICS

WNR LISTED NYSE

September 21, 2009

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RECEIVED OCD
2009 SEP 23 A 11:32

RE: Revised Sampling and Analysis Plan
Western Refining's Centralized Surface Waste Management Facility
Bisti Landfarm: NM-02-0010

Dear Mr. Jones,

Western Refining (Western) proposes the following Revised Sampling and Analysis Plan in response to recent concerns from the New Mexico Oil Conservation Division (NMOCD) regarding monitoring compliance and potential downward migration of contaminants at Western's Bisti Landfarm (NM-02-0010). The Bisti Landfarm was originally permitted in 1998 and is located in Unit I of Section 16 of Township 25N, Range 12W in San Juan County, New Mexico. This plan discusses how Western intends to bring the monitoring and operational procedures for the facility into compliance with revised rules set forth in 19.15.36 NMAC. Immediate implementation of the new procedures will allow Western to identify and delineate possible areas of concern, as well as address migration of contaminants, if necessary. Once the sampling procedures are refined, results may indicate migration has not occurred. Should migration be confirmed, Western will initiate corrective actions as required. The attached sampling plan also clarifies issues concerning background conditions, cell delineation and previous sampling methods.

Western strives towards industry and government cooperation and is committed to achieving full compliance as required by NMOCD. Your consideration in this matter is greatly appreciated. Western wishes to resolve this issue as quickly as possible and requests a conference call to discuss this proposal once NMOCD has reviewed the plan in detail.

Please contact me at (505) 632-4044 or at ron.copple@wnr.com with any questions that may arise and to schedule a conference call at your earliest convenience.

Sincerely,
Western Refining

Ron Copple

CC: Bill Robertson, Western Refining
Allen Hains, Western Refining
Ashley Ager, Lodestar Services
File

Attachments: Revised Sampling and Analysis Plan

Certified Mail 7009 0820 0000 0482 8521

Western Refining

Revised Sampling and Analysis Plan:

For Western Refining's Centralized Surface Waste Management Facility: Bisti Landfarm, NM-02-0010

September 21, 2009

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Background Information

The New Mexico Oil Conservation Division (NMOCD) requested that Western Refining (Western) work to bring all monitoring and operational procedures at their Surface Waste Management Facility, referred to as the Bisti Landfarm, into compliance with revised New Mexico Administrative Code Title 19, Chapter 15, Part 36 (19.15.36 NMAC). Additionally, NMOCD recommended that Western address concerns of potential downward migration of soil contaminants.

The Bisti Landfarm was permitted in February 1998 under 711 Permit NM-02-0010 to Giant Industries, Arizona (Giant). It is located in Unit I of Section 16 of Township 25N, Range 12W in San Juan County, New Mexico. The application and NMOCD permit are attached as Appendix A. One background sample was collected in the middle of the proposed landfarm from two feet below ground surface as part of the application requirements (see results in Appendix B). Giant disposed of impacted soils at the landfarm from its opening in April 1998 through July 2003, resulting in three cells: the API Cell (containing material originating from API and Pettigrew), the Crude Cell (containing material originating from East Line, Bisti and West Line) and a currently Inactive Cell (Figure 1). No new cells or lifts have been added to the landfarm since 2003. Western procured the landfarm from Giant in the first quarter of 2008.

The original permit outlines landfarm construction, operation and monitoring parameters. The approved monitoring plan of the treatment zone states the following:

> "A treatment zone not to exceed three (3) feet beneath the landfarm native ground surface will be monitored. A minimum of one random soil sample from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils were received in the cell and then quarterly thereafter. The samples will be taken two (2) to three (3) feet below native ground surface.
>
> The soil samples will be analyzed using EPA methods for TPH and BTEX quarterly and major cations/anions and heavy metals annually..."

Vadose and treatment zone monitoring, as defined in the revised (2008) regulations, 19.15.36 NMAC, have not been applied. Instead, Giant and Western used the guidelines quoted above to monitor soils at the landfarm. Most recently, Western's sampling procedures consisted of sampling from beneath the two active cells (Crude and API cells) on a quarterly basis. Samples were analyzed for benzene, toluene, ethyl-benzene, and total xylenes (BTEX) and total petroleum hydrocarbons (TPH) using EPA-approved methods (8021B and 8015). Beginning in 2008, chlorides were also analyzed quarterly. Results from 2004 to present are shown in Appendix B. Records of sampling events prior to 2004 are available upon request. The Inactive Cell was last sampled in 2004, and the results were used to request discontinued maintenance (disking) and permission to add possible subsequent lifts (see letter and NMOCD approval in Appendix C).

In December 2008, two samples were collected from within the actual treatment zone of each section to monitor natural degradation. Samples were analyzed for BTEX, TPH (USEPA Method 418.1) and chlorides (USEPA Method 300.0). These results are also shown in Appendix B.

The NMOCD has concerns with the compliance deficiencies described above and has noted that recent sampling results may suggest downward migration of soil contaminants. Specifically, elevated chloride concentrations were measured in API and Crude cell samples over the last two years. Traces of TPH and BTEX were detected in the 2008 annual sample from the API Cell, and TPH was detected in the 2009 annual sample from the Crude Cell (Appendix B).

Revised Sampling and Analysis Plan

Western has developed this Revised Sampling and Analysis Plan to establish compliant sampling and operational procedures according to 19.15.36 NMAC. Immediate implementation of the new procedures will allow Western to identify and delineate potential impacts to subsurface soil and address migration of contaminants, if necessary.

Establish Sampling Regime and Operation Parameters for Compliance with 19.15.36 NMAC

Western will update the sampling protocol and operational parameters based on requirements set forth in 19.15.36 NMAC. Monitoring will consist of the following:

1) Biannual sampling of the treatment zone of each of the two (2) active cells (API and Crude cells): One (1) composite sample, consisting of four (4) discrete samples from each cell will be collected and analyzed. All samples will be analyzed for TPH using USEPA method 8015M, and chlorides using USEPA method 300.1.
2) Biannual sampling of the vadose zone: At least four (4) random discrete samples taken from 3-4 feet below the ground surface from each active cell. All samples will be analyzed for BTEX using USEPA method 8021B, TPH using USEPA method 8015M, and chlorides using USEPA method 300.1. Results will be compared with the higher of the Practical PQL and the background soil concentrations to determine if a release has occurred.
3) Five-year monitoring of the vadose zone: In addition to the biannual vadose zone sampling, at least four (4) discrete samples from beneath each active cell will be collected and analyzed for constituents listed in Subsections A and B of 20.6.2.3103 NMAC using EPA-approved methods. Results will be compared with the higher of the Practical Quantitation Limit (PQL) or the background soil concentrations to determine if a release has occurred.

Composite sampling will include placing a predetermined number of aliquots of soil into a one-gallon plastic bag. The soil within the bag will be thoroughly mixed before filling glass sampling jars provided by the laboratory. All samples will be placed on ice and sent to a laboratory for analysis. Samples will be labeled with the date and time of collection, sample name, collector's name and parameters to be analyzed. The samples will be shipped to a laboratory in a sealed cooler via bus before designated holding times expired. Proper chain-of-custody (COC) procedures will be followed, with logs documenting the date and time sampled, sample number, type of sample, sampler's name, preservative used, analyses required and sampler's signatures.

Western will prepare a report after each sampling event to document sampling locations, methods used and results. Reports will be submitted to the NMOCD.

Treatment will consist of disking soils within active cells bi-weekly. Western will add moisture, as necessary to enhance bioremediation and to control blowing dust. Western understands pooling liquids are prohibited and shall remove freestanding water within 24 hours of observation. Western will continue to maintain records of remediation activites that are readily accessible for inspection. Any additional treatment will be submitted for approval by the NMOCD before application.

Initial Sampling Event

An initial sampling event will be conducted immediately upon approval of this plan by the NMOCD. Results of this event will not only bring Western's procedures into compliance with revised regulations, but also allow Western and the NMOCD to determine if downward migration is, in fact, an issue.

Western will begin by updating the current site map used for reporting. There is some concern about the current map's accuracy, and a detailed map is needed to fully delineate problems should any be identified. The mapping project will include marking the boundaries of the different cells in the field so that future samples are gathered from appropriate locations.

Composite samples will be collected from the treatment zone of each active cell (Crude and API). The composite samples will be comprised of four (4) discrete samples within the cells. The composite samples will be analyzed for TPH and chlorides. Since the purpose of the initial sampling event is not only to comply with revised regulations, but to also identify potential areas of concern, Western will also test the treatment zone composite samples for BTEX concentrations. Future monitoring events will test for TPH and chlorides only within the treatment zone.

A minimum of four (4) discrete vadose zone samples will be taken from each of the two (2) active cells. The number of vadose zone samples taken within each cell will be dependent on the size of the cell. See Figure 2 for proposed sampling locations. A list of samples to be collected and their associated analyses are shown in Table 1.

TABLE 1: Proposed Sampling Methods for Delineation

Treatment Zone Sampling:

2 composite samples (one from each cell), each composed of 4 each discrete samples from the treatment zone.

Sample #	*Location*	*Analyses (for each Sample)*
1	API Cell	TPH: EPA Method 8015M
2	Crude Cell	BTEX: EPA Method 8021B
		Chlorides: EPA Method 300.1

Vadose Zone Sampling:

Discrete samples from each cell. Samples to be taken 3-4' below original ground surface

Sample #	*Location*	*Analyses (for each Sample)*
4-12	API Cell	TPH: EPA Method 8015M
13-27	Crude Cell	BTEX: EPA Method 8021B
		Chlorides: EPA Method 300.1

Sample Analysis

Western will review the sample data and submit a comprehensive report of activities and results to the NMOCD. The report will include characterization of treatment zone soil concentrations and impacts to the vadose zone, if any. Results will be compared with the higher of the PQL and the background soil concentrations to determine if downward migration has occurred. Once sampling procedures are refined, results may indicate otherwise. The report will include, but not be limited to, vicinity and site diagrams, summary tables of analytical results, laboratory analytical reports, data interpretation with associated maps and diagrams and recommendations for further action based on reported results.

Any urgent issues will be reported to the NMOCD immediately. If downward migration is discovered, further vadose zone sampling will be initiated as necessary. Western will work with the NMOCD to change the landfarm's operation to prevent further contamination, and Western will develop a plan for appropriate remediation of targeted soils.

Continued Monitoring

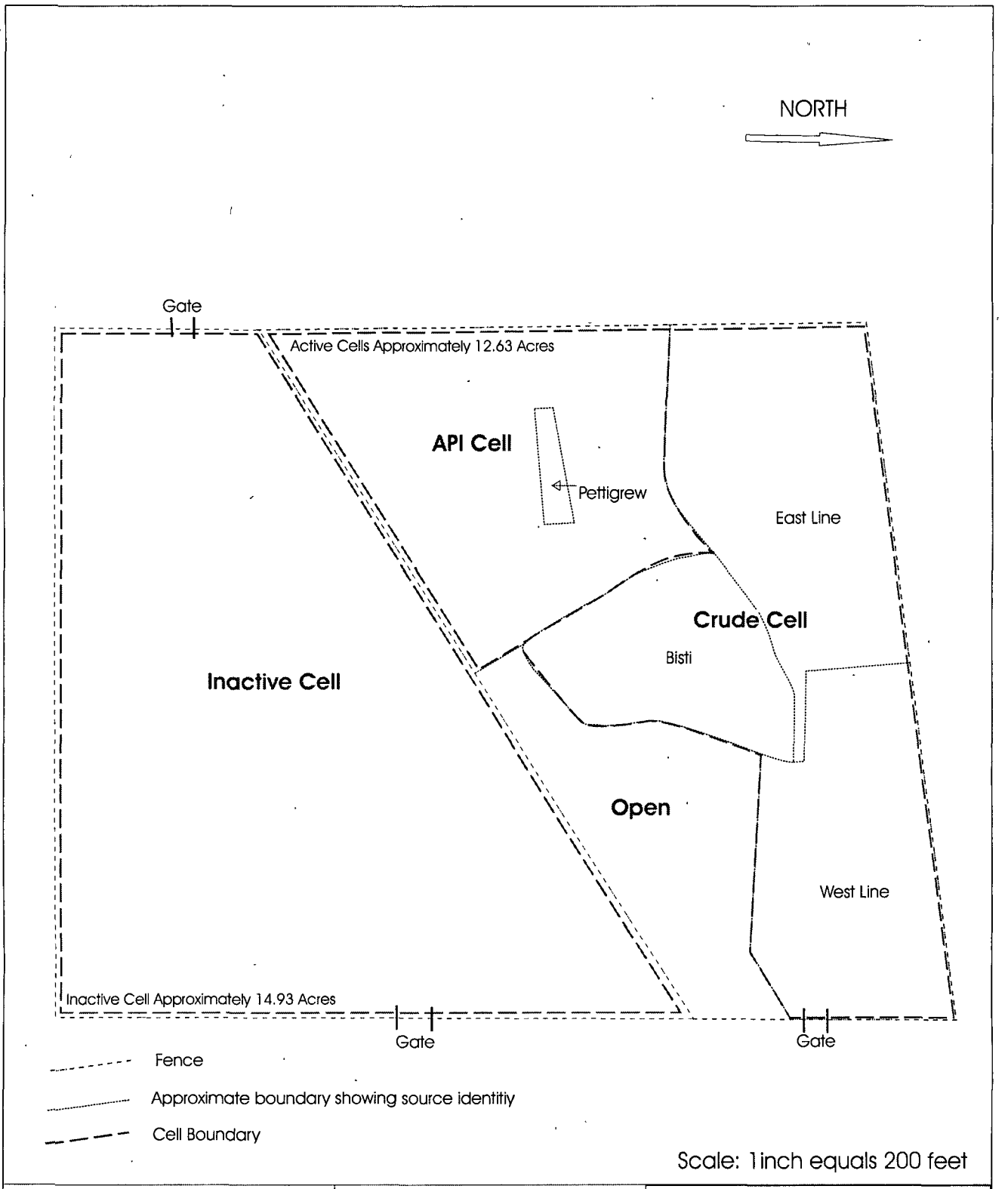
The sampling and operational procedures described above will be in place during continued operation of the landfarm. If delineation sampling of treatment zones indicate closure of cells is immediately possible, Western will consider initiating closure procedures.

Giant accurately estimated depth to groundwater to be greater than 100' in the original permit application. A hydrogeologic assessment can be found on page 5 of the original application (Appendix A). It identifies nearby surface water features and characterizes groundwater based on well-know references. Local aquifers and groundwater quality are referenced to Stone and others (1983) and Thorn and others (1990). The application cites two water wells on record with the State Engineer's Office that are nearest the Bisti Landfarm. Water depths are 92' and 210' in the wells. A current review of the State Engineer's records indicates there is no new water well information to add to these findings. Based on the estimated depth to groundwater, closure standards for treatment zones are as follows:

Benzene	0.2 mg/kg
Total BTEX	50 mg/kg
GRO + DRO	500 mg/kg
TPH	2500 mg/kg
Chlorides	1000 mg/kg
Constituents listed in A and B of 20.6 2.3103 NMAC	< PQL or background concentrations

Conclusions

This Revised Sampling and Analysis Plan will allow Western to bring the Bisti Landfarm into compliance with the December 2008 19.15.36 NMAC regulations and allow for sufficient monitoring in the future. The plan will also allow Western to define site conditions at the Bisti Landfarm and address any problem of downward migration.



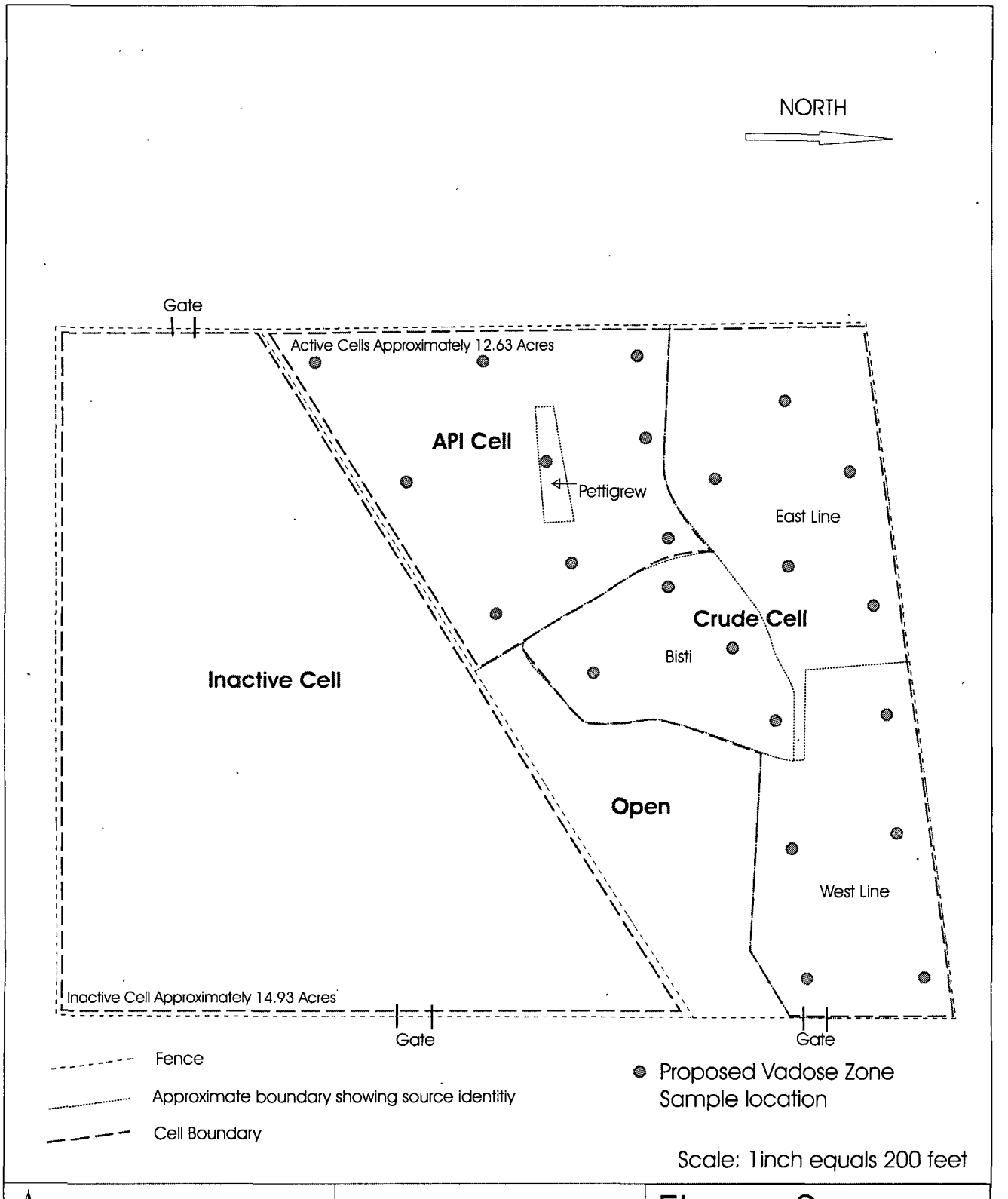
Scale: 1inch equals 200 feet

Lodestar Services, Inc
PO Box 4465
Durango, CO 81302

Landfarm Cell Diagram

Figure 1

Cell dimensions are based on Philip Services Figure 1A dated 9/30/97



Lodestar Services, Inc
PO Box 4465
Durango, CO 81302

Proposed Sampling for Vadose Zone Delineation

Figure 2

Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

Appendix A: Original Landfarm Permit and Landfarm Application

RECEIVED
OCT 9 1997
Environmental Bureau
Oil Conservation Division

APPLICATION

for

WASTE MANAGEMENT FACILITY

T25N, R12W, Sec. 16

Giant Industries Arizona, Inc.
5764 Highway 64
Farmington, New Mexico 87401

October 8, 1997

PHILIP SERVICES CORP
4000 Monroe Road
Farmington, New Mexico 87401
(800) 326-2262

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

RECEIVED
NOV 04 1997
Environmental Bureau
Oil Conservation Division

Form C-137
Originated 8/8/95
Revised 6/25/97

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to appropriate
District Office

APPLICATION FOR WASTE MANAGEMENT FACILITY

(Refer to the OCD Guidelines for assistance in completing the application)

☐ Commercial ☒ Centralized

1. Type: ☐ Evaporation ☐ Injection ☐ Other _____
   ☒ Solids/Landfarm ☐ Treating Plant
2. Operator: Giant Industries Arizona, Inc.
   Address: 5764 Hwy. 64, Farmington, NM 87401
   Contact Person: Timothy Kinney Phone: 505/632-4001
3. Location: NW 1/4 SE 1/4 Section 16 Township 25N Range 12W
   Submit large scale topographic map showing exact location
4. Is this a modification of an existing facility? ☐ Yes ☒ No
5. Attach the name and address of the landowner of the facility site and landowners of record within one mile of the site.
   See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
6. Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility.
   See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
7. Attach designs prepared in accordance with Division guidelines for the construction/installation of the following: pits or ponds, leak-detection systems, aerations systems, enhanced evaporation (spray) systems, waste treating systems, security systems, and landfarm facilities.
   See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
8. Attach a contingency plan for reporting and clean-up for spills or releases.
   See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
9. Attach a routine inspection and maintenance plan to ensure permit compliance.
   See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
10. Attach a closure plan.
    See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
11. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact groundwater. Depth to and quality of ground water must be included.
    See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
12. Attach proof that the notice requirements of OCD Rule 711 have been met.
    See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
13. Attach a contingency plan in the event of a release of H_2S.
    See "Application for Waste Management Facility T25N, R12W, Sec. 16" dated October 8, 1997
14. Attach such other information as necessary to demonstrate compliance with any other OCD rules, regulations and orders. NONE ATTACHED
15. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Timothy Kinney Title: General Manager

Signature: Timothy Kinney Date: 11/3/97

APPLICATION

for

WASTE MANAGEMENT FACILITY

T25N, R12W, Sec. 16

Giant Industries Arizona, Inc.
5764 Highway 64
Farmington, New Mexico 87401

October 8, 1997

PHILIP SERVICES CORP.
4000 Monroe Road
Farmington, New Mexico 87401
(800) 326-2262

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APPLICATION FOR WASTE MANAGEMENT FACILITY

☐ **Commercial** ☒ **Centralized**

1. Type: ☐ Evaporation ☐ Injection ☐ Other
☒ Solids/Landfarm ☐ Treating Plant

This facility will be used for the landfarming of hydrocarbon impacted soil produced by Giant Industries Arizona's San Juan Basin Operations.

2. Operator: Giant Industries Arizona, Inc.
Address: 5764 Highway 64, Farmington, New Mexico 87401
Contact Person: Timothy Kinney Phone: 505-632-4001

3. Location: NW 1/4, SE 1/4, Section 16, Township 25 North, Range 12 West.

A large scale topographic map showing the exact location of the facility is included as attachment A.

4. Is this a modification of an existing facility? ☐ Yes ☒ No

5. Attach the name and address of the landowner of the facility site and landowners of record within one mile of the site.

Giant Industries Arizona Inc. owns all 640 acres of Section 16. The 40-acre land farm is located in the center of the Section. Giant's address is as follows:

Giant Industries Arizona, Inc.
5764 Highway 64
Farmington, New Mexico 87401

The following are the owners of record of the sections of land adjacent to Section 16 according to the San Juan County Assessor. The landowner names and addresses are included in Appendix A.

- **Section 8: Indian Allotments**
- **Section 9: Indian Allotments**

- **Section 10: Federal**
- **Section 15: Federal**
- **Section 17: Private**
- **Section 20: Trust for Navajo Indians *(BIA)***
- **Section 21: Federal**
- **Section 22: Federal**

6. Attach description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.

The proposed 40 acre facility is located in the center of section 16 owned by Giant. Of the 40 acres included herein, 15 acres will be fenced and active. The facility will be used for landfarming hydrocarbon impacted soil from releases associated with Giant's San Juan Basin Operations. The facility will not receive liquid wastes, therefore pits or tanks are not proposed at this time. The entire facility will be bermed to prevent precipitation run-off and run-on. In addition, the entire facility will be fenced with three-strand barbed wire to prevent the ingress of livestock. There will be two access gates as shown on Figure 1a.

7. Attach designs prepared in accordance with Division guidelines for the construction/installation of the following: pits or ponds, leak-detection systems, aeration systems, enhanced evaporation (spray) systems, waste treating systems, security systems, and land farm facilities.

See Figures 1a, b, and c. In addition, the facility will be constructed and operated in accordance with the New Mexico Oil Conservation Division's (NMOCD) "Guidelines for Permit Application, Design and Operation of Centralized & Commercial Land Farms," Section VII Facility Construction/Operation & Waste Classification, as appropriate, Appendix B.

8. Attach a contingency plan for reporting and clean-up for spills or releases.

Because liquids will not be brought to the facility, Giant does not anticipate spills or releases. It is possible that a catastrophic precipitation event (500 yr. frequency or greater) could cause a release. If such an event occurs, Giant will within 24 hours from discovery, initiate an oral report and initiate assessment of the impact to the environment.

9. Attach a routine inspection and maintenance plan to ensure permit compliance.

Routine inspection and maintenance will be conducted on a monthly basis to the extent that soils above 100 parts per million (PPM), total petroleum hydrocarbons (TPH) remain on-site or following consequential rainstorms or windstorms. Routine maintenance and inspection will consist of inspection of the integrity of the berms, fences and gates. In the event that damage or degradation of the facility is evident, the facility manager will be notified and arrangements will be made to repair or replace damaged structures.

Quarterly Sampled For?

Routine inspection and maintenance will include annual sampling of the soils beneath the land farm to ensure that contaminant migration has not occurred.

Quarterly

A letter report will be submitted to the NMOCD annually. The letter report will transmit analytical results, NMOCD forms and a summary of the previous year's operations.

10. Attach a closure plan.

To close the facility, Giant will notify the NMOCD of the anticipated closure date, cease acceptance of materials and complete the following within one year of closure:

- **Collect representative soil samples of materials that have been landfarmed to verify TPH concentrations are less than 100 PPM**
- **Collect final representative samples of the natural soil beneath the land farm to demonstrate lack of impact**
- **Remove all fencing and structures**
- **Grade the location to approximate pre-land farm conditions**
- **Complete reseeding with natural grasses**
- **Submit final closure report to the NMOCD for approval of closure**

Estimated costs for closure are as follows:

Remove Fencing and Building	**$ 2,500**
Grade and Reseed Location	**$ 5,500**
Soil Sampling and Analysis	**$ 1,200**
Closure Report	**$ 850**

11. Attach geological / hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact groundwater. Depth to and quality of ground water must be included.

Hydrologic Features

A. A tributary arm to the ephemeral West Fork of the Gallegos Canyon is located approximately 2,000 horizontal feet to the northeast of the proposed facility. The land farm location is approximately 160 vertical feet above the flowline of the West Fork of Gallegos Canyon. No other watercourses or groundwater discharge sites have been found within one mile of the facility.

B. Based on Stone et al. in "Hydrogeology and Water Resources of San Juan Basin, New Mexico" (1983); the aquifer most likely to be impacted by vertical migration of hydrocarbons is contained within the Ojo Alamo Sandstone. Comparing the elevation of the potentiometric surface (Stone et al., Figure 28, sheet 5) to the site elevation as indicated on the United States Geological Survey Quadrangle Carson Trading Post, New Mexico, the depth to groundwater is estimated at approximately 200 feet beneath land surface.

According to Thorn et al. in "Hydrogeology of the Ojo Alamo Sandstone in the San Juan Structural Basin, New Mexico, Colorado, Arizona, and Utah" (1990), of water sample analyses from 32 locations, the high total dissolved solids (TDS) concentration was 7,300 milligrams per liter (mg/L); the low was 56 mg/L, with a median value of 640 mg/L.

C. Based on Stone, et al. (Figure 28, sheet 5), groundwater in the Ojo Alamo flows to the north in the vicinity of the proposed site.

D. At this time no wells exist within one mile of the facility and no chemical analysis is available. New Mexico State Engineers Office records were searched and two well permits were on record in T25N, R12W Sections 1 and 13. Copies of these records are included in Appendix C.

Geologic Description of the Land farm Site

A. According to "Soil Survey of San Juan County New Mexico, Eastern Part", United States Soil Conservation Service, the surficial soils at the site are identified as the Shiprock-Sheppard-Doak soils; deep, nearly level to moderately steep, well drained to somewhat excessively drained soils that formed in alluvial and eolian material on uplands.

Stone, et al.'s hydrogeologic map indicates the Tertiary Nacimiento Formation immediately beneath the soil throughout section 16 where the land farm is to be located. Stone. et al. describe the lower part of the Nacimiento formation as being characterized by interbedded black, carbonaceous mudstones and white, coarse-grained sandstones; and the upper part of the Formation as somber beds of mudstone and sandstone. Immediately beneath the Nacimiento Formation, less than 200 feet, is the Tertiary Ojo Alamo Sandstone. Stone et al. describe the Ojo Alamo sandstone as a sequence of sandstone, conglomeratic sandstone and shale.

B. The Ojo Alamo is the first aquifer located beneath the site. The top of the Ojo Alamo may be less than 200 feet beneath ground surface at the facility. According to Stone, et al., the Ojo Alamo ranges in thickness from 72 to 313 feet.

12. Attach proof that the notice requirements of NMOCD Rule 711 have been met.

Once the receipts from the certified mailings have been received they will be forwarded to the NMOCD

13. Attach a contingency plan in the event of a release of H2S.

Because no liquids will be stored at the facility, Giant does not anticipate the release of hydrogen sulfide (H_2S). There are no enclosures that would serve to collect and concentrate H_2S produced from materials being landfarmed. During unloading and landfarming operations, a H_2S alarm will be used to ensure personnel protection. A site health and safety plan will be prepared in compliance with Occupational Health and Safety Act (OSHA) to protect site workers.

14. Attach such other information as necessary to demonstrate compliance with any other NMOCD rules, regulations and orders. ***NONE ATTACHED.***

15. CERTIFICATION: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Jim Kenney Title: General Manager

Date: October 8, 1997

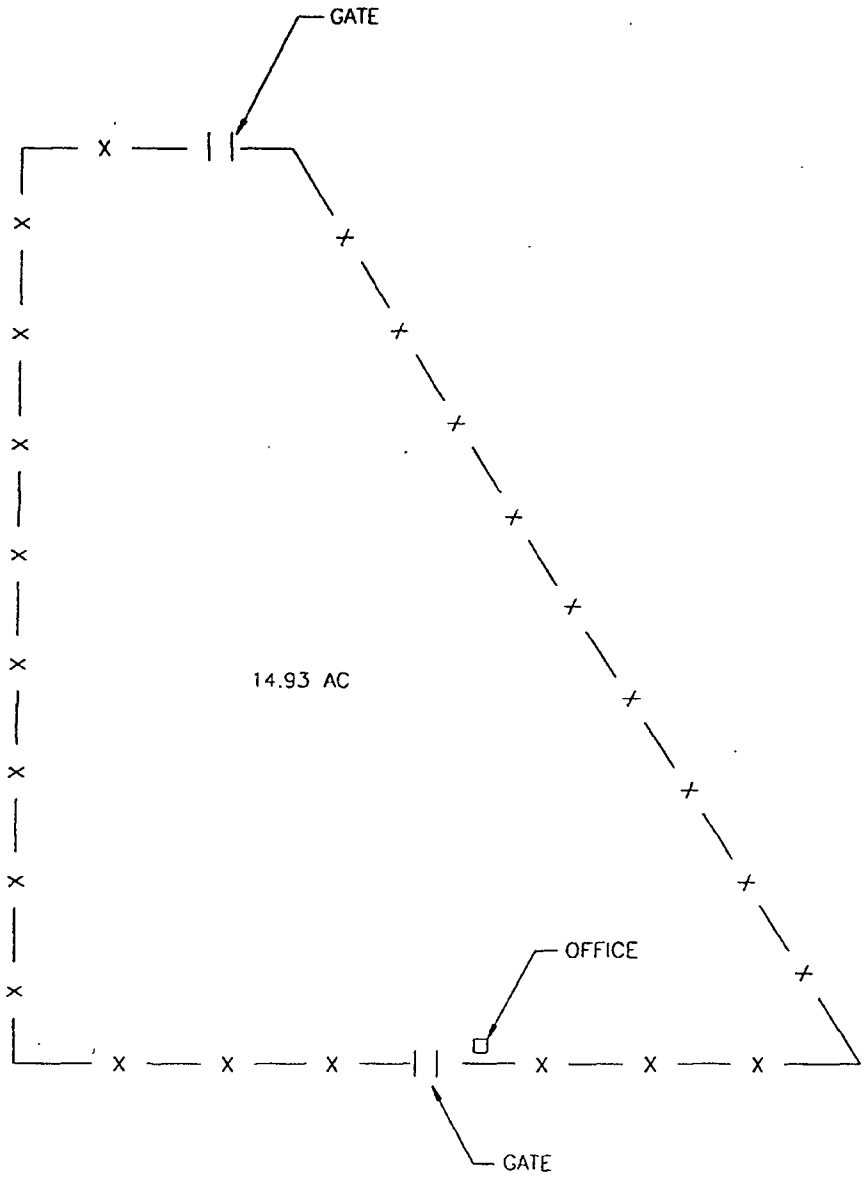
J:\16958\GIAAPP.DOC

ATTACHMENT A: LARGE SCALE TOPOGRAPHIC MAP

ATTACHMENT A: LARGE SCALE TOPOGRAPHIC MAP

ATTACHMENT A: LARGE SCALE TOPOGRAPHIC MAP

FIGURE 1A: GIANT LAND FARM



N

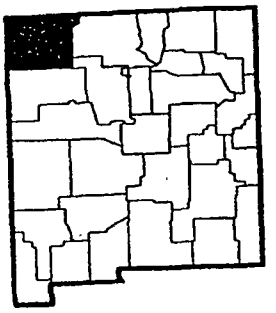
0 100 200
FEET

PHILIP SERVICES CORP	TITLE: T25N, R12W SECTION 16 GIANT LAND FARM 15 ACRE FENCED PORTION	DWN: CDJ	DES.: MN	PROJECT NO.: 16958 GIANT LAND FARM CARSON TRADING POST
		CHKD.: MN	APPD.:	
		DATE: 9/30/97	REV: A	FIGURE 1A

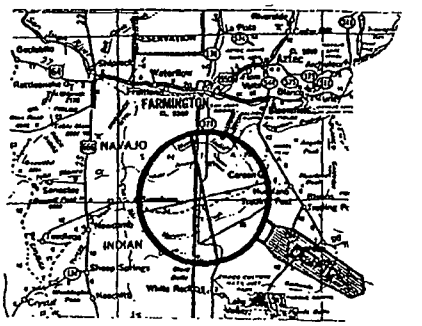
COL. 16958B-001

FIGURE 1B: PROPOSED LAND FARM LOCATION

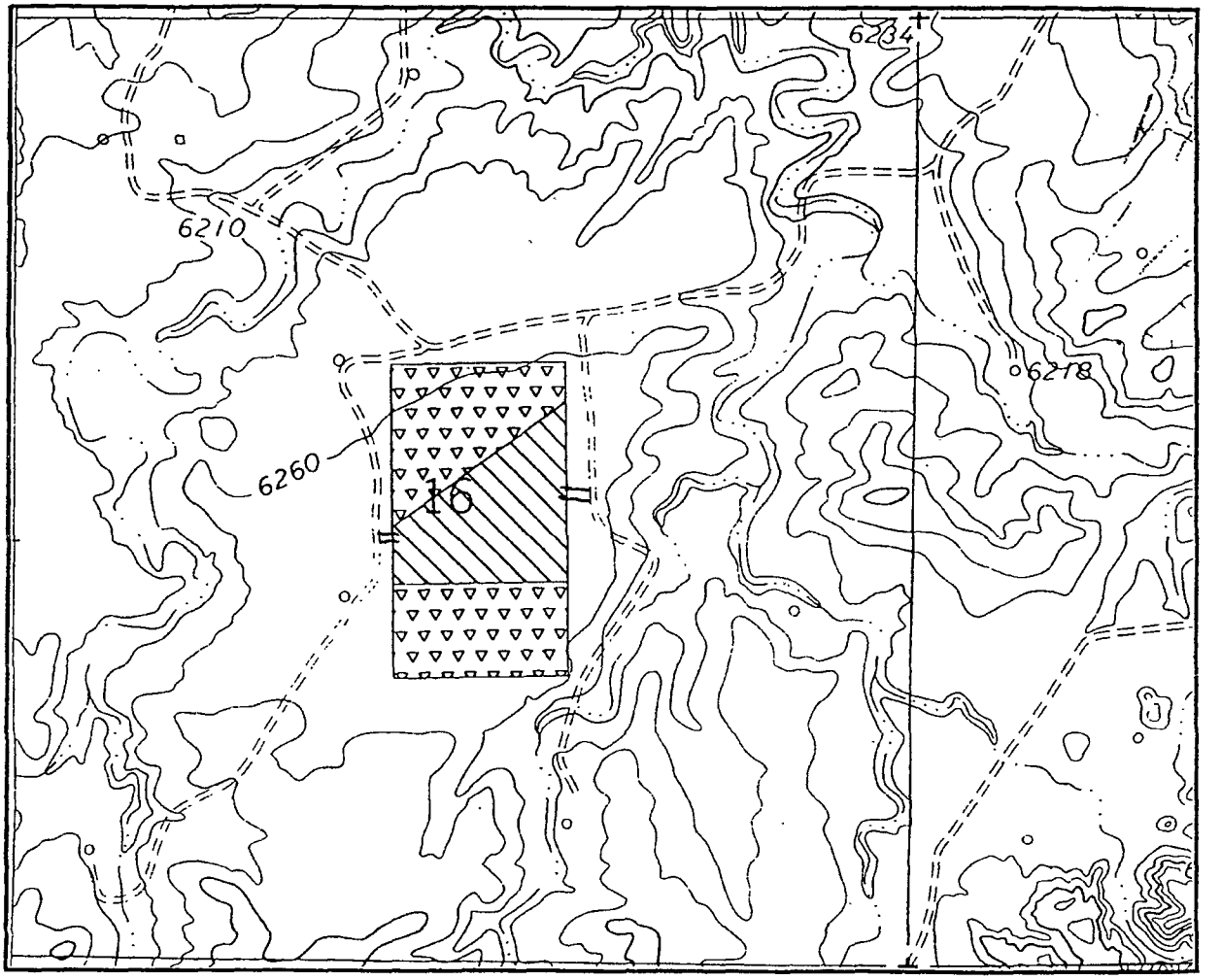
NEW MEXICO



SAN JUAN COUNTY



AREA OF DETAIL



Modified from U S. Geological Survey. Carson Trading Post. New Mexico. quadrangle. Photorevised 1978.

LEGEND

15 ACRES FENCED, ACTIVE

25 ACRES NOT FENCED, NOT ACTIVE

SCALE IS VARIABLE

N

PHILIP SERVICES CORP

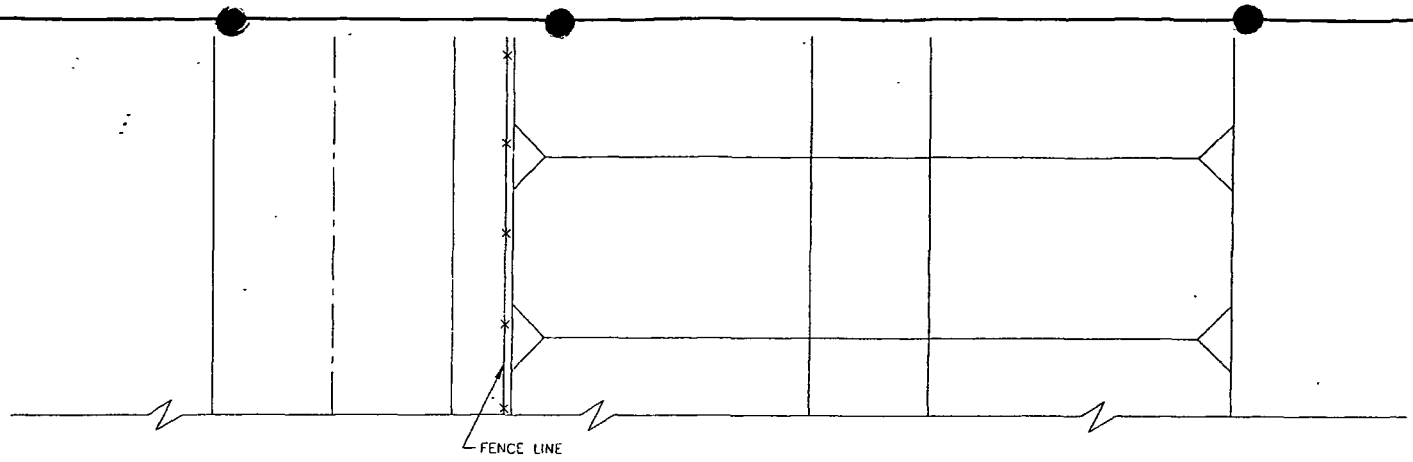
TITLE:

SITE LOCATION MAP
LAND FARM LOCATION

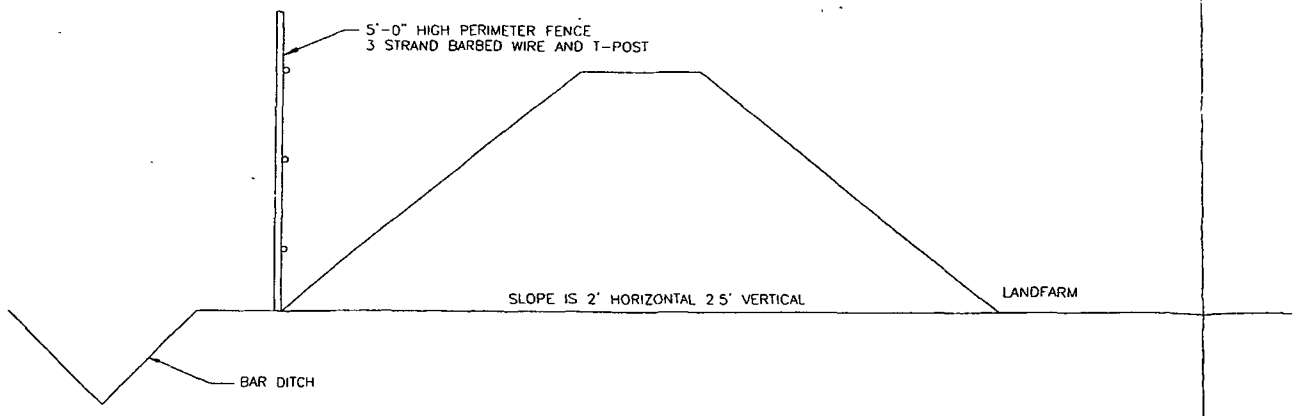
DWN	DES.	PROJECT NO. 16958
TMM	MN	CARSON TRADING POST NEW MEXICO
CHKD: MN	APPD. MN	
DATE: 10/1/97	REV 0	FIGURE 1B

COL 16958C-001

FIGURE 1C: BERM DETAILS



TOP



SIDE

NOT TO SCALE

PHILIP SERVICES CORP

TITLE

BERM DETAILS
GIANT LAND FARM

DWN. CDJ	DES. MN	PROJECT NO: 16958 GIANT LAND FARM CARSON TRADING POST	
CHKD: MN	APPD:		
DATE: 9/30/97	REV: A	FIGURE 1C	

COL 16958A-001

APPENDIX A: LANDOWNERS WITHIN ONE MILE

Landowners of Record within One Mile of Landfarm Site

Indian Allotted Land

Gleason, Allen
4715 Gila
Farmington NM 87401

George, Sam
General Delivery
Bloomfield NM 87413

Begay, Imogene
P. O. Box 981
Kirtland NM 87417

Begay, Lavena
P. O. Box 981
Kirtland NM 87417

Begay, Alroy Roger
C/o Minnie Low Begay
P. O. Box 981
Kirtland NM 87417

Begay, Evelyn
C/o Minnie Low Begay
P. O. Box 981
Kirtland NM 87417

Begay, Melissa
C/o Minnie Low Begay
P. O. Box 981
Kirtland NM 87417

George, Melvin
P. O. Box 1262
Cuba NM 8701

I Ni Pah, Joan
Box 2154
Bloomfield NM 87413

Jackson, Anthony Dal-Roy
C/o Frank Jackson (guardian)
817 Nicklaus Dr.
Rio Rancho NM 87124

Jackson, Everett Michael
C/o Frank Jackson (guardian)
817 Nicklaus Dr.
Rio Rancho NM 87124

Charley, Dorothy Ann
2435 19th Ave.
San Francisco CA 94116

Charley, Dorothy Anna
2435 19th Ave.
San Francisco CA 94116

Valdez, Dorothy Ann
2435 19th Ave.
San Francisco CA 94116

Charley, Kenneth B.
2435 19th Ave.
San Francisco CA 94116

Charley, Kenneth
2435 19th Ave.
San Francisco CA 94116

Federal Land
Bureau of Land Management
1235 La Plata Highway
Farmington, New Mexico 87401

Bureau of Indian Affairs Trust Land
Bureau of Indian Affairs
Shiprock Agency
PO Box 966
Shiprock, New Mexico 87420

Private Land
C.L. Crowder Investment Co.
508 Wellesley SE
Albuquerque, NM 87106

APPENDIX B:

FACILITY CONSTRUCTION/OPERATION & WASTE CLASSIFICATION

coordinates or latitude/longitude on unsurveyed land. Submit a large scale topographic map, site plan, or detailed aerial photograph for use in conjunction with the written material. Include on the map the appropriate highways or roads giving access to the facility.

IV. EXPANSION REQUEST
If the application is for an expansion of an existing facility, include the original OCD order or approval authorization for the facility.

V. LAND & OWNERSHIP
List the name and address of the landowner of the landfarm and all landowners of record within one-half mile of the site. Include a topographic map, plot map or aerial photograph delineating ownership boundaries. Include on the map all private residences within one mile of the proposed facility.

Note: see Part XII. of application for Proof of Notice.

VI. FACILITY DESCRIPTION
Attach a description of the facility with a diagram indicating the location of the following:
1. Roads, fences, gates, berms, ditches, and proposed cells.

2. All pipelines crossing the facility, including owner, contents, depth and size of the pipeline(s).
3. Actual or proposed offices and/or storage buildings.

4. Chemical storage areas indicating the type of storage containers (ie. drums, sacks, tanks, etc.).

5. All tanks indicating whether they are above ground or below ground and saddle or vertical.

6. Any on-site storage/disposal facilities for wastes other than contaminated soils to be landfarmed (ie. waste oil, washbay sumps, etc.).

VII. FACILITY CONSTRUCTION/OPERATION & WASTE CLASSIFICATION

A. Facility Construction - The following items should be addressed when designing the facility:

1. Location: A landfarm facility shall not be located in any watercourse, lakebed, sink-hole, or other depression. Facilities located adjacent to any such watercourses or depression shall be located safely above the high water level of such watercourse or depression. In addition, facilities located adjacent to any watercourses shall include a storm water runoff plan.

2. Fences & Signs: The facility shall be fenced and have a sign at the entrance. The sign shall be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.

3. Facility Buffer Zone: No contaminated soils should be placed within one hundred (100) feet of the boundary of the facility unless it can be demonstrated that a smaller buffer zone will not adversely impact the adjacent properties.

4. Pipeline Buffer Zone: No contaminated soils should be placed within twenty (20) feet of any pipelines crossing the landfarm. In addition, no

equipment should be operated within ten (10) feet of a pipeline. All pipelines crossing the facility should have surface markers identifying the location of the pipelines.

5. Facility Berming: The portion of the facility containing contaminated soils shall be bermed to prevent runoff and runon. A berm should be constructed and maintained such that it capable of containing precipitation from a one-hundred year flood for that specific region.
6. Treatment Zone Monitoring: Because a landfarm is designed to remediate contaminated soils and not transfer contaminants into the underlying native soil and/or groundwater, the applicant shall submit a plan to detect leaching of contaminants. If the native ground surface has a minimum of three feet of uncemented material (ie. soil) then a treatment zone monitoring program may be incorporated into the facility design to ensure contaminants are not leaching into the native soil/groundwater. The following procedures should be used to monitor a treatment zone not to exceed three (3) feet beneath the landfarm:

a. One (1) background soil sample should be taken from the center portion of the landfarm two (2) feet below the native ground surface prior to operation. The sample should be analyzed for total petroleum hydrocarbons (TPH), major cations/anions, volatile aromatic organics (BTEX), and heavy metals using approved EPA methods.

b. A treatment zone not to exceed three (3) feet beneath the land farm should be monitored. A minimum of one random soil sample should be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample should be taken at two to three (2-3) feet below the native ground surface.

c. The soil samples should be analyzed using approved EPA methods for TPH and BTEX quarterly, and for major cations/anions and heavy metals annually.

d. After obtaining the soil samples the boreholes should be filled with an impermeable material such as cement.

e. Analytical results from the treatment zone monitoring should be submitted to the OCD Santa Fe Office for review on a regular schedule to be proposed by the applicant.

7. Double-Lined System: If the native ground surface is composed of resistant cemented materials which make it infeasible to sample a treatment zone then another method shall be proposed to guarantee that contaminants do not leach into the underlying soils and/or groundwater. This may be accomplished by installing a double-lined system with leak detection in accordance with the OCD "Engineering Design Guidelines for Construction of Waste Storage/Disposal Ponds (10/90)H. In addition, the facility shall be constructed so that the primary liner will not be ripped or punctured when the contaminated soils are disked.
B. Facility Operation - The Director shall consider, but is not limited to, the following operating procedures for commercial and centralized landfarms. The purpose of specific operating requirements is so that operation of a landfarm will not adversely impact ground water, surface water, public health or the environment.

1. Disposal shall only occur when an attendant is on duty. The facility shall be secured when no attendant is present.

2. All contaminated soils received at the facility should be spread and disked within 72 hours of receipt.

3. Soils should be spread on the surface in six inch lifts or less unless the applicant can demonstrate that the equipment will adequately disk a thicker lift.

4. Soils should be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.

5. Exempt contaminated soils should be placed in the landfarm so that they are physically separate (ie. bermed) from nonexempt contaminated soils. There should be no mixing of exempt and nonexempt soils.

6. Successive lifts of contaminated soils should not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations shall be maintained at the facility. Authorization from the OCD shall be obtained prior to application of successive lifts.

7. Moisture should be added as necessary to enhance bioremediation and to control blowing dust. There shall be no ponding, pooling or run-off of water allowed. Any ponding of precipitation should be removed within seventy-two (72) hours of discovery.

8. Enhanced bio-remediation through the application of microbes (bugs) and/or fertilizers shall only be permitted after prior approval from the OCD. Request for application of microbes should include the location of the area designated for the bio-remediation program, composition of additives, and the method, amount and frequency of application.

9. No free liquids or soils with free liquids shall be accepted at the facility.

10. Comprehensive records of all material disposed of at the facility shall be maintained at the facility. The records for each load will include: 1) the generator, 2) the origin, 3) date received, 4) quantity, 5) Certification of exempt status or analysis for hazardous constituents if non-exempt, 6) transporter, and 7) exact cell location and any addition of microbes, moisture, fertilizers, etc.

C. Characterization & Tracking of Wastes - The operator of a landfarm must be able to distinguish between those oilfield contaminated solids which are exempt from RCRA Subtitle C (hazardous waste) regulations and those which are subject to the RCRA Subtitle C regulations. To aid the landfarm applicant in making those determinations and therefore prohibiting hazardous waste from entering the facility, all OCD permitted landfarms should operate under the following conditions:

1. The facility should be authorized to accept only:

a. Oilfield contaminated solids which are exempt from RCRA Subtitle C regulations. These wastes should be accompanied by a "Certification of Waste Status" from the generator.

b. "Non-hazardous" non-exempt oilfield contaminated solids from OCD permitted facilities on a case-by-case basis after conducting an analysis tor hazardous characteristics and receiving OCD approval. The test for hazardous characteristics for a particular waste may be effective for one year from the date of analysis, if, the subsequent wastes from the same waste stream are accompanied by a statement from the generator that there has been no change in the processes employed or the chemicals stored/used at the facility generating the waste.

C. Other non-oilfield contaminated solids which are RCRA Subtitle C exempt or non-hazardous by characteristic testing, if requested by another regulatory agency on an emergency basis as the waste poses an eminent danger to public health. The wastes should be accompanied by a "Verification of Waste Status" demonstrating the exempt or non-hazardous classification of the solids and signed by the appropriate regulatory agency. OCD approval shall be obtained prior to accepting the wastes.

2. At no time will any OCD permitted landfarms accept wastes which are hazardous by either testing or listing.
3. All loads received at the facility will be accompanied by the following:

a. A "Certification of Waste Status" signed by the waste generator or a "Verification of Waste Status" issued by the New Mexico Environment Department (NMED) or the appropriate agency from antoher state tor wastes regulated by that agency. The state agency verification is based on specific information on the subject waste submitted by the generator and demonstrating the exempt or non-hazardous classification of the waste.

b. The analytical results of Hazardous Waste Characterization for non-exempt waste including corrosivity, reactivity, ignitability, and toxic constituents and a certification that no listed hazardous wastes are contained within the wastes. The samples for these analyses and results will be obtained from the wastes prior to removal from the generator's facility and without dilution in accordance with EPA SW-846 sampling procedures.

4. The transporter of all wastes to the facility will supply a certification that wastes delivered are those wastes received from the generator and that no additional materials have been added.

VIII. SPILL/LEAK PREVENTION & REPORTING (CONTINGENCY PLANS)

A. The disposal application shall contain a contingency plan that anticipates where any leaks/spill might occur. It should describe how the applicant proposes to guard against such accidents and detect them when they have occurred.

B. The contingency plan shall describe the steps proposed to contain and remove the spilled substance or mitigate the damage caused by the discharge such that ground water is protected, or movement into surface waters is prevented.

C. The disposal application shall describe how any ponding, pooling or runon of precipitation will be removed from the landfarm and where itS final disposition will be.

APPENDIX C: STATE ENGINEER'S WELL RECORDS

IMPORTANT — READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

Declaration of Owner of Underground Water Right

HC-786-A

~~25247~~ SJ-79

Declaration No. ~~xxxxxxxxxxx~~ Misc. 1-SJ-47 Book _____ Date received 7/15/57

I, _____ being first duly sworn upon my oath, depose and say that the following is a full and complete statement prepared in accordance with the instructions on the reverse side of this form and submitted in evidence of ownership of a valid underground water right, that I have carefully read each and all of the items contained therein and that the same are true to the best of my knowledge and belief.

R. R. Robison, declarant.

R. R. Robison, Division Production Manager, Shell Oil Company

Subscribed and sworn to before me this 12th day of July, A.D. 1957

My commission expires 6-12-60

Notary Public

STATEMENT

1 Name of water right owner Shell Oil Company

of 1008 W. 6th St., Los Angeles, California

County of Los Angeles, State of California

2. Source of water supply Shallow water basin
(state whether artesian or shallow water basin)

located in Cliff House and Allison - Menefee - San Juan Basin
(name of underground stream, valley, artesian basin, etc.)

3. The well is located in the (See attached plat) ¼, SE ¼

of section 13, Township 25N, Range 12W, N.M.P.M.

on land owned by U.S. Government

4. Description of well: date drilled 3-27-57 driller New Drilling Co. depth 2550 feet.

diameter (outside) of casing 8-5/8" inches; original ~~pump~~ flow 30 gal. per min.;

present ~~pump~~ flow 30 gal. per min.; maximum pumping lift - feet;

make and type of pump Lufkin Mdl C-114 DA-54-14

make, type, horsepower, etc., of power plant Le Roi, A 288, Single cylinder 18.6 HP, RPM 770

Fractional or percentage interest claimed in well 100%

5. Quantity of water appropriated and beneficially used _____
(feet depth or acre feet per acre)

for the drilling and production operations of oil wells purposes.

6 Acreage actually irrigated and with water right _____ acres,

located and described as follows (describe only lands actually irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner

RECEIVED JUL 27 1957 AM 9:51 STATE ENGINEER SANTA FE, N.M.

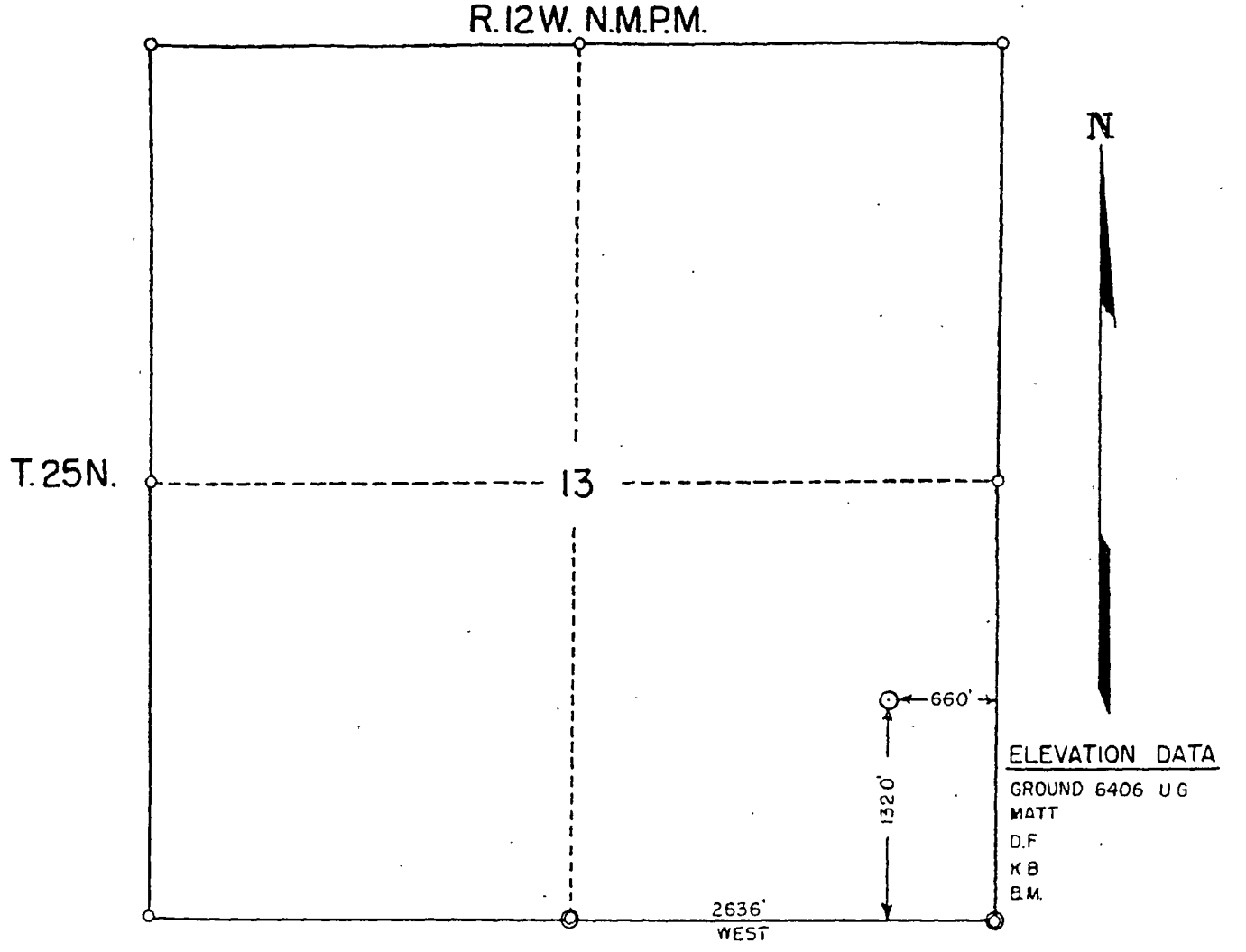
RECEIVED JUL 15 1957 P M

RECEIVED JUL 32 1957 AM 9:34 STATE ENGINEER OFFICE SANTA FE, N.M.

(Note: location of well and acreage actually irrigated must be shown on plat on reverse side.)

7. Water was first applied to beneficial use 4-1-57 and since that time has been used fully and continuously on all of the above described lands or for the above described purposes except as follows: _____

8. Additional statements or explanations 8-5/8" casing (combination string) set at 2541', slotted intervals 2541-2267, 2187-2096, 2001-1956. Cemented at 1927' with 50 sacks pozzo mix. Tubing (3") set at 1908'. Producing interval 1927-2550.



REFERENCE POINT DATUM—

◎= G.L.O BRASS CAP FOUND

1"x2" hub and 4' flag set at Loc. being 1320' N. & 660' W. of the SE. Cor. of Sec. 13, T.25N., R.12W. N.M.P.M. Contractor grading at time of staking and no check angle was observed.

This is to certify that the above plat was prepared from field notes of an actual survey made by me on March 21, 1957, and that the same is true and correct to the best of my knowledge and belief.

April 2, 1957

John A. Kroeger

John A. Kroeger / Reg. L.S.
N.M. Reg. No. 1941

Drawn By: A.C.T.	SHELL OIL COMPANY	Scale 1"= 1000'
Checked By: JAK		
Date: 4-2-57		

LOCATION OF CARSON UNIT WATER WELL NO. 1

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

SCHLUMBERGER

Electrical Log

COUNTY SAN JUAN, N.M.
FIELD or LOCATION BISTI GALLUP
WELL BISTI WATER WELL #1
COMPANY SHELL OIL COMPANY

COMPANY SHELL OIL COMPANY

WELL BISTI WATER WELL #1

FIELD BISTI GALLUP

LOCATION SEC. 13-25N-12W

COUNTY SAN JUAN

STATE NEW MEXICO

Other Surveys
NONE

Location of Well
1320' N & 660' W of SE CORNER SEC. 13-25N-12W

Elevation: D.F.: 6412'
K.B.:
or G.L.: 6400'

FILING No. S20-020

RUN No.	ONE				
Date	3-31-57				
First Reading	2542				
Last Reading	92				
Feet Measured	2450				
Csg. Schlum.	--				
Csg. Driller	56				
Depth Reached	2543				
Bottom Driller	2550				
Depth Datum	KB				
Mud Nat.	GEL				
Dens. | Visc.	9.7 | 37				
Mud Resist.	3.0 @ 70 °F	@ °F	@ °F	@ °F	@ °F
" Res. BHT	2.2 @ 96 °F	@ °F	@ °F	@ °F	@ °F
Rmf	-- @ °F	@ °F	@ °F	@ °F	@ °F
Rmc	-- @ °F	@ °F	@ °F	@ °F	@ °F
" pH	-- @ °F	@ °F	@ °F	@ °F	@ °F
" Wtr. Loss	-- CC 30 min.	CC 30 min.	CC 30 min	CC 30 min.	CC 30 min.
Bit Size	10 5/8"				
Spcgs.—AM	16"				
A M	64"				
AO	18' 8"				
Opr. Rig Time	1 HR				
Truck No.	1786FARM				
Recorded By	NEVITT				
Witness	AUBERT				

FOLD HERE

REMARKS MUD FROM FLOW LINE

FLUID LEVEL AT 92'

SJ-1716

25N.12W.1.320

Form 4-1209
(August 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PROJECT COMPLETION REPORT

CODE	NAME	CODE	NAME
1–2	State	7–8	County
30	New Mexico	24	San Juan
3–4	District	9–10	Sub-basin
07	Farmington	64	San Juan River
5–6	Fiscal Year	11–12	Community Watershed
64	1964	03	West San Juan

16 Project No.	17 CTI RM	19 Program	23 Practice	29 Units	Project Expenditures: 36 Soil & Moisture	41 Weed Control	46 Range Improvements
324	1	33	4100	1	50		8140

Project Expenditures: 50 Other BLM	56 Watershed Protection	60 Contribution	Seeding: 61 Plant Contl	62 Appn	63 Sup.	65 Gully Contl	Water Development: 67 Stockwater Reservoir	69 New Water	Flood Control Dam: 72 Permanent Storage	75 Sediment Storage	79 Flood Storage
								3			

Project Name: Carson No. 1 Well

Permittee Name: N.A.

Program	Plant Control Method	SEEDING: APPLICATION	SEEDING: SPECIES	Unit of Measurement
Range Improvement A,P,W.	N.A.	N.A.	N.A.	Each

DATE: PERMIT ISSUED	STARTED	COMPLETED	OF EASEMENT	Name of Owner
N.A.	6-20-63	2-5-64	N.A.	N.A.

Land Status: [X] BLM [ ] Other Federal [ ] State [ ] County [ ] Private

Cooperative Agreement	Date	Maintenance Responsibility of	Date sent to W.O. for recording
[ ] Yes [X] No	N.A.	Bureau of Land Management	8-6-64

State Water Certificate No.	DATE: RECORDED	PROJECT MARKER PLACED	ABANDONED	ABANDONMENT REPORTED TO W.O.
N.A.	N.A.	2-7-64		

STATUS 8-12-64
4-1210 8-10-64
MAP 9-8-64

Completed Project Description

a. Drilled depth - 403 ft.
b. Normal static water level - 210 ft.
c. Casing length - 405 ft. diameter of casing 6-5/8 inch o.d.
d. Flow during baling - 40 g.p.m., drawdown 165 ft.
e. Pump - plunger type, power - 14 ft. aermotor, discharge 110 g.p.h., diam. of cylinder - 1-7/8 ", depth to cylinder - 273 ft.
f. Storage - round, galvanized steel, open top tank, with a concrete base, height 8 ft., diameter 12'4", capacity 6,838 gal.
g. Troughs - 3 round, painted steel rim, with concrete base, 6 ft. diameter, 15 inches high, capacity 69 gal. each.

Form 9-1475
(Aug. 1961)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

xxx Driller's log

Sample log

State New Mexico County San Juan

Location NE¼ SE ¼ sec. 1 T. 25 N R. 13 W

Name of well Carson #1

W. R. West Drilling Company

LOG OF WELL San Juan Co. Unit #4

14-11-0008-1279

Depth (feet) From–	Depth (feet) To–	Cuttings sample number	Type of rock	Color	Other characteristics (Grain size, hardness, etc.)	Water yield (gpm)	Remarks (Quality of water, ease of drilling, caving, loss of drilling fluid, etc.)
0	52		Overburden	Brown			
	100		Shale	Gray			
100	105		"	Gray-Brown			
105	110		Sdy Shale	Dark Gray			Jumped box odd stem Wed. 6-27-63
110	115		"	"			recovered bit Thurs. 6-2 -63
115	125		"	Light gray	Bent. Type		
125	170		Shale	Gray			
170	175		Shale	Light gray	Bantonite		Mon. 7-1-63 lost bit
175	200		Shale	Gray			Tues. 7-2-63 recovered bit
200	225		Shale	Light Gray	Bantonite		[illegible]
225	250		Sand	White	coarse grained		[illegible]
250	260		"	"	thin grained		
260	280		"	"	coarse grained		
280	300		"	"	Sandy shale		
300	310		Shale	Dark			
310	330		Shale	Blue			
330	340		Shale	White			
340	350		Shale	Blue			
350	360		Shale	Dark			
[illegible]							

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

February 23, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-400

Mr. Timothy Kinney
Giant Industries Arizona, Inc.
5764 Highway 64
Farmington, NM 87401

RE: Giant Industries Arizona, Inc.
OCD Rule 711 Permit Approval NM-02-0010
NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM,
San Juan County, New Mexico.

Dear Mr. Kinney:

The **permit application for the Giant Industries Arizona, Inc. (Giant) centralized surface waste management landfarm facility** located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, New Mexico, **is hereby approved** in accordance with the New Mexico Oil Conservation Division (OCD) Rule 711 under the conditions contained in the enclosed attachment. **This permit approval is conditional upon the receipt and approval of a $25,000 bond**. Construction of the facility and/or receipt of contaminated soil shall not commence until the $25,000 bond has been approved by the Director. The application consists of the original application dated October 8, 1997, and the materials dated November 3, 1997, December 10, 1997, January 8, 1998, and February 11, 1998, submitted as supplements to the application.

The operation, monitoring and reporting shall be as specified in the enclosed attachment. All modifications and alternatives to the approved landfarming methods must receive prior OCD approval. Giant is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of this facility does not relieve Giant Industries Arizona, Inc. of liability should your operation result in actual pollution of surface water, ground water, or the environment. In addition, OCD approval does not relieve Giant Industries Arizona, Inc of responsibility for compliance with other federal, state or local laws and/or regulations.

Please be advised that all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted or otherwise rendered nonhazardous to migratory birds. In addition, OCD Rule 310 prohibits oil from being stored or retained in earthen reservoirs, or open receptacles.

The facility is subject to periodic inspections by the OCD. The conditions of this permit and the facility will be inspected and reviewed by the OCD no later than five (5) years from the date of this approval.

Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the OCD Santa Fe Office with in five working days of receipt of this letter.**

If you have any questions please do not hesitate to contact Martyne J. Kieling at (505) 827-7153.

Sincerely,

Lori Wrotenbery

Lori Wrotenbery
Director

LR/mjk

xc with attachments:
Aztec OCD Office

ATTACHMENT TO OCD 711 PERMIT APPROVAL
PERMIT NM-02-0010
GIANT INDUSTRIES ARIZONA, INC.
(February 23, 1998)

LANDFARM CONSTRUCTION

1. The facility will be fenced and have a sign at the entrance. The sign will be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.

2. Contaminated soils will not be placed within twenty-five (25) feet of the boundary of the facility and the landfarm facility will not be constructed within one hundred (100) feet of adjacent landowners' property.

3. Contaminated soils will not be placed within twenty (20) feet of any pipelines crossing the landfarm. In addition, no equipment will be operated within ten (10) feet of a pipeline. All pipelines crossing the facility will have surface markers identifying the location of the pipelines.

4. The portion of the facility containing contaminated soils will be bermed to prevent runoff and runon. A berm will be constructed and maintained such that it is capable of containing precipitation from a one-hundred year flood for that specific region.

5. All above ground tanks located at the facility and containing materials other than fresh water will be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks.

LANDFARM OPERATION

1. Disposal will only occur when an attendant is on duty. The facility will be secured when no attendant is present.

2. All contaminated soils received at the facility will be spread and disked within 72 hours of receipt.

3. Soils will be spread on the surface in six inch lifts or less.

4. Soils will be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.

5. Exempt contaminated soils will be placed in the landfarm so that they are physically

separate (ie. bermed) from non-exempt contaminated soils. There will be no mixing of exempt and nonexempt soils.

6. Successive lifts of contaminated soils will not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts and/or removal of the remediated soils.

7. The facility is authorized to accept only:

   a. Oilfield contaminated solids which are exempt from RCRA Subtitle C regulations. These wastes should be accompanied by a OCD Form C-144 "Generator Certificate of Waste Status" from the generator.

   b. "Non-hazardous" non-exempt oilfield contaminated solids from OCD permitted facilities on a case-by-case basis after conducting an analysis for hazardous characteristics and receiving OCD approval. The test for hazardous characteristics for a particular waste may be effective for one year from the date of analysis, if the subsequent wastes from the same waste stream are accompanied by a statement from the generator that there has been no change in the processes employed or the chemicals stored/used at the facility generating the waste.

   c. Other non-oilfield contaminated solids which are RCRA Subtitle C exempt or non-hazardous by characteristic testing, if ordered by the Department of Public Safety on an emergency basis as the waste poses an eminent danger to public health. The wastes should be accompanied by a "Verification of Waste Status" demonstrating the exempt or non-hazardous classification of the solids and signed by the appropriate regulatory agency. OCD approval will be obtained prior to accepting the wastes.

8. At no time will any OCD permitted landfarms accept wastes which are hazardous by either testing or listing.

9. All loads received at the facility will be accompanied by the following:

   a. A OCD Form C-144 "Generator Certificate of Waste Status" signed by the waste generator or "Verification of Waste Status" issued by the New Mexico Environment Department (NMED) or the appropriate agency from another state for wastes regulated by that agency. The state agency verification is based on specific information on the subject waste submitted by the generator and

demonstrating the exempt or non-hazardous classification of the waste.

b. The analytical results of Hazardous Waste Characterization for non-exempt waste including corrosivity, reactivity, ignitability, and toxic constituents and a certification that no listed hazardous wastes are contained within the wastes. The samples for these analyses and results will be obtained from the wastes prior to removal from the generator's facility and without dilution in accordance with EPA SW-846 sampling procedures.

c. All generators submitting waste to a OCD Permitted 711 Waste Management Facility must include a Naturally Occurring Radioactive Material (NORM) status declaration which is included in the OCD Form C-144 "Generator Certificate of Waste Status". The generator must declare that the waste if not exempted pursuant to 20 NMAC 3.1 subpart 1403, was surveyed for NORM and does not contain a maximum radiation exposure reading or NORM concentrations do not exceed that listed in 20 NMAC 3.1 Subpart 1403.C and D.

10. The transporter of all wastes to the facility will supply a certification that wastes delivered are those wastes received from the generator and that no additional materials have been added.

11. Moisture will be added as necessary to enhance bioremediation and to control blowing dust. There will be no ponding, pooling or run-off of water allowed. Any ponding of precipitation will be removed within seventy-two (72) hours of discovery.

12. Enhanced bio-remediation through the application of microbes (bugs) and/or fertilizers will only be permitted after prior approval from the OCD. Request for application of microbes will include the location of the area designated for the bio-remediation program, composition of additives, and the method, amount and frequency of application.

13. No free liquids or soils with free liquids will be accepted at the facility.

14. Comprehensive records of all material disposed of at the facility will be maintained at the facility. The records for each load will include: 1) the generator, 2) the origin, 3) date received, 4) quantity, 5) certification of exempt status or analysis for hazardous constituents if non-exempt, 6) transporter, and 7) exact cell location and any addition of microbes, moisture, fertilizers, etc.

TREATMENT ZONE MONITORING

1. One (1) background soil sample will be taken from the center portion of the landfarm two

(2) feet below the native ground surface prior to operation. The sample will be analyzed for total petroleum hydrocarbons (TPH), major cations/anions, volatile aromatic organics (BTEX), and heavy metals using approved EPA methods.

2. A treatment zone not to exceed three (3) feet beneath the landfarm native ground surface will be monitored. A minimum of one random soil sample will be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample will be taken at two (2) to three (3) feet below the native ground surface.

3. The soil samples will be analyzed using approved EPA methods for TPH and BTEX quarterly, and for major cations/anions and heavy metals annually.

4. After obtaining the soil samples the boreholes will be filled with an impermeable material such as cement or bentonite.

REPORTING

1. Analytical results from the treatment zone monitoring will be submitted to the OCD Santa Fe office for annual review by **February 23, of each year**.

2. The applicant will notify the **OCD Aztec District office within 24 hours** of any break, spill, blow out, or fire or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

3. Authorization from the OCD Santa Fe office will be obtained prior to application of successive lifts and/or removal of the remediated soils.

4. The OCD will be notified prior to the installation of any pipelines or wells within the boundaries of the facility.

5. The OCD Santa Fe and Aztec District office will be notified when operation of the facility is discontinued for a period in excess of six (6) months or when the facility is to be dismantled. A closure plan for the facility will be provided.

BOND

1. Pursuant to OCD Rule 711 a surety or cash bond in the amount of $25,000, in a form approved by the Division, is required prior to commencing construction of the centralized surface waste management facility.

CLOSURE

1. The OCD Santa Fe and Aztec District office will be notified when operation of the facility is discontinued for a period in excess of six (6) months or when the facility is to be dismantled. Upon cessation of landfarming operations for six (6) consecutive months, the operator shall complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension of time is granted by the Director.

2. A closure plan for the facility will be provided including the following OCD closure procedures:

   a. When the facility is to be closed no new material will be accepted;

   b. Existing landfarm soils will be remediated until they meet the OCD standards in effect at the time of closure;

   c. The area will be reseeded with natural grasses and allowed to return to its natural state;

   d. Closure will be pursuant to all OCD requirements in effect at the time of closure, and any other applicable local, state and/or federal regulations.

CERTIFICATION

Giant Industries Arizona, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Giant Industries Arizona, Inc. further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect fresh water, human health and the environment.

Accepted:

GIANT INDUSTRIES ARIZONA, INC.

by_____
Title

Appendix B: Historical Sampling Results

Bisti Land Farm Analytical Data

API Cell

	Baseline Sample	2004 Annual	2004 2nd Quarter	2004 3rd Quarter	2004 4th Quarter
	27-Mar-98	30-Mar-04	15-Jun-04	30-Sep-04	14-Dec-04
TPH (mg/kg)				47	
GRO		<10	<10	<10	
DRO	<50	<10	<10	23	
MRO		<10	<10	24	
BTEX (mg/kg)					
Benzene	<0.05	<0.025	<0.050	<0.025	<0.025
Toluene	<0.05	<0.025	<0.050	<0.025	<0.025
Ethyl-Benzene	<0.05	<0.025	<0.050	<0.025	<0.025
Xylenes	<0.05	<0.050	<0.10	<0.050	<0.050
Metals (mg/kg)					
Arsenic	2.8				
Barium	180				
Cadmium	<1.3				
Calcium	2500				
Chromium	<5.0				
Lead	6.8				
Magnesium	1300				
Potassium	810				
Selenium	<2.5				
Silver	<1.3				
Sodium	90				
Mercury	<0.50				
Gen Chem					
Alkalinity (meq/l)		1900			
Bicarbonate (meq/l)	110	<21			
Carbonate (meq/l)	26	100			
Sulfate (mg/kg)	140	830			
Chloride (mg/kg)	<50	570			

Bisti Land Farm Analytical Data

API Cell

	Baseline Sample	2005 Annual	2005 2nd Quarter	2005 3rd Quarter	2005 4th Quarter	2006 Annual	2006 2nd Quarter	2006 3rd Quarter	2006 4th Quarter
	27-Mar-98	29-Mar-05	27-Jun-05	30-Sep-05	20-Dec-05	31-Mar-06	18-Jul-06	29-Sep-06	21-Dec-06
TPH (mg/kg)								13	
GRO		<10	<10	<10		<10		<10	<10
DRO	<50	<10	<10	<10		<10		13	<10
MRO		<10	<10	<10		<10		<20	<10
BTEX (mg/kg)									
Benzene	<0.05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	<0.05	<0.025	<0.025	<0.025	<0.025	<0.050	<0.025	<0.025	<0.025
Ethyl-Benzene	<0.05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Xylenes	<0.05	<0.050	<0.050	<0.050	<0.050	<0.10	<0.010	<0.010	<0.10
Metals (mg/kg)									
Arsenic	2.8	1.8				0.956			
Barium	180	90				63.9			
Cadmium	<1.3	<0.50				0.100U			
Calcium	2500	4300				731			
Chromium	<5.0	2.6				1.98			
Lead	6.8	3.4				3.51			
Magnesium	1300	1000				734			
Potassium	810	630				460			
Selenium	<2.5	<1.0				0.200U			
Silver	<1.3	<0.50				0.0500U			
Sodium	90	<100				207			
Mercury	<0.50	<0.0084				0.0391			
Gen Chem									
Alkalinity (meq/l)		600				451			
Bicarbonate (meq/l)	110	580				441			
Carbonate (meq/l)	26	23				299			
Sulfate (mg/kg)	140	<110				20.8I			
Chloride (mg/kg)	<50	120				143			

Bisti Land Farm Analytical Data

API Cell

	Baseline Sample	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter
	27-Mar-98	30-Mar-07	28-Jun-07	28-Sep-07	29-Dec-07	11-Mar-08	16-Jun-08	29-Sep-08	30-Dec-08
TPH (mg/kg)		nd				31			
GRO		nd	<10	<10	<10	31	<2.5	<5.0	<5.0
DRO	<50	nd	<10	<10		<10		<10	<10
MRO		nd	<10	<10		<10		<50	<50
BTEX (mg/kg)		nd				0.686			
Benzene	<0.05	nd	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	<0.050
Toluene	<0.05	nd	<0.025	<0.025	<0.025	0.064	<0.025	<0.050	<0.050
Ethyl-Benzene	<0.05	nd	<0.025	<0.025	<0.025	0.082	<0.025	<0.050	<0.050
Xylenes	<0.05	nd	<0.10	<0.10	<0.10	0.54	<0.10	<0.10	<0.10
Metals (mg/kg)									
Arsenic	2.8	0.187				2.5			
Barium	180	47.1				130			
Cadmium	<1.3	nd				<0.44			
Calcium	2500	2690				7300			
Chromium	<5.0	0.305				4.4			
Lead	6.8	0.477				4.1			
Magnesium	1300	863				1800			
Potassium	810	729				1300			
Selenium	<2.5	nd				<0.88			
Silver	<1.3	nd				<0.44			
Sodium	90	66.2				150			
Mercury	<0.50	nd				<0.0083			
Gen Chem									
Alkalinity (meq/l)		54.4				3500			
Bicarbonate (meq/l)	110	49.4				2900			
Carbonate (meq/l)	26	4.52				540			
Sulfate (mg/kg)	140	81.7				<100			
Chloride (mg/kg)	<50	nd				660	180	37	68

Bisti Land Farm Analytical Data

API Cell

	Baseline Sample	2009 Annual	2009 2nd Quarter
	27-Mar-98	6-Mar-09	17-Jun-09
TPH (mg/kg)			
GRO		<5.0	<5.0
DRO	<50	<10	<10
MRO		<50	<50
BTEX (mg/kg)			
Benzene	<0.05	<0.050	<0.050
Toluene	<0.05	<0.050	<0.050
Ethyl-Benzene	<0.05	<0.050	<0.050
Xylenes	<0.05	<0.10	<0.10
Metals (mg/kg)			
Arsenic	2.8	<13	
Barium	180	81	
Cadmium	<1.3	<0.50	
Calcium	2500	740	
Chromium	<5.0	2.9	
Lead	6.8	3.5	
Magnesium	1300	830	
Potassium	810	680	
Selenium	<2.5	<13	
Silver	<1.3	<1.3	
Sodium	90	3600	
Mercury	<0.50	<0.033	
Gen Chem			
Alkalinity (meq/l)		1.9	
Bicarbonate (meq/l)	110	1.9	
Carbonate (meq/l)	26	<0.10	
Sulfate (mg/kg)	140	1600	
Chloride (mg/kg)	<50	4100	67

Bisti Landfarm Analytical Data

Crude Cell

	Baseline Sample	2004 Annual	2004 2nd Quarter	2004 3rd Quarter	2004 4th Quarter	2005 Annual	2005 2nd Quarter	2005 3rd Quarter	2005 4th Quarter
	27-Mar-98	30-Mar-04	15-Jun-04	30-Sep-04	14-Dec-04	29-Mar-05	27-Jun-05	30-Sep-05	20-Dec-05
		West Line	West Line	West Line	West Line	West Line	West Line	West Line	West Line
TPH (mg/kg)									
GRO		<10	<10	<10		<10	<10	<10	
DRO	<50	<10	<10	<10		<10	<10	<10	
MRO		<10	<10	<10		<10	<10	<10	
BTEX (mg/kg)									
Benzene	<0.05	<0.025	<0.050	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	<0.05	<0.025	<0.050	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Ethyl-Benzene	<0.05	<0.025	<0.050	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Xylenes	<0.05	<0.050	<0.10	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Metals (mg/kg)									
Arsenic	2.8	2.6				1.8			
Barium	180	78				200			
Cadmium	<1.3	<0.51				<.034			
Calcium	2500	2500				5100			
Chromium	<5.0	3.5				2.5			
Lead	6.8	4.3				3.3			
Magnesium	1300	1100				1100			
Potassium	810	690				630			
Selenium	<2.5	<1.0				<0.69			
Silver	<1.3	<0.51				<0.34			
Sodium	90	180				<69			
Mercury (mg/kg)	<0.50	<0.0085				<0.0080			
Gen Chem									
Alkalinity (mg/kg)		870				620			
Bicarbonate (meq/l)	110	820				600			
Carbonate (meq/l)	26	48				<20			
Sulfate (mg/kg)	140	860				<100			
Chloride (mg/kg)	<50	310				<41			

Bisti Landfarm Analytical Data

Crude Cell

	Baseline Sample	2006 Annual		2006 2nd Quarter	2006 3rd Quarter	2006 4th Quarter	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter
	27-Mar-98	31-Mar-06	31-Mar-06	18-Jul-06	29-Sep-06	29-Dec-06	30-Mar-07	28-Jun-07	28-Sep-07	29-Dec-07
		West Line	Pettigrew	West Line	Crude	West Line		West Line	West Line	West Line
TPH (mg/kg)							nd			
GRO		<10	<10		<10	<10	nd	<10	<10	<10
DRO	<50	<10	<10		<10	<10	nd	<10	<10	
MRO		<10	<10		<20	<10	nd	<10	<10	
BTEX (mg/kg)							nd			
Benzene	<0.05	<0.025	<0.025	<0.025	<0.025	<0.025	nd	<0.025	<0.025	<0.025
Toluene	<0.05	0.1	<0.05	<0.025	<0.025	<0.025	nd	<0.025	<0.025	<0.025
Ethyl-Benzene	<0.05	0.062	<0.025	<0.025	<0.025	<0.025	nd	<0.025	<0.025	<0.025
Xylenes	<0.05	0.35	<0.10	<0.010	<0.010	<0.10	nd	<0.10	<0.10	<0.10
Metals (mg/kg)										
Arsenic	2.8	1.71	1.57				0.173			
Barium	180	78.1	105				14.8			
Cadmium	<1.3	0.100U	0.100U				nd			
Calcium	2500	2330	3240				3530			
Chromium	<5.0	2.12	1.75				0.248			
Lead	6.8	3.05	3.37				0.479			
Magnesium	1300	721	762				957			
Potassium	810	348	480				806			
Selenium	<2.5	0.200U	0.200U				nd			
Silver	<1.3	0.0500U	0.0500U				nd			
Sodium	90	50.0U	430				69.7			
Mercury (mg/kg)	<0.50	0.0528	0.0388				nd			
Gen Chem										
Alkalinity (mg/kg)		821	1500				791			
Bicarbonate (meq/l)	110	771	1430				731			
Carbonate (meq/l)	26	1860	2920				56.3			
Sulfate (mg/kg)	140	20.0U	163				68			
Chloride (mg/kg)	<50	43.4 I	2700				nd			

Bisti Landfarm Analytical Data

Crude Cell

	Baseline Sample	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter	2009 Annual	2009 2nd Quarter
	27-Mar-98	11-Mar-08	16-Jun-08	29-Sep-08	30-Dec-08	6-Mar-09	17-Jun-09
		Crude	Crude	Crude	Crude	Crude	Crude
TPH (mg/kg)						520	
GRO		<10	<2.5	<5.0	<5.0	<5.0	<5.0
DRO	<50	<10		<10	<10	250	<10
MRO		<10		<50	<50	270	<50
BTEX (mg/kg)							
Benzene	<0.05	<0.025	<0.025	<0.050	<0.050	<0.050	<0.050
Toluene	<0.05	<0.025	<0.025	<0.050	<0.050	<0.050	<0.050
Ethyl-Benzene	<0.05	<0.025	<0.025	<0.050	<0.050	<0.050	<0.050
Xylenes	<0.05	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Metals (mg/kg)							
Arsenic	2.8	1.9				<12	
Barium	180	140				96	
Cadmium	<1.3	<0.48				<0.50	
Calcium	2500	2800				4500	
Chromium	<5.0	3.7				4	
Lead	6.8	3.8				5.3	
Magnesium	1300	1200				1100	
Potassium	810	1100				640	
Selenium	<2.5	<0.96				<12	
Silver	<1.3	<0.48				<1.2	
Sodium	90	<96				<120	
Mercury (mg/kg)	<0.50	<0.0085				<0.033	
Gen Chem							
Alkalinity (mg/kg)		1200				1.8	
Bicarbonate (meq/l)	110	880				1.8	
Carbonate (meq/l)	26	280				<0.10	
Sulfate (mg/kg)	140	690				860	
Chloride (mg/kg)	<50	110	540	2.1	35	4.3	5.4

Bisti Land Farm Analytical Data

Inactive Cell

Sampled 9 Feb 04 - a 5 pt composite sample in the current "inactive area" in order to discontinue disking and possibly add subsequent lifts.

	9-Feb-04
TPH (mg/kg)	
GRO	1.1
DRO	7
MRO	8.1
BTEX (mg/kg)	
Benzene	<.0018
Toluene	0.0305
Ethyl-Benzene	0.0187
Xylenes	0.287

Bisti Land Farm Analytical Data

Treatment Zone Sampling

10-Dec-08, Discrete samples from API and Crude Cells

	API Cell	Crude Cell (East Line)	Crude Cell (Bisti)	Crude Cell (West Line)
TPH (mg/kg)	59	700	4200	69
GRO				
DRO				
MRO				
BTEX (mg/kg)				
Benzene	<0.05	<0.05	<0.05	<0.05
Toluene	<0.05	<0.05	<0.05	<0.05
Ethyl-Benzene	<0.05	<0.05	<0.05	<0.05
Xylenes	<0.1	<0.1	<0.1	<0.1
Chloride (mg/kg)	820	7.9	15	3.4

Appendix C: Letter Concerning Sampling of Inactive Cell

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

March 8, 2004

Mr. Timothy Kinney
Giant Industries Arizona, Inc.
111 County Road 4990
Bloomfield, NM 87413

RE: Approval for Discontinued Maintenance Status
Giant Industries Arizona, Inc., Permit NM-02-0010
NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM,
San Juan County, New Mexico.

Dear Mr. Kinney:

The New Mexico Oil Conservation Division (OCD) has received Loadstar Services, Inc. letter dated March 1, 2004 on behalf of Giant Industries Arizona, Inc. and has reviewed the analytical data concerning remediated soils within Cells 1. Based on the information provided, Cell 1 is hereby approved for discontinued maintenance status and the addition of another lift of contaminated soil. Note that with the addition of successive lifts Giant must resume maintenance and treatment zone monitoring. The treatment zone monitoring depth must be adjusted to reach the 2-3 foot zone below the original native ground surface. If Giant wants to move the soils from the facility, separate OCD authorization must be granted.

Please be advised that OCD approval does not relieve Giant of liability should their operation result in pollution of the ground water, surface water or the environment. In addition, OCD approval does not relieve Giant of the responsibility for compliance with other federal, state, local laws and/or regulations.

If you have any further questions please do not hesitate to contact me at (505) 476-3488.

Sincerely,

Martyne J. Kieling
Environmental Geologist

xc: Aztec OCD Office
Martin Nee, Loadstar Services, Inc., P.O. Box 3861 Farmington, NM 87499-3861

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

March 1, 2004

Ms. Martyne Kieling
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, 87505

RE: Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Ms. Kieling,

On February 9, 2004, Lodestar Services, Inc. collected a 5 point composite sample from Giant Industries Arizona, Inc.'s (Giant) landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. The sample was from material previously landfarmed within the original fifteen-acre cell. The intent of sample collection was to determine if the material within the original cell was of acceptable concentrations of hydrocarbons to discontinue disking and to add a subsequent lift in accordance with the New Mexico Oil Conservation Division (OCD) Rule 711.

Approximately 24 ounces of soil was collected at each of the locations shown on the attached Landfarm Cell Diagram. Soil was collected from approximately three inches beneath the top of the six inch thick lift. Each sample was immediately placed in a 1 gallon plastic bag and sealed. Once each of the five samples had been collected the material was thoroughly mixed and an eight ounce laboratory sample jar filled and sealed. The sample was then labeled with the sampler's initials, time, date and location, and placed on ice. The sample was then delivered to Envirotech Inc.'s laboratory in Farmington, NM following strict chain of custody procedures. The sample was analyzed for benzene, toluene, ethylbenzene, xylenes, (BTEX) and total petroleum hydrocarbons, by USEPA methods, 8021 and 8015, respectively.

The laboratory report is attached. The following laboratory results have been converted from micrograms per kilogram and milligrams per kilogram for comparison to NMOCD standards.

Analyte	Result	NMOCD Standard
Benzene	Not detected	10 ppm
Toluene	0.030 ppm	
Ethylbenzene	0.019 ppm	
Xylenes	0.332 ppm	
Total BTEX	0.381 ppm	50 ppm
Total Petroleum Hydrocarbons	8.1 ppm	100 ppm

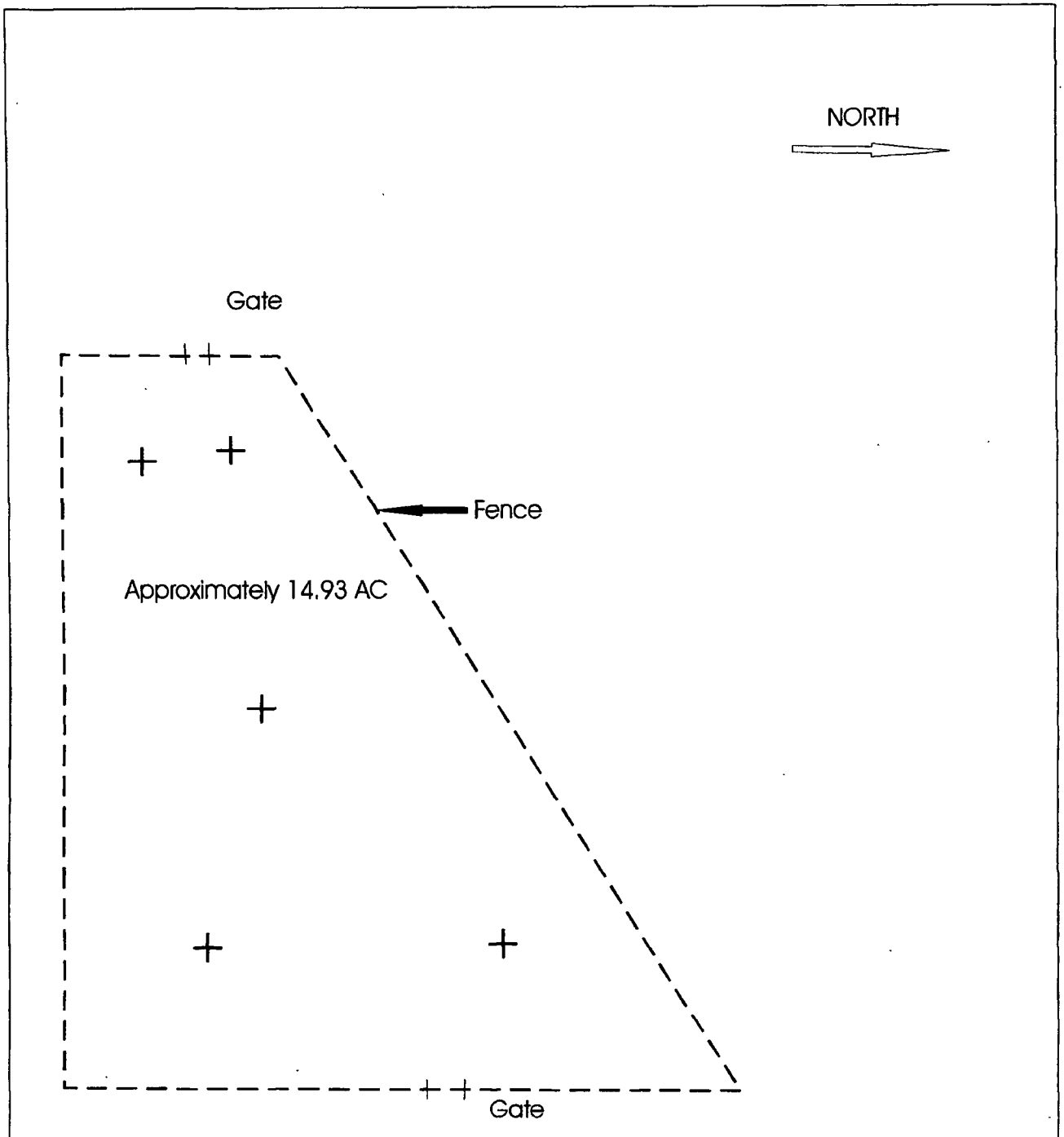
Based on the results of sampling presented above, Giant herein requests permission to discontinue disking the existing material and approval for the addition of future lifts. In the event that future lifts are added disking will resume.

We look forward to your approval of this proposed work. Should you have any questions or require additional information please do not hesitate to call me at (505) 334-2791 or Gary Winn (505) 632-4077.

Sincerely,

Martin Nee

Cc: Mr. Gary Winn, Giant Industries Arizona, Inc
Mr. Tim Kinney, Giant Industries Arizona, Inc.
File



Lodestar Services, Inc
PO Box 3861
Farmington, NM 87499

Landfarm Cell Diagram

Figure 1

Drawn By MJN 3/1/04
Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

February 13, 2004

Mr. Martin Nee
Lodestar Service
#26 CR 3500
Flora Vista, New Mexico 87415

Phone: (505) 334-2791
Cell: (505) 320-9675

Client No.: 97059-007

Dear Mr. Nee,

Enclosed are the analytical results for the sample collected from the location designated as "Bisti Land Farm". One soil sample was collected by Giant designated personnel on 2/09/04, and delivered to the Envirotech laboratory on 2/09/04 for Total Petroleum Hydrocarbons (TPH) per USEPA Method 8015 and BTEX per USEPA Method 8021.

The sample was documented on Envirotech Chain of Custody No. 11723 and assigned Laboratory Nos. 27817 (5 Pt. Composite) for tracking purposes.

The sample was analyzed on 2/12/04 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Christine M. Walters
Lab Coordinator / Environmental Scientist

enclosure

CMW/cmw

C:/files/labreports/giant/.wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Giant	Project #:	97059-007
Sample ID:	5 pt Composite	Date Reported:	02-12-04
Laboratory Number:	27817	Date Sampled:	02-09-04
Chain of Custody:	11723	Date Received:	02-09-04
Sample Matrix:	Soil	Date Analyzed:	02-12-04
Preservative:	Cool	Date Extracted:	02-09-04
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**30.5**	**1.7**
Ethylbenzene	**18.7**	**1.5**
p,m-Xylene	**287**	**2.2**
o-Xylene	**45.1**	**1.0**
Total BTEX	**381**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**95 %**
	1,4-difluorobenzene	**95 %**
	Bromochlorobenzene	**95 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bisti Land Farm.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	02-12-BTEX QA/QC	Date Reported:	02-12-04
Laboratory Number:	27816	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-12-04
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	4.2776E-002	4.2905E-002	0.3%	ND	0.2
Toluene	4.8966E-002	4.9064E-002	0.2%	ND	0.2
Ethylbenzene	7.4036E-002	7.4259E-002	0.3%	ND	0.2
p,m-Xylene	6.8275E-002	6.8480E-002	0.3%	ND	0.2
o-Xylene	5.5866E-002	5.5978E-002	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	% Diff.	Accept Range	Detect. Limit
Benzene	41.2	40.7	1.2%	0 - 30%	1.8
Toluene	787	772	2.0%	0 - 30%	1.7
Ethylbenzene	418	409	2.0%	0 - 30%	1.5
p,m-Xylene	2,600	2,570	1.2%	0 - 30%	2.2
o-Xylene	927	911	1.7%	0 - 30%	1.0

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	41.2	50.0	91.1	99.9%	39 - 150
Toluene	787	50.0	836	99.8%	46 - 148
Ethylbenzene	418	50.0	467	99.8%	32 - 160
p,m-Xylene	2,600	100	2,690	99.6%	46 - 148
o-Xylene	927	50.0	975	99.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for samples 27816 - 27817, 27824 - 27825, 27829 - 27830.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Giant	Project #:	97059-007
Sample ID:	5 pt Composite	Date Reported:	02-12-04
Laboratory Number:	27817	Date Sampled:	02-09-04
Chain of Custody No:	11723	Date Received:	02-09-04
Sample Matrix:	Soil	Date Extracted:	02-09-04
Preservative:	Cool	Date Analyzed:	02-12-04
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**1.1**	**0.2**
Diesel Range (C10 - C28)	**7.0**	**0.1**
Total Petroleum Hydrocarbons	**8.1**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bisti Land Farm.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	02-12-TPH QA/QC	Date Reported:	02-12-04
Laboratory Number:	27815	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-12-04
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept. Range
Gasoline Range C5 - C10	04-29-03	1.8591E-002	1.8572E-002	**0.10%**	**0 - 15%**
Diesel Range C10 - C28	04-29-03	1.5507E-002	1.5492E-002	**0.10%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**ND**	**0.2**
Diesel Range C10 - C28	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**ND**	**ND**	**0.0%**	**0 - 30%**
Diesel Range C10 - C28	**6.5**	**6.4**	**1.5%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**ND**	**250**	**250**	**100%**	**75 - 125%**
Diesel Range C10 - C28	**6.5**	**250**	**256**	**99.8%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples 27815 - 27817, 27824 - 27825, 27829 - 27830.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

11723

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
Giant Land Farm	Bisti	
Sampler: MJN	Client No. Grant 97059-007	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX 8021	TPH 8015					Remarks
5pt composite	2-9-04	1151	27817	Soil	1	✓	✓					

	Date	Time		Date	Time
Relinquished by: (Signature)	2904	1350	Received by: (Signature) Must Walto	2/9/04	13:50
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

Western Refining
LOGISTICS

RECEIVED
2008 AUG 25 PM 1 38

WNR
LISTED
NYSE

August 11, 2008

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, 87505

Certified Mail # 7006 0810 0003 7020 8145

RE: 2nd Quarter Sampling of the Centralized Surface Waste Management Landfarm Facility Western Refining Southwest Inc.'s NM -02-0010

Dear Mr. Price,

Please find enclosed the August 5, 2008 report from Lodestar Services, Inc. concerning the results from the 2nd quarter 2008 sampling event of Western Refining Southwest Inc.'s landfarm, (permit number NM-02-010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM).

Samples were collected according to established NMOCD procedures and analyzed for the following constituents:

- Total Petroleum Hydrocarbons;
- Benzene, Toluene, Ethyl benzene, and Xylenes;
- Major Ions (Na, Ca, Mg, K, Cl-,SO4, CO3, and HCO3); and
- RCRA Metals (As, Ba, Cd, Cr, Pb, Se, Ag, and Hg).

Please also find enclosed, the analytical results, which can be compared to the original baseline data collected on March 27, 1998.

Thank you and should you require additional information please do not hesitate to call me at (505) 632-4035

Respectfully Submitted,

Bruce Cauthen
Environmental Engineer
Western Refining Southwest Inc. Logistics / HSER
111 County Road 4990
Bloomfield, NM 87413
Main: 505-632-4035

Cc. Ms. Ann Allen, Western Refining Southwest Inc
Mr. Carlos Guerra, Western Refining Southwest Inc
Mr. Bill Robertson, Western Refining Southwest Inc
Mr. Dave Richards, Western Refining Southwest Inc
File

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

August 5, 2008

Mr. Bill Robertson
Western Refining, LLC
111 CR 4990
Bloomfield, NM 87413

RE: Second Quarter Sampling at Western Refining's Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Mr. Robertson,

On June 16, 2008, Lodestar Services, Inc. collected second quarter samples from Western Refining's landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. One crude cell sample and one API cell sample was collected as shown on Figure 1. Each sample was collected using a hand powered auger from three feet beneath native ground surface. Each sample was placed in an eight-ounce glass jar and stored on ice during shipping to Pinnacle Laboratories in Albuquerque, NM. Strict chain-of-custody procedures were followed during shipping. Pinnacle laboratories analyzed the samples for the following constituents: chlorides, total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, and xylenes (BTEX).

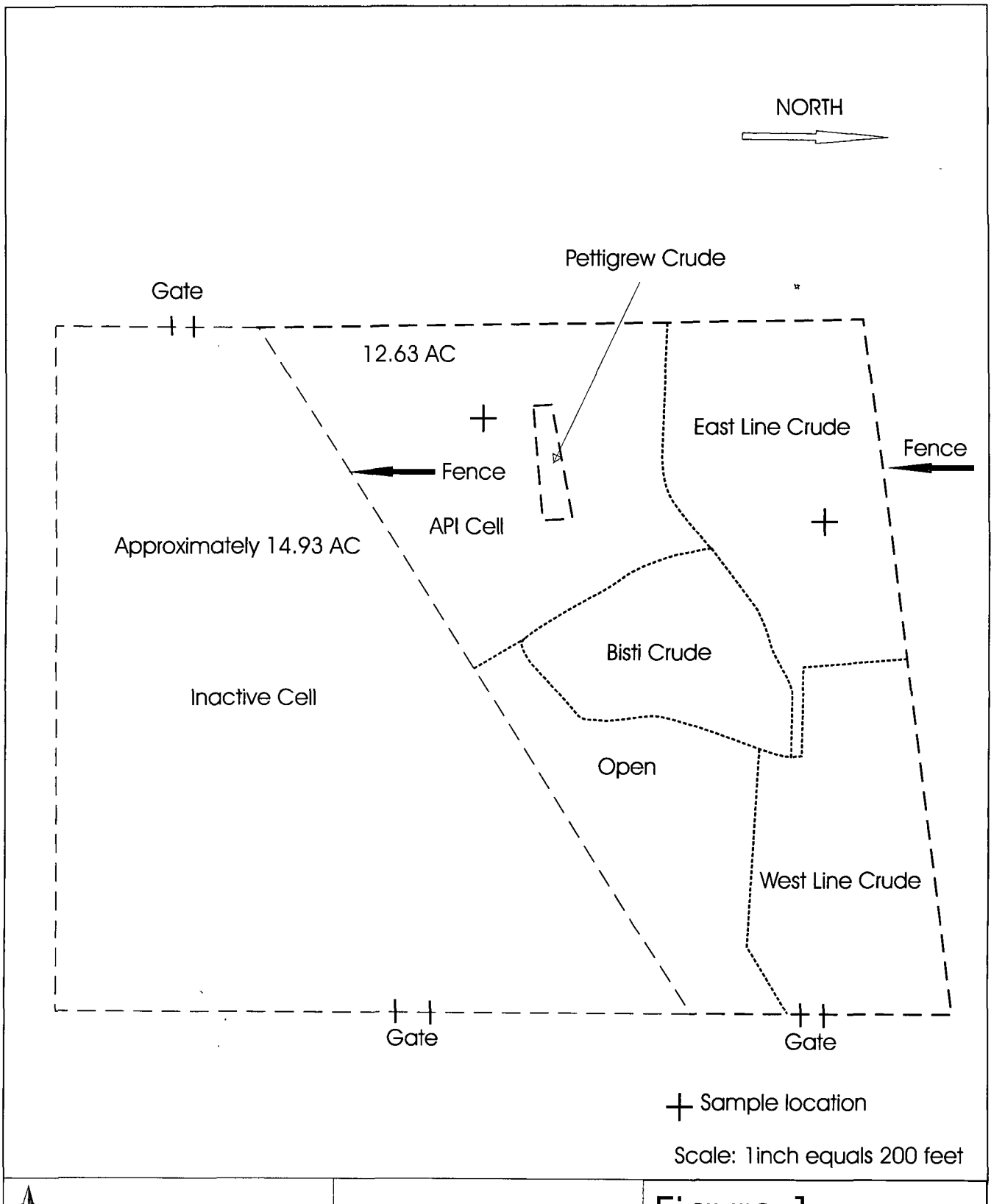
Concentrations of BTEX and TPH were not detected in either sample. Chloride concentrations were 180 mg/kg in the API Cell sample and 540 mg/kg in the Crude Cell sample. The complete laboratory report is included for your review.

Should you have any questions or require additional information please do not hesitate to call me at (970) 946-1093.

Respectfully Submitted,
Lodestar Services, Inc.

Ashley Ager

Cc. Mr. Dave Richards, Western Refining
Mr. Bruce Cauthen, Western Refining
File



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	**Landfarm Cell Diagram**	Figure 1 Drawn By MJN 3/1/04 Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

PINNACLE LABS
Environmental Testing

Pinnacle Lab ID number 806050
July 28, 2008

LODESTAR SERVICES
P.O. BOX 4465
DURANGO, CO 81302

Project Name LANDFARM
Project Number (NONE)

Attention: ASHLEY AGER/BILL ROBERTSON

On 06/18/2008 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), received a request to analyze **non-aq** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA Method 8015 GRO/8021B were performed by Pinnacle Laboratories, Inc., Albuquerque, NM.

All other analyses were performed by Test America, Inc. Pensacola, FL.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc

MR: jt

Enclosure

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PINNACLE LABS
Environmental Testing

CLIENT	LODESTAR SERVICES	PINNACLE ID	: 806050
PROJECT #	(NONE)	DATE RECEIVED	: 06/18/2008
PROJECT NAME	LANDFARM	REPORT DATE	: 07/24/2008

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
806050 - 01	API CELL	NON-AQ	06/16/2008
806050 - 02	CRUDE CELL	NON-AQ	06/16/2008

PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS

TEST	: EPA 8021B / 8015D BTEX/GRO		
CLIENT	: LODESTAR SERVICES	PINNACLE I.D.	: 806050
PROJECT #	: (NONE)	ANALYST	: DRK
PROJECT NAME	: LANDFARM		

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	API CELL	NON-AQ	06/16/2008	06/23/2008	06/25/2008	1
02	CRUDE CELL	NON-AQ	06/16/2008	06/23/2008	06/25/2008	1

PARAMETER	DET. LIMIT	UNITS	API CELL	CRUDE CELL
BENZENE	0.025	MG/KG	< 0.025	< 0.025
TOLUENE	0.025	MG/KG	< 0.025	< 0.025
ETHYLBENZENE	0.025	MG/KG	< 0.025	< 0.025
TOTAL XYLENES	0.10	MG/KG	< 0.10	< 0.10
METHYL-t-BUTYL ETHER	0.25	MG/KG	< 0.25	< 0.25
GASOLINE RANGE (GRO)	2.5	MG/KG	< 2.5	< 2.5
SURROGATE:				
TRIFLUOROTOLUENE (%)			93	95
SURROGATE LIMITS	(65 - 120)			

CHEMIST NOTES:
N/A

PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS
METHOD BLANK

TEST	: EPA 8021B / 8015D BTEX/GRO	PINNACLE I.D	: 806050
BLANK I. D	: 062508B1	DATE EXTRACTED	: 06/23/2008
CLIENT	: LODESTAR SERVICES	DATE ANALYZED	: 06/25/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	ANALYST	: DRK

PARAMETER	UNITS	
BENZENE	MG/KG	<0.025
TOLUENE	MG/KG	<0.025
ETHYLBENZENE	MG/KG	<0.025
TOTAL XYLENES	MG/KG	<0.10
METHYL-t-BUTYL ETHER	MG/KG	<0.25
GASOLINE RANGE (GRO)	MG/KG	<2.5
SURROGATE:		
TRIFLUOROTOLUENE (%)		103
SURROGATE LIMITS:	(65 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS

TEST	: EPA 8021B	PINNACLE I.D.	: 806050
BATCH ID	: 062508B1	DATE EXTRACTED	: 06/23/2008
CLIENT	: LODESTAR SERVICES	DATE ANALYZED	: 06/25/2008
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	REC LIMITS
BENZENE	<0.025	1.00	1.15	115	(68 - 120)
TOLUENE	<0.025	1.00	1.12	112	(64 - 120)
ETHYLBENZENE	<0.025	1.00	1.19	119	(49 - 127)
TOTAL XYLENES	<0.10	3.00	3.52	117	(58 - 120)
METHYL-t-BUTYL ETHER	<0.25	1.00	1.55	**155** M	(66 - 120)

CHEMIST NOTES:
L = LCS/LCSD spike recovery does not meet criteria, high. Associated samples were BDL.

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 806050
BATCH ID	: 062508B1	DATE EXTRACTED	: NA
CLIENT	: LODESTAR SERVICES	DATE ANALYZED	: 06/25/2008
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	BLANK RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<10	50.0	54.2	108	52.7	105	3	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							
HYDROCARBONS QUANTITATED USING GASOLINE									

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B	PINNACLE I.D.	: 806050
SAMPLE ID	: 806050-01 [1X]	DATE EXTRACTED	: 06/23/2008
CLIENT	: LODESTAR SERVICES	DATE ANALYZED	: 06/25/2008
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.025	1.00	1.07	107	1.10	110	4	(68 - 120)	20
TOLUENE	<0.025	1.00	1.03	103	1.07	107	3	(64 - 120)	20
ETHYLBENZENE	<0.025	1.00	1.07	107	1.12	112	5	(49 - 127)	20
TOTAL XYLENES	<0.10	3.00	3.28	109	3.33	111	2	(58 - 120)	20
METHYL-t-BUTYL ETHER	<0.25	1.00	1.21	**121 M**	1.22	**122 M**	1	(66 - 120)	20

CHEMIST NOTES:
M = MS/MSD spike recovery does not meet PLI criteria - high. Associated samples were BDL.

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS
METHOD BLANK

TEST	: EPA 8015D GRO	PINNACLE I.D	: 806050
BLANK I.D.	: 052908VS	DATE EXTRACTED	: 05/29/08
CLIENT	: LODESTAR SERVICES	DATE ANALYZED	: 06/06/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	ANALYST	: DRK

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/KG	<10
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE
SURROGATE:		
BROMOFLUOROBENZENE (%)		97
SURROGATE LIMITS	(80 - 120)	

CHEMIST NOTES:
N/A

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS

TEST	: EPA 8015D GRO	PINNACLE I.D.	: 806050
BATCH ID	: 052908VS	DATE EXTRACTED	: 05/29/2008
CLIENT	: LODESTAR SERVICES	DATE ANALYZED	: 06/06/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	BLANK RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	REC LIMITS
FUEL HYDROCARBONS	<10	20	20.8	104	(70 - 130)
HYDROCARBON RANGE		C6-C10			
HYDROCARBONS QUANTITATED USING GASOLINE					

CHEMIST NOTES:
N/A

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015D GRO	PINNACLE I.D.	: 806050
SAMPLE ID	: 805090-12	DATE EXTRACTED	: 05/29/08
CLIENT	: LODESTAR SERVICES	DATE ANALYZED	: 06/06/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<10	20.0	17.0	85	17.0	85	0	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 400-31888-1

Job Description: 806050

For:
Anasazi NM Holdings, Inc
2709-D Pan American Freeway, NE
Albuquerque, NM 87107

Attention: Mitch Rubenstein

Mark Swafford

Designee for
Marty Edwards
Project Manager I
marty.edwards@testamericainc.com
07/23/2008

The test results in this report meet all NELAP requirements for accredited parameters and relate only to the referenced samples. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory.

TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), California (2510), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250507), New Jersey (FL006), New York (11503), North Carolina (314), North Dakota (R-108), Oklahoma (9810), Pennsylvania (68-00467), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-08-TX), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).

TestAmerica Laboratories, Inc.
TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514
Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH NELAC

METHOD SUMMARY

Client: Anasazi NM Holdings, Inc | Job Number: 400-31888-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Chloride (Colormetric, Automated Ferricyanide)	TAL PEN	SW846 9251	
Deionized Water Leaching Procedure (Routine)	TAL PEN		ASTM DI Leach

Lab References:

TAL PEN = TestAmerica Pensacola

Method References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Anasazi NM Holdings, Inc

Job Number: 400-31888-1

Method	Analyst	Analyst ID
SW846 9251	Gimlin, Wendy	WG
EPA PercentMoisture	Chea, Vanda	VC

SAMPLE SUMMARY

Client: Anasazi NM Holdings, Inc

Job Number: 400-31888-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
400-31888-1	API CELL/ 806050-01	Solid	06/16/2008 1247	06/19/2008 1005
400-31888-2	CRUDE CELL/ 806050-02	Solid	06/16/2008 1258	06/19/2008 1005

SAMPLE RESULTS

Client: Anasazi NM Holdings, Inc

Job Number: 400-31888-1

General Chemistry

Client Sample ID: API CELL/ 806050-01

Lab Sample ID: 400-31888-1
Client Matrix: Solid
% Moisture: 3.7

Date Sampled: 06/16/2008 1247
Date Received: 06/19/2008 1005

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	180		mg/Kg	42	1.0	9251
	Anly Batch: 400-71807		Date Analyzed 06/25/2008 1149			DryWt Corrected: Y
Percent Solids	96		%	0.10	1.0	PercentMoisture
	Anly Batch: 400-71629		Date Analyzed 06/21/2008 0000			

Client Sample ID: CRUDE CELL/ 806050-02

Lab Sample ID: 400-31888-2
Client Matrix: Solid
% Moisture: 7.5

Date Sampled: 06/16/2008 1258
Date Received: 06/19/2008 1005

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	540		mg/Kg	43	1.0	9251
	Anly Batch: 400-71807		Date Analyzed 06/25/2008 1149			DryWt Corrected: Y
Percent Solids	93		%	0.10	1.0	PercentMoisture
	Anly Batch: 400-71629		Date Analyzed 06/21/2008 0000			

QUALITY CONTROL RESULTS

Client: Anasazi NM Holdings, Inc

Job Number: 400-31888-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:400-71629					
400-31888-1	API CELL/ 806050-01	T	Solid	PercentMoisture	
400-31888-2	CRUDE CELL/ 806050-02	T	Solid	PercentMoisture	
Prep Batch: 400-71794					
MB 400-71794/1-A	Method Blank	S	Solid	DI Leach	
400-31772-B-1-A MS	Matrix Spike	S	Solid	DI Leach	
400-31772-B-1-A MSD	Matrix Spike Duplicate	S	Solid	DI Leach	
400-31888-1	API CELL/ 806050-01	T	Solid	DI Leach	
400-31888-2	CRUDE CELL/ 806050-02	T	Solid	DI Leach	
Analysis Batch:400-71807					
MB 400-71794/1-A	Method Blank	S	Solid	9251	
LCS 400-71807/2	Lab Control Spike	T	Water	9251	
400-31772-B-1-A MS	Matrix Spike	S	Solid	9251	
400-31772-B-1-A MSD	Matrix Spike Duplicate	S	Solid	9251	
400-31888-1	API CELL/ 806050-01	T	Solid	9251	
400-31888-2	CRUDE CELL/ 806050-02	T	Solid	9251	

Report Basis
S = Soluble
T = Total

Quality Control Results

Client: Anasazi NM Holdings, Inc Job Number: 400-31888-1

Method Blank - Batch: 400-71807 **Method: 9251**
Preparation: N/A

Lab Sample ID: MB 400-71794/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 06/25/2008 1146
Date Prepared: N/A
Date Leached: 06/23/2008 0900

Analysis Batch: 400-71807
Prep Batch: N/A
Units: mg/Kg
Leachate Batch: 400-71794

Instrument ID: Konelab 1
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL
Chloride	<40		40

Lab Control Spike - Batch: 400-71807 **Method: 9251**
Preparation: N/A

Lab Sample ID: LCS 400-71807/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/25/2008 1146
Date Prepared: N/A

Analysis Batch: 400-71807
Prep Batch: N/A
Units: mg/Kg

Instrument ID: Konelab 1
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	50.0	45.1	90	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 400-71807 **Method: 9251**
Preparation: N/A

MS Lab Sample ID: 400-31772-B-1-A MS
Client Matrix: Solid
Dilution: 5.0
Date Analyzed: 06/25/2008 1325
Date Prepared: N/A
Date Leached: 06/23/2008 0900

MSD Lab Sample ID: 400-31772-B-1-A MSD
Client Matrix: Solid
Dilution: 5.0
Date Analyzed: 06/25/2008 1325
Date Prepared: N/A
Date Leached: 06/23/2008 0900

Analysis Batch: 400-71807
Prep Batch: N/A
Leachate Batch: 400-71794

Analysis Batch: 400-71807
Prep Batch: N/A
Leachate Batch: 400-71794

Instrument ID: Konelab 1
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

Instrument ID: Konelab 1
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	28	28	75 - 125	0	20	4	4

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Anasazi NM Holdings, Inc

Job Number: 400-31888-1

Lab Section	Qualifier	Description
General Chemistry		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Pinnacle Laboratories, Inc. 400-31888 **Interlab Chain of Custody** Date: 6/18/08 Page: 1 of 1

LABORATORIES Network Project Manager: Jacinta Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107
(505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals)	Dissolved Fe, Mn, Pb (6010)	TOC	Gen Chemistry: Chloride	Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8260 (TCLP 1311) ZHE	Base/Neutral Acid Compounds GC/MS (625/8270)	Uranium (ICP-MS)	Radium 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
API Cell/ 806050-01	6/16/08	1247	NAQ								X													
Crude Cell/ 806050-02	"	1258	"								X													

Page 11 of 12

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:		RELINQUISED BY: 1.	RELINQUISED BY: 2.
PROJECT #:	806050	Total Number of Containers		APEX LABS		Signature: Time: Jacinta Tenorio 1700	Signature: Time:
PROJ. NAME:	LODE	Chain of Custody Seals		ARS		Printed Name: Date: Jacinta Tenorio 6/18/08	Printed Name: Date:
QC LEVEL:	(STD) IV	Received Intact?		BIOVIR		Pinnacle Laboratories, Inc.	Company
QC REQUIRED:	MS MSD BLANK	Received Good Cond./Cold		BSK ANALYTICAL		RECEIVED BY: 1.	RECEIVED BY: 2.
TAT:	(STANDARD) RUSH!!	LAB NUMBER:		GEL		Signature: Time: 10:05	Signature: Time:
DUE DATE:	7/2	COMMENTS:		MWH LABS		Printed Name: Date: 6/19/08	Printed Name: Date:
RUSH SURCHARGE:	—			TEST AMERICA-FL	X	Company	Company
CLIENT DISCOUNT:	—			WCAS			
SPECIAL CERTIFICATION REQUIRED: YES (NO)		0.7°C		WOHL			

21

Login Sample Receipt Check List

Client: TestAmerica Pensacola

Job Number: 400-31888-1

Login Number: 31888
Creator: Hor, Koma
List Number: 1

List Source: TestAmerica Pensacola

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 06-17-08 PAGE: 1 OF 1

PLI Accession #: 806050

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	Ashley Ager
COMPANY:	Lodestar Services
ADDRESS:	1588 CR 204
	Durango, CO 81301
PHONE:	970 946-1093
FAX:	970 385 6794
BILL TO:	Bill Robertson
COMPANY:	Western Refining
ADDRESS:	111 CR 4990
	Bloomfield, NM

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐/DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics ☐PBMS	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry: Cl	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method1311)	Metals:	NUMBER OF CONTAINERS
API Cell	6-16-08	1247	soil	01			✓		✓														✓						2
Crude Cell	6-16-08	1258	soil	02			✓		✓														✓						2

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION	
PROJ. NO:	Landfarm
PROJ. NAME:	
P.O. NO.:	
SHIPPED VIA:	

SAMPLE RECEIPT	
NO CONTAINERS	4
CUSTODY SEALS	Y / N / NA
RECEIVED INTACT	Y / N
BLUE ICE/ICE	4.5° C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) X

*NOT AVAILABLE ON ALL ANALYSES

CERTIFICATION REQUIRED ☐NM ☐SDWA ☐AZ ☐OTHER

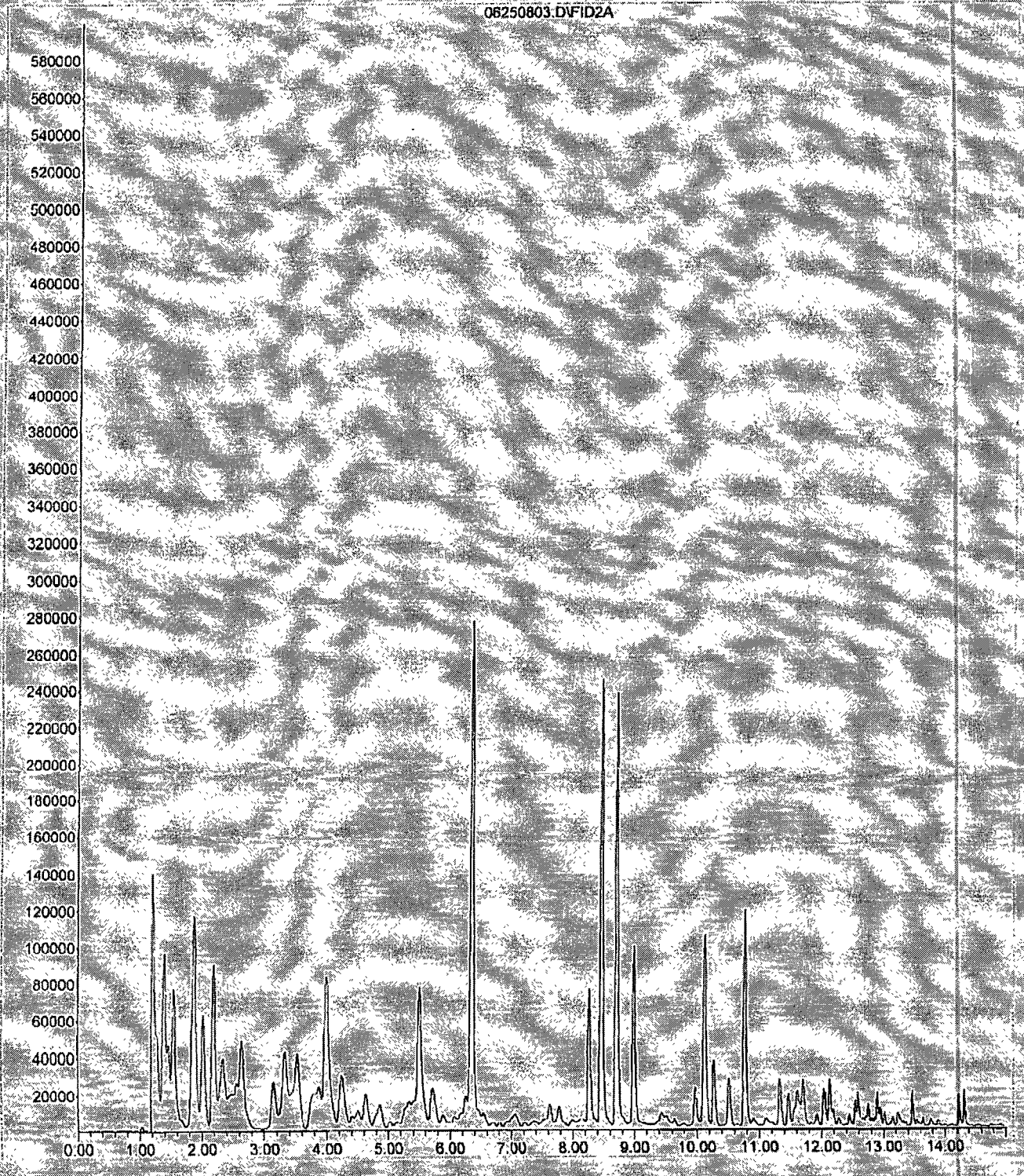
METHANOL PRESERVATION ☐ METALS ☐TOTAL ☐DISSOLVED

COMMENTS:

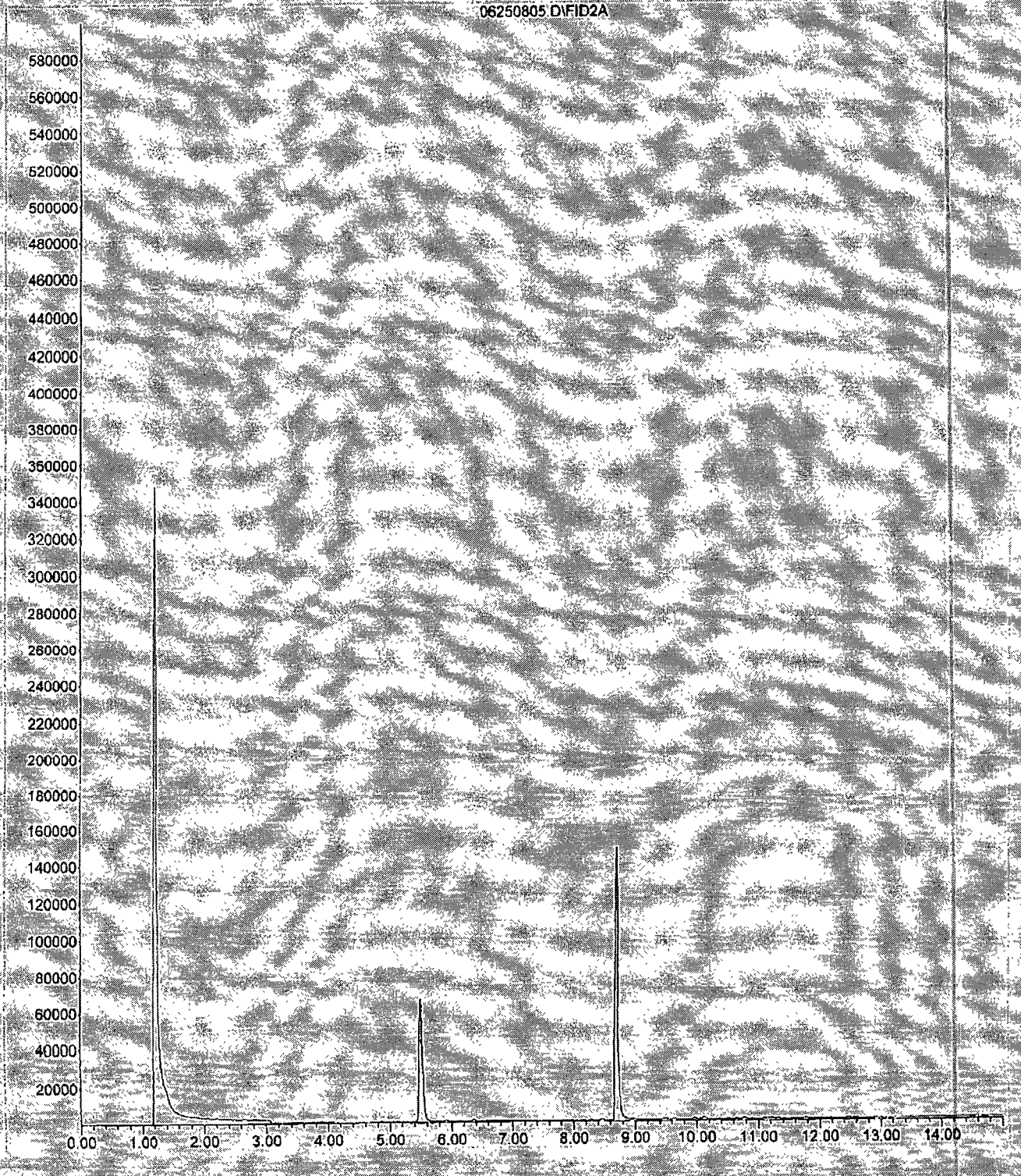
RELINQUISHED BY: 1.	RELINQUISHED BY: 2
Signature: Ashley Ager Time: 1500	Signature: Time:
Printed Name: Ashley L Ager Date: 06-17-08	Printed Name: Date:
Company: Lodestar	Company:
See Reverse side (Force Majeure)	
RECEIVED BY: 1	**RECEIVED BY: (LAB) 2**
Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:
Company	Pinnacle Laboratories Inc.

DISTRIBUTION: White - PLI, Canary - Originator

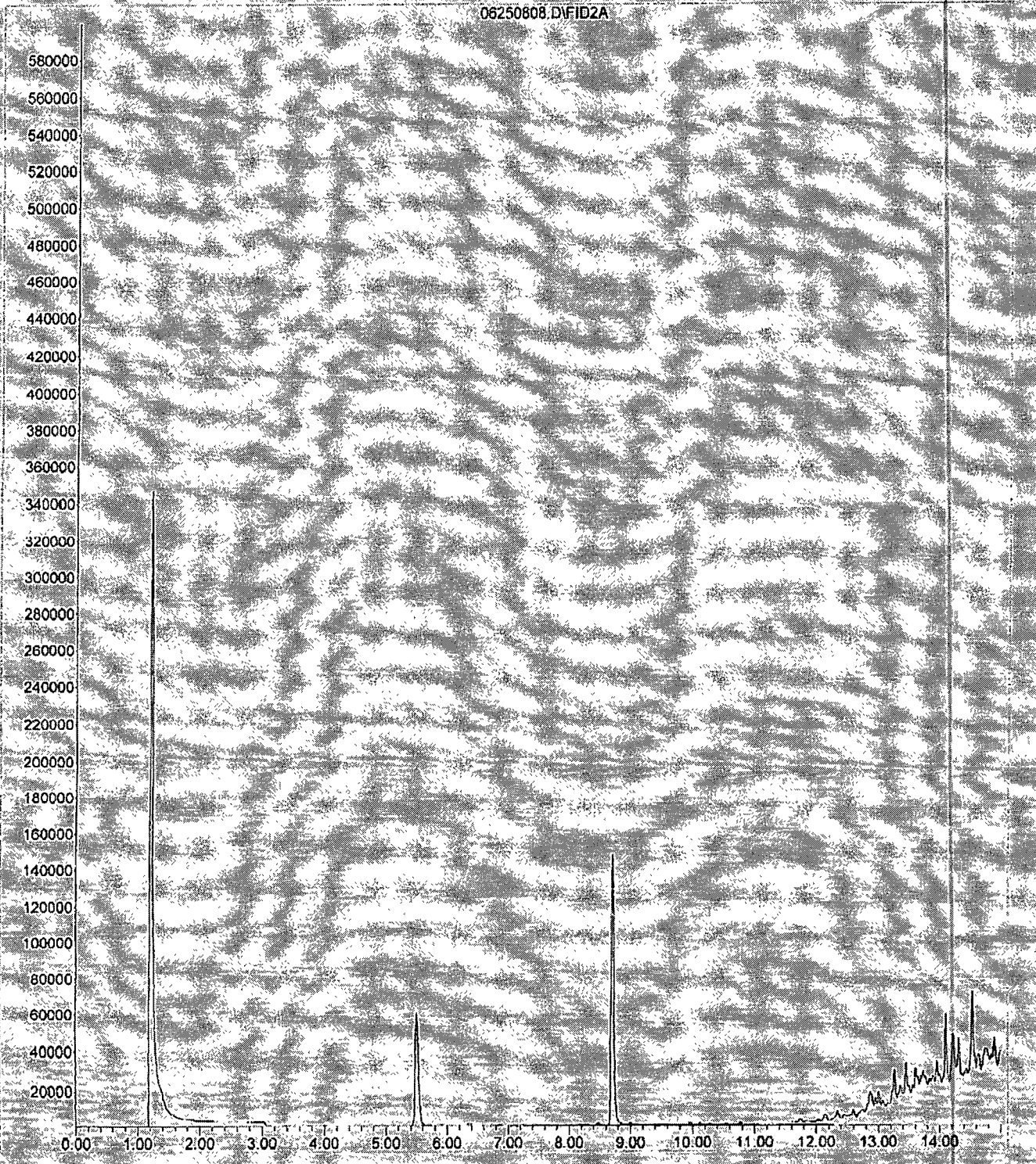
File : C:\HPCHEM\1\DATA\062508B1\06250803.D
Operator : DRK
Acquired : 25 Jun 2008 10:08 using AcqMethod GCB80429.M
Instrument : GC-2 PID/
Sample Name: 062508.15, GRO CCV 1000UG/L
Misc Info : R0625, P0625, PLI-NM 1000UG/L
Vial Number: 15



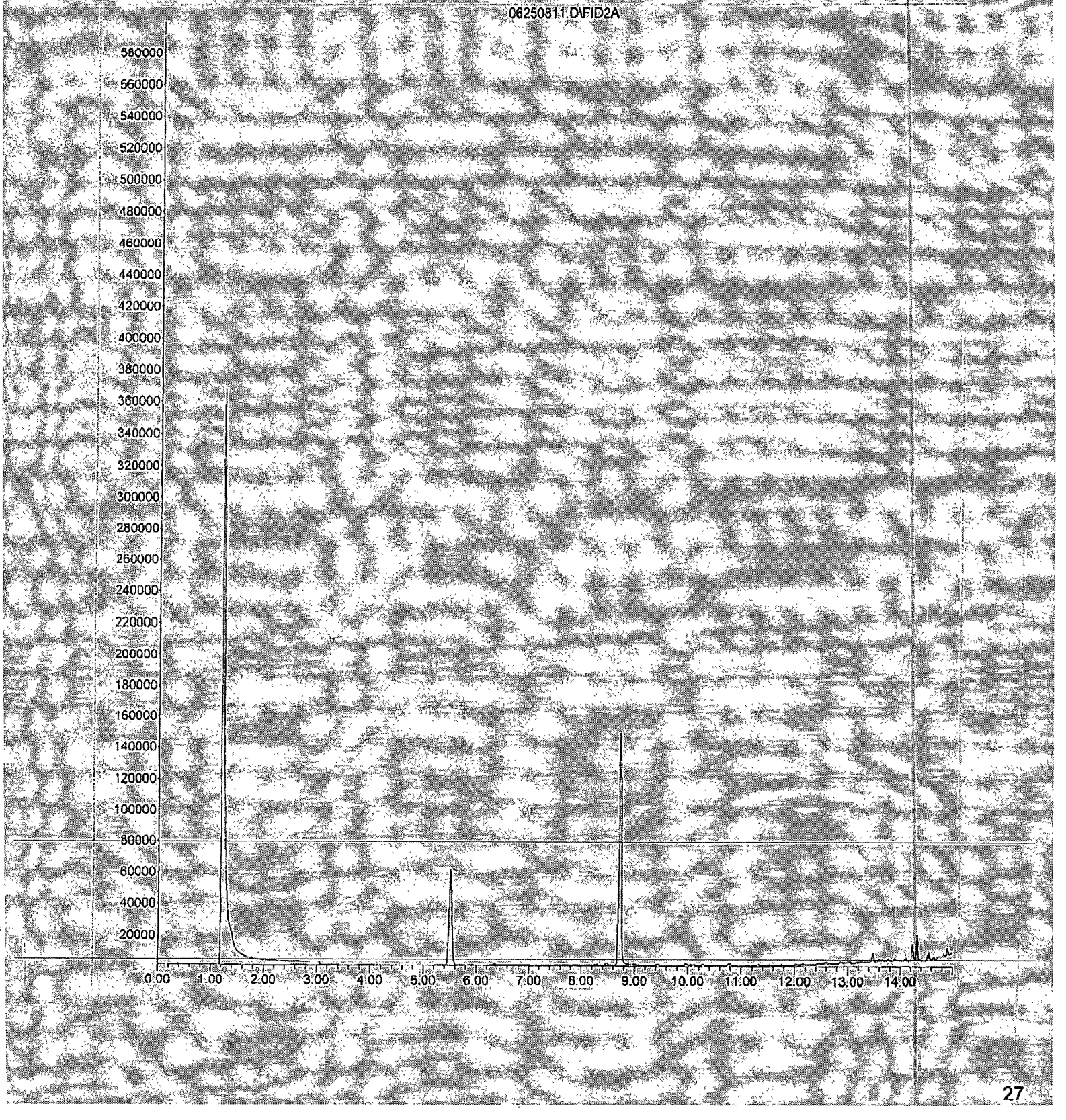
File : C:\HPCHEM\1\DATA\062508B1\06250805.D
Operator : DRK
Acquired : 25 Jun 2008 11:08 using AcqMethod GCB80429.M
Instrument : GC-2 PID/
Sample Name: 062508.10, SOIL BLK 0623GS
Misc Info : R0618, P0623, PLI-NM BLK
Vial Number: 1



File : C:\HPCHEM\1\DATA\062508B1\06250808.D
Operator : DRK
Acquired : 25 Jun 2008 12:50 using AcqMethod GCB80429.M
Instrument : GC-2 PID/
Sample Name: 062408.10, API C806050.01, API CELL
Misc Info : R0618, P0623, LANDFARM
Vial Number: 4



File : C:\HPCHEM\1\DATA\062508B1\06250811.D
Operator : DRK
Acquired : 25 Jun 2008 14:18 using AcqMethod GCB80429.M
Instrument : GC-2 PID/
Sample Name: 806050.02, CRUDE CELL
Misc Info : R0618, D0623, LANDFARM
Vial Number: 7



Western Refining

LOGISTICS

WNR LISTED NYSE

RECEIVED

2009 NOV 12 PM 2 38

November 9, 2009

Mr. Brad Jones
Solid Waste Management Facilities
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

CERTIFIED MAIL: 7009 0820 0000 0482 8620

RE: 3rd Quarter 2009, Sampling at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

Dear Mr. Jones:

Please find enclosed the 3rd Quarter 2009, sampling results at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

If you have any questions or require additional information, please do not hesitate to contact me at (505) 632-4077 or at Bill.Robertson@wnr.com.

Sincerely,
Western Refining

Bill Robertson
Safety, Environmental & Regulatory Manager

Attachments Analytical Report

Cc: Allen Hains, Western Refining
File

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

October 22, 2009

Mr. Bill Robertson
Western Refining, Southwest
111 CR 4990
Bloomfield, NM 87413

RE: Third Quarter Sampling at Western Refining's Centralized Surface Waste Management Landfarm Facility NM-02-0010

Dear Mr. Robertson,

On September 29, 2009, Lodestar Services, Inc. collected third quarter samples from Western Refining's Bisti landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. One Crude Cell sample and one API Cell sample was collected as shown on Figure 1. Each sample was collected using a hand powered auger from four feet beneath native ground surface. Each sample was placed in an eight-ounce glass jar and stored on ice during shipping to Hall Environmental Analysis Laboratory in Albuquerque, NM. Strict chain-of-custody procedures were followed during shipping. Hall Environmental Analysis Laboratory analyzed the samples for the following constituents: chlorides, total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, and xylenes (BTEX).

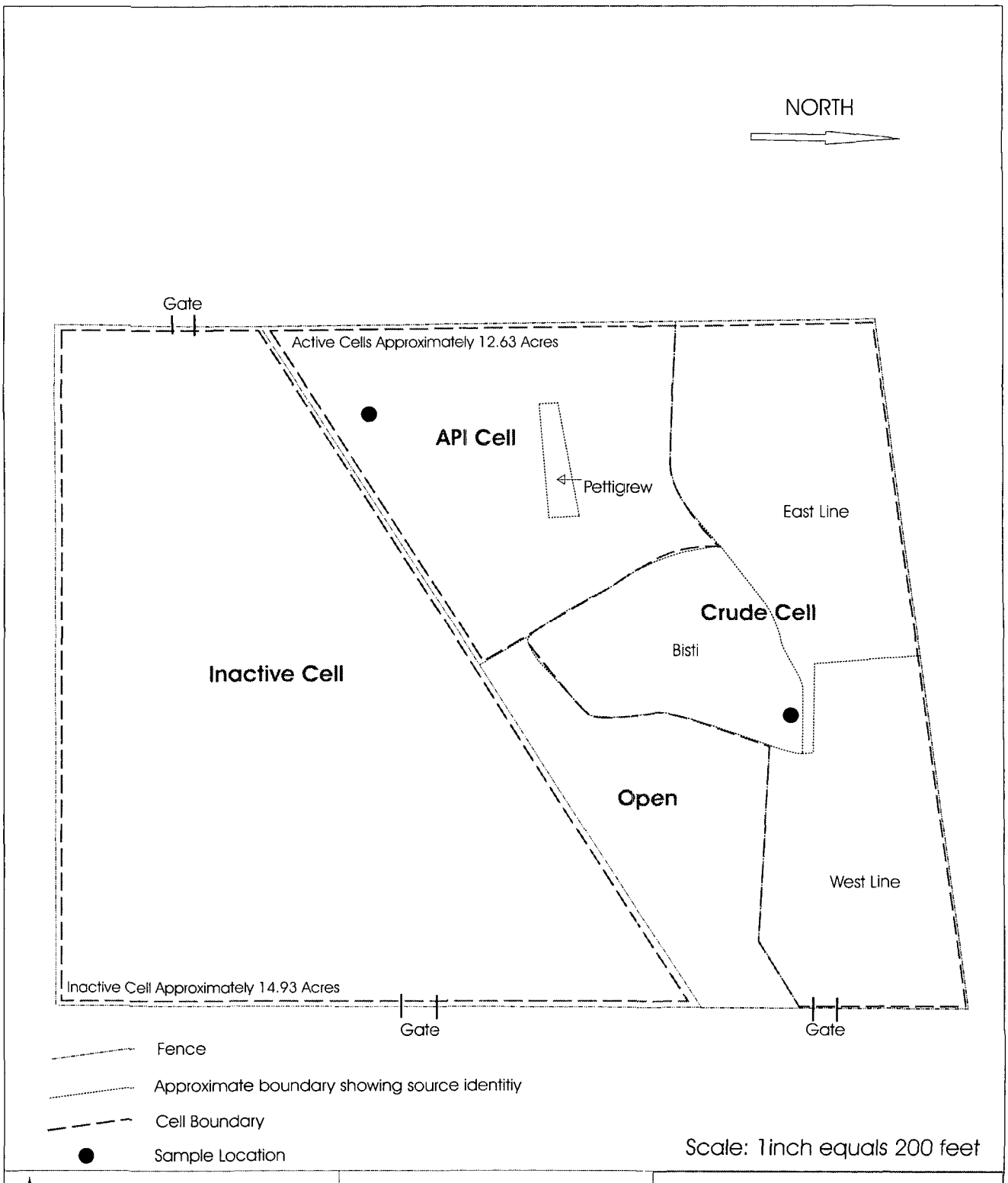
Concentrations of BTEX and TPH were not detected in either sample. Chloride concentrations were 95 mg/kg in the API Cell sample and 14 mg/kg in the Crude Cell sample. The complete laboratory report is included for your review.

Should you have any questions or require additional information please do not hesitate to call me at (970) 946-1093.

Respectfully Submitted,
Lodestar Services, Inc.

Ashley Ager

Cc. Mr. Bruce Cauthen, Western Refining
File



Lodestar Services, Inc
PO Box 4465
Durango, CO 81302

Landfarm Cell Diagram

Figure 1

Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Monday, October 19, 2009

Bill Robertson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Western Bisti Landfarm

Order No.: 0910123

Dear Bill Robertson:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 10/7/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

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, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

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

Hall Environmental Analysis Laboratory, Inc.

Date: *19-Oct-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Crude Cell
Lab Order:	0910123	**Collection Date:**	9/29/2009 2:50:00 PM
Project:	Western Bisti Landfarm	**Date Received:**	10/7/2009
Lab ID:	0910123-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/17/2009 3:56:32 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/17/2009 3:56:32 PM
Surr: DNOP	91.6	61.7-135		%REC	1	10/17/2009 3:56:32 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/13/2009 2:38:04 AM
Surr: BFB	105	65.9-118		%REC	1	10/13/2009 2:38:04 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	10/13/2009 2:38:04 AM
Toluene	ND	0.050		mg/Kg	1	10/13/2009 2:38:04 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/13/2009 2:38:04 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/13/2009 2:38:04 AM
Surr: 4-Bromofluorobenzene	110	64.7-120		%REC	1	10/13/2009 2:38:04 AM
EPA METHOD 300.0: ANIONS						Analyst: **TAF**
Chloride	14	1.5		mg/Kg	5	10/14/2009 10:22:59 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Estimated value	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-Oct-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	API Cell
Lab Order:	0910123	**Collection Date:**	9/29/2009 2:18:00 PM
Project:	Western Bisti Landfarm	**Date Received:**	10/7/2009
Lab ID:	0910123-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/17/2009 4:31:37 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/17/2009 4:31:37 PM
Surr: DNOP	84.0	61.7-135		%REC	1	10/17/2009 4:31:37 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/13/2009 3:08:30 AM
Surr: BFB	101	65.9-118		%REC	1	10/13/2009 3:08:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	10/13/2009 3:08:30 AM
Toluene	ND	0.050		mg/Kg	1	10/13/2009 3:08:30 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/13/2009 3:08:30 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/13/2009 3:08:30 AM
Surr: 4-Bromofluorobenzene	105	64.7-120		%REC	1	10/13/2009 3:08:30 AM
EPA METHOD 300.0: ANIONS						Analyst: **TAF**
Chloride	95	1.5		mg/Kg	5	10/14/2009 10:57:48 AM

Qualifiers:				
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Estimated value	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: Western Refining Southwest, Inc.
Project: Western Bisti Landfarm **Work Order:** 0910123

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions											
Sample ID: MB-20302		*MBLK*				Batch ID:	**20302**	Analysis Date:	10/14/2009 9:48:10 AM		
Chloride	ND	mg/Kg	0.30								
Sample ID: LCS-20302		*LCS*				Batch ID:	**20302**	Analysis Date:	10/14/2009 10:05:34 AM		
Chloride	14.67	mg/Kg	0.30	15	0	97.8	90	110			
Method: EPA Method 8015B: Diesel Range Organics											
Sample ID: MB-20277		*MBLK*				Batch ID:	**20277**	Analysis Date:	10/17/2009 5:31:02 AM		
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-20277		*LCS*				Batch ID:	**20277**	Analysis Date:	10/17/2009 6:06:23 AM		
Diesel Range Organics (DRO)	47.11	mg/Kg	10	50	0	94.2	64.6	116			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: MB-20284		*MBLK*				Batch ID:	**20284**	Analysis Date:	10/13/2009 6:40:15 AM		
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-20284		*LCS*				Batch ID:	**20284**	Analysis Date:	10/13/2009 4:39:04 AM		
Gasoline Range Organics (GRO)	28.70	mg/Kg	5.0	25	1.27	110	64.4	133			
Method: EPA Method 8021B: Volatiles											
Sample ID: MB-20284		*MBLK*				Batch ID:	**20284**	Analysis Date:	10/13/2009 6:40:15 AM		
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: LCS-20284		*LCS*				Batch ID:	**20284**	Analysis Date:	10/13/2009 6:09:47 AM		
Benzene	0.9996	mg/Kg	0.050	1	0.0167	98.3	78.8	132			
Toluene	1.049	mg/Kg	0.050	1	0	105	78.9	112			
Ethylbenzene	1.133	mg/Kg	0.050	1	0	113	69.3	125			
Xylenes, Total	3.413	mg/Kg	0.10	3	0	114	73	128			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT** Date Received: **10/7/2009**

Work Order Number **0910123** Received by: **TLS**

Checklist completed by: _____ 10/7/09 Sample ID labels checked by: _____
Signature Date Initials

Matrix: Carrier name: ~~UPS~~ Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted	☑	Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	**8.9°"**	*<6° C Acceptable* If given sufficient time to cool.		

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Western Refining
Bill Robertson
Mailing Address: 111 CR 4990
Bloomfield, NM
Phone #: 505-632-8006
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____
Project Name: Western Bisti Land farm
Project #:
Project Manager: Bill Robertson
Sampler: Devin Henemann
On Ice: ☒ YES ☐ NO
Sample Temperature: 4°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0911023	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides 300.1				Air Bubbles (Y or N)
9-29-09	14:50	Soil	Crude Cell	Soil/2	—	1	X		X									X				
9-29-09	14:18	Soil	API Cell	Soil/2	—	2	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
10-5-09	19:15			10/7/09	1000
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
Please copy results to
ALA@lodestarservices.com

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

Western Refining

LOGISTICS

WNR LISTED NYSE

July 20, 2009

RECEIVED
2009 JUL 22 PM 1 47

Mr. Ed Hansen
Hydrologist, Ground Water Remediations
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

CERTIFIED MAIL: 7006 0100 0002 9205 1676

RE: 2nd Quarter 2009, Sampling at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

Dear Mr. Hansen:

Please find enclosed the 2nd Quarter 2009, Sampling at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

Please contact Bruce Cauthen at (505) 632-4035 should you have any questions or need further information regarding this report.

Sincerely,

Bruce Cauthen
Environmental Engineer
Western Refining, Logistics

Attachments Analytical Report

Cc: Allen Hains, Western Refining
Bill Robertson, Western Refining
File

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

July 3, 2009

Mr. Bruce Cauthen
Western Refining, Southwest
111 CR 4990
Bloomfield, NM 87413

RE: Second Quarter Sampling at Western Refining's Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Mr. Cauthen,

On June 17, 2009, Lodestar Services, Inc. collected second quarter samples from Western Refining's (Western's) Bisti Landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. One crude cell sample and one API cell sample was collected as shown on Figure 1. Each sample was collected using a hand powered auger from three feet beneath native ground surface. Samples were placed in eight-ounce glass jars and stored on ice during shipping to Hall Environmental Analysis Laboratories (HEAL) in Albuquerque, NM. Strict chain-of-custody procedures were followed during shipping. HEAL analyzed the samples for the following constituents: chlorides, total petroleum hydrocarbons (TPH), benzene, toluene, ethyl benzene, and xylenes (BTEX).

Concentrations of BTEX and TPH were not detected in either sample. Chloride concentrations were 67 mg/kg in the API Cell sample and 5.4 mg/kg in the Crude Cell sample. The complete laboratory report is included for your review. Analytical results are shown on the attached table and can be compared to the original baseline data collected on March 27, 1998.

Should you have any questions or require additional information please do not hesitate to call me at (970) 946-1093.

Respectfully Submitted,
Lodestar Services, Inc.

Ashley Ager

Cc. Mr. Bill Robertson, Western Refining
File

API Cell

	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter	2009 Annual	2009 2nd Quarter
TPH (mg/kg)	nd	nd	nd	nd	31	nd	nd	nd	nd	nd
GRO	nd	nd	nd	nd	31	nd	nd	nd	nd	nd
DRO	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MRO	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BTEX (mg/kg)	nd	nd	nd	nd	0.686	nd	nd	nd	nd	nd
Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	nd	nd	nd	nd	0.064	nd	nd	nd	nd	nd
Ethyl-Benzene	nd	nd	nd	nd	0.082	nd	nd	nd	nd	nd
Xylenes	nd	nd	nd	nd	0.54	nd	nd	nd	nd	nd
Metals (mg/kg)										
Arsenic	0.187				2.5				nd	
Barium	47.1				130				81	
Cadmium	nd				nd				nd	
Calcium	2690				7300				740	
Chromium	0.305				4.4				2.9	
Lead	0.477				4.1				3.5	
Magnesium	863				1800				830	
Potassium	729				1300				680	
Selenium	nd				nd				nd	
Silver	nd				nd				nd	
Sodium	66.2				150				3600	
Mercury	nd				nd				nd	
Gen Chem										
Alkalinity (meq/l)	54.4				3500				1.9	
Bicarbonate (meq/l)	49.4				2900				1.9	
Carbonate (meq/l)	4.52				540				nd	
Sulfate (mg/kg)	81.7				nd				1600	
Chloride (mg/kg)	nd				660	180	37	68	4100	67

Crude Cell

	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter	2009 Annual	2009 2nd Quarter
TPH (mg/kg)	nd	nd	nd	nd	nd	nd	nd	nd	520	nd
GRO	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DRO	nd	nd	nd	nd	nd	nd	nd	nd	250	nd
MRO	nd	nd	nd	nd	nd	nd	nd	nd	270	nd
BTEX (mg/kg)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethyl-Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Xylenes	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Metals (mg/kg)										
Arsenic	0.173				1.9				nd	
Barium	14.8				140				96	
Cadmium	nd				nd				nd	
Calcium	3530				2800				4500	
Chromium	0.248				3.7				4	
Lead	0.479				3.8				5.3	
Magnesium	957				1200				1100	
Potassium	806				1100				640	
Selenium	nd				nd				nd	
Silver	nd				nd				nd	
Sodium	69.7				nd				nd	
Mercury (mg/kg)	nd				nd				nd	
Gen Chem										
Alkalinity (meq/l)	791				1200				1.8	
Bicarbonate (meq/l)	731				880				1.8	
Carbonate (meq/l)	56.3				280				nd	
Sulfate (mg/kg)	68				690				860	
Chloride (mg/kg)	nd				110	540	2.1	35	4.3	5.4

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Tuesday, June 30, 2009

Bruce Cauthen
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Bisti Landfarm

Order No.: 0906420

Dear Bruce Cauthen:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 6/19/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

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
Texas Lab# T104704424-08-TX

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

Hall Environmental Analysis Laboratory, Inc.

Date: *30-Jun-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	API Cell
Lab Order:	0906420	**Collection Date:**	6/17/2009 1:25:00 PM
Project:	Bisti Landfarm	**Date Received:**	6/19/2009
Lab ID:	0906420-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/27/2009
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/27/2009
Surr: DNOP	98.6	61.7-135		%REC	1	6/27/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/26/2009 1:57:19 PM
Surr: BFB	78.9	58.8-123		%REC	1	6/26/2009 1:57:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	6/26/2009 1:57:19 PM
Toluene	ND	0.050		mg/Kg	1	6/26/2009 1:57:19 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/26/2009 1:57:19 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/26/2009 1:57:19 PM
Surr: 4-Bromofluorobenzene	87.4	66.8-139		%REC	1	6/26/2009 1:57:19 PM
EPA METHOD 300.0: ANIONS						Analyst: **RAGS**
Chloride	67	3.0		mg/Kg	10	6/24/2009 3:52:22 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Estimated value
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: *30-Jun-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	Crude Cell
Lab Order:	0906420	**Collection Date:**	6/17/2009 1:38:00 PM
Project:	Bisti Landfarm	**Date Received:**	6/19/2009
Lab ID:	0906420-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/27/2009
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/27/2009
Surr: DNOP	98.8	61.7-135		%REC	1	6/27/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/26/2009 2:58:19 PM
Surr: BFB	86.4	58.8-123		%REC	1	6/26/2009 2:58:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	6/26/2009 2:58:19 PM
Toluene	ND	0.050		mg/Kg	1	6/26/2009 2:58:19 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/26/2009 2:58:19 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/26/2009 2:58:19 PM
Surr: 4-Bromofluorobenzene	99.1	66.8-139		%REC	1	6/26/2009 2:58:19 PM
EPA METHOD 300.0: ANIONS						Analyst: **RAGS**
Chloride	5.4	0.30		mg/Kg	1	6/25/2009 12:21:20 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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: Western Refining Southwest, Inc.
Project: Bisti Landfarm **Work Order:** 0906420

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions									
Sample ID: MB-19440		*MBLK*			Batch ID:	**19440**	Analysis Date:		6/23/2009 5:08:13 PM
Chloride	ND	mg/Kg	0.30						
Sample ID: LCS-19440		*LCS*			Batch ID:	**19440**	Analysis Date:		6/23/2009 5:25:38 PM
Chloride	14.88	mg/Kg	0.30	99.2	90	110			
Method: EPA Method 8015B: Diesel Range Organics									
Sample ID: MB-19418		*MBLK*			Batch ID:	**19418**	Analysis Date:		6/23/2009
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-19418		*LCS*			Batch ID:	**19418**	Analysis Date:		6/23/2009
Diesel Range Organics (DRO)	45.81	mg/Kg	10	91.6	64.6	116			
Sample ID: LCSD-19418		*LCSD*			Batch ID:	**19418**	Analysis Date:		6/23/2009
Diesel Range Organics (DRO)	41.27	mg/Kg	10	82.5	64.6	116	10.4	17.4	
Method: EPA Method 8015B: Gasoline Range									
Sample ID: MB-19443		*MBLK*			Batch ID:	**19443**	Analysis Date:		6/26/2009 10:04:49 PM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: LCS-19443		*LCS*			Batch ID:	**19443**	Analysis Date:		6/26/2009 8:02:57 PM
Gasoline Range Organics (GRO)	26.39	mg/Kg	5.0	102	64.4	133			
Sample ID: LCSD-19443		*LCSD*			Batch ID:	**19443**	Analysis Date:		6/26/2009 8:33:29 PM
Gasoline Range Organics (GRO)	26.91	mg/Kg	5.0	104	69.5	120	1.95	11.6	
Method: EPA Method 8021B: Volatiles									
Sample ID: MB-19443		*MBLK*			Batch ID:	**19443**	Analysis Date:		6/26/2009 10:04:49 PM
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: LCS-19443		*LCS*			Batch ID:	**19443**	Analysis Date:		6/26/2009 9:03:56 PM
Benzene	1.146	mg/Kg	0.050	113	78.8	132			
Toluene	1.083	mg/Kg	0.050	107	78.9	112			
Ethylbenzene	1.044	mg/Kg	0.050	104	69.3	125			
Xylenes, Total	3.029	mg/Kg	0.10	101	73	128			
Sample ID: LCSD-19443		*LCSD*			Batch ID:	**19443**	Analysis Date:		6/26/2009 9:34:23 PM
Benzene	1.140	mg/Kg	0.050	112	78.8	132	0.525	27	
Toluene	1.050	mg/Kg	0.050	103	78.9	112	3.04	19	
Ethylbenzene	1.020	mg/Kg	0.050	102	69.3	125	2.30	10	
Xylenes, Total	2.919	mg/Kg	0.10	97.3	73	128	3.72	13	

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING SOUT | Date Received: 6/19/2009

Work Order Number 0906420 | Received by: TLS

Checklist completed by: _____ Signature _____ 6/19/09 Date | Sample ID labels checked by: _____ Initials

Matrix: | Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐		
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑		
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐		
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑		
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑		
Container/Temp Blank temperature?	2.4°	<6° C Acceptable If given sufficient time to cool.			

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Western Refining
Bruce Cauthen
Mailing Address: 111 CR 4990
Bloomfield, NM
Phone #: 505 632 8006
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____
Project Name:
Bisti Landfarm
Project #:
Project Manager:
Ashley Ager
Sampler: Ashley Ager
On Ice: ☒ Yes ☐ No
Sample Temperature: 2°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 0906130	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.1 Chlorides				Air Bubbles (Y or N)
6-17-09	1325	soil	API Cell	4 oz/2		1	✓		✓									✓				
6-17-09	1338	soil	Crude Cell	4 oz/2		2	✓		✓									✓				

Date: 6-18-09 Time: 15:00 Relinquished by: Ashley L Ager
Received by: [signature] Date: 6/19/09 Time: 955
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
Please copy results to
ALA@lodestarservices.com

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

Western Refining

LOGISTICS

WNR LISTED NYSE

RECEIVED

2009 APR 23 AM 11 21

April 21, 2008

Ed Hansen
Hydrologist, Ground Water Remediations
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Annual Sampling at Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010

Cert. Mail # 7006 0100 0002 9205 1294

Dear Mr. Hansen

Please find enclosed, Annual Sampling Report from Western Refining Southwest Inc. (Western's) Centralized Surface Waste Management Landfarm Facility NM-02-0010 (prepared by Lodestar Environmental Services).

Please call me if you should have any questions or require additional information.

Respectfully Submitted,

Bruce Cauthen
Environmental Engineer
Western Refining Southwest Inc.
111 County Road 4990
Bloomfield, NM 87413
Main: 505-632-4035

Attachments: Annual Sampling Report

CC: Brandon Powell NMOCD
Ann Allen
Allen Haines
Bill Robertson
WNR File

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

April 20, 2009

Mr. Bruce Cauthen
Western Refining, Southwest
111 CR 4990
Bloomfield, NM 87413

RE: Annual Sampling at Western Refining's Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Mr. Cauthen,

On March 6, 2009, Lodestar Services, Inc. collected annual samples from Western Refining's (Western's) Bisti Landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. One crude cell sample and one API cell sample was collected as shown on Figure 1. Each sample was collected using a hand powered auger from three feet beneath native ground surface. Samples were placed in eight-ounce glass jars and stored on ice during shipping to Hall Environmental Analysis Laboratories (HEAL) in Albuquerque, NM. Strict chain-of-custody procedures were followed during shipping. HEAL analyzed the samples for the following constituents:

- Total Petroleum Hydrorcarbons;
- Benzene, Toluene, Ethyl benzene, and Xylenes;
- Major Ions (Na, Ca, Mg, K, Cl-,SO_4, CO_3, and HCO_3); and
- RCRA Metals (As, Ba, Cd, Cr, Pb, Se, Ag, and Hg).

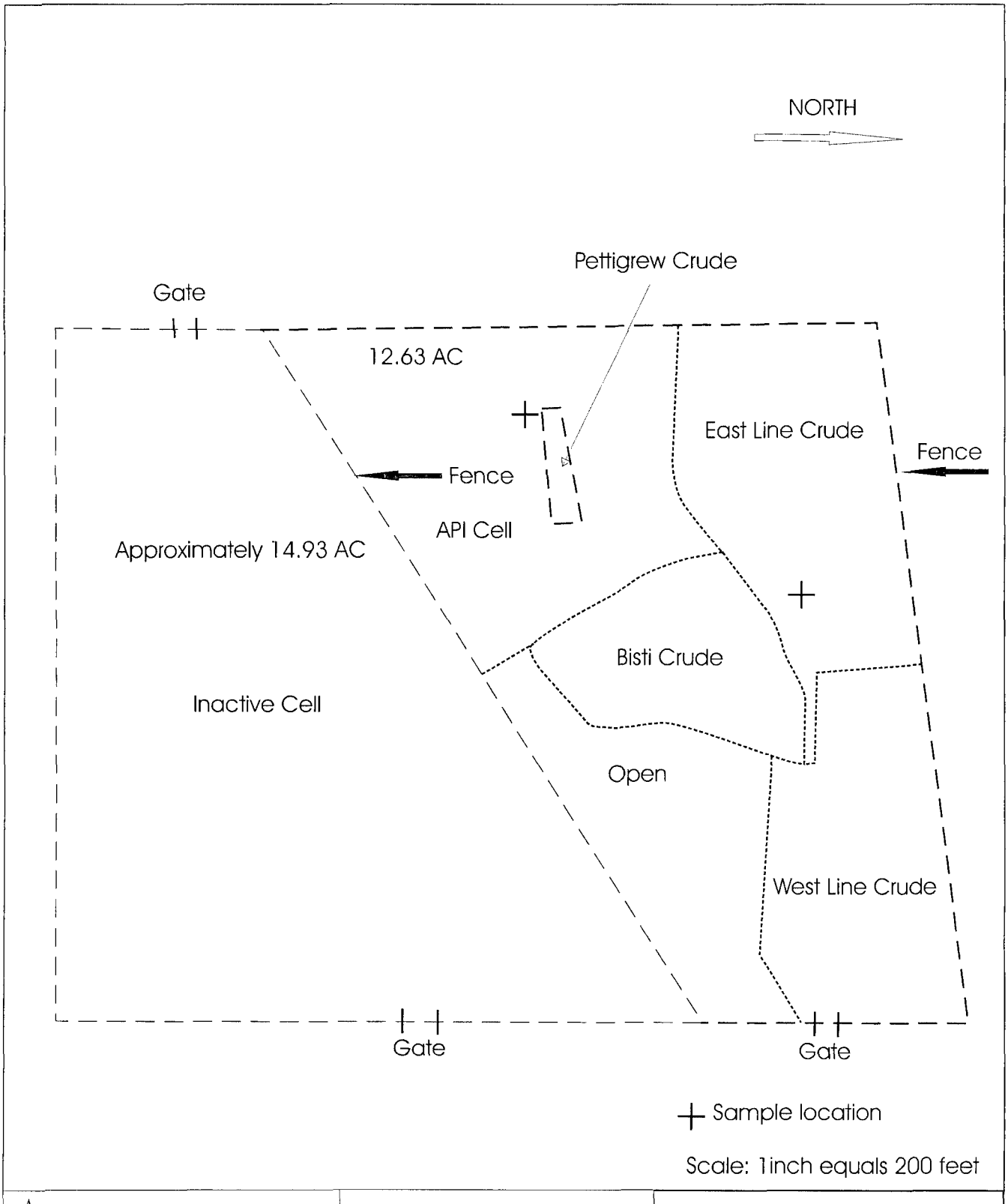
Analytical results are attached and can be compared to the original baseline data collected on March 27, 1998.

Should you have any questions or require additional information please do not hesitate to call me at (970) 946-1093.

Respectfully Submitted,
Lodestar Services, Inc.

Ashley Ager

Cc. Mr. Bill Robertson, Western Refining
File



Lodestar Services, Inc
PO Box 3861
Farmington, NM 87499

Landfarm Cell Diagram

Figure 1

Cell dimensions are based on Philip Services Figure 1A dated 9/30/97

API Cell

	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter	2009 Annual
TPH (mg/kg)	nd	nd	nd	nd	31	nd	nd	nd	nd
GRO	nd	nd	nd	nd	31	nd	nd	nd	nd
DRO	nd	nd	nd	nd	nd	nd	nd	nd	nd
MRO	nd	nd	nd	nd	nd	nd	nd	nd	nd
BTEX (mg/kg)	nd	nd	nd	nd	0.686	nd	nd	nd	nd
Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	nd	nd	nd	nd	0.064	nd	nd	nd	nd
Ethyl-Benzene	nd	nd	nd	nd	0.082	nd	nd	nd	nd
Xylenes	nd	nd	nd	nd	0.54	nd	nd	nd	nd
Metals (mg/kg)									
Arsenic	0.187				2.5				nd
Barium	47.1				130				81
Cadmium	nd				nd				nd
Calcium	2690				7300				740
Chromium	0.305				4.4				2.9
Lead	0.477				4.1				3.5
Magnesium	863				1800				830
Potassium	729				1300				680
Selenium	nd				nd				nd
Silver	nd				nd				nd
Sodium	66.2				150				3600
Mercury	nd				nd				nd
Gen Chem									
Alkalinity (meq/l)	54.4				3500				1.9
Bicarbonate (meq/l)	49.4				2900				1.9
Carbonate (meq/l)	4.52				540				nd
Sulfate (mg/kg)	81.7				nd				1600
Chloride (mg/kg)	nd				660	180	37	68	4100

Crude Cell

	2007 Annual	2007 2nd Quarter	2007 3rd Quarter	2007 4th Quarter	2008 Annual	2008 2nd Quarter	2008 3rd Quarter	2008 4th Quarter	2009 Annual
TPH (mg/kg)	nd	nd	nd	nd	nd	nd	nd	nd	520
GRO	nd	nd	nd	nd	nd	nd	nd	nd	nd
DRO	nd	nd	nd	nd	nd	nd	nd	nd	250
MRO	nd	nd	nd	nd	nd	nd	nd	nd	270
BTEX (mg/kg)	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethyl-Benzene	nd	nd	nd	nd	nd	nd	nd	nd	nd
Xylenes	nd	nd	nd	nd	nd	nd	nd	nd	nd
Metals (mg/kg)									
Arsenic	0.173				1.9				nd
Barium	14.8				140				96
Cadmium	nd				nd				nd
Calcium	3530				2800				4500
Chromium	0.248				3.7				4
Lead	0.479				3.8				5.3
Magnesium	957				1200				1100
Potassium	806				1100				640
Selenium	nd				nd				nd
Silver	nd				nd				nd
Sodium	69.7				nd				nd
Mercury (mg/kg)	nd				nd				nd
Gen Chem									
Alkalinity (meq/l)	791				1200				1.8
Bicarbonate (meq/l)	731				880				1.8
Carbonate (meq/l)	56.3				280				nd
Sulfate (mg/kg)	68				690				860
Chloride (mg/kg)	nd				110	540	2.1	35	4.3

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Monday, April 20, 2009

Bruce Cauthen
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Bisti Land Farm

Order No.: 0903159

Dear Bruce Cauthen:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 3/11/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

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
Texas Lab# T104704424-08-TX

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

Hall Environmental Analysis Laboratory, Inc.

Date: *20-Apr-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	GLF API Cell
Lab Order:	0903159	**Collection Date:**	3/6/2009 9:09:00 AM
Project:	Bisti Land Farm	**Date Received:**	3/11/2009
Lab ID:	0903159-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/13/2009
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/13/2009
Surr: DNOP	95.5	61.7-135		%REC	1	3/13/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **DAM**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/18/2009 9:25:57 PM
Surr: BFB	84.2	58.8-123		%REC	1	3/18/2009 9:25:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: **DAM**
Benzene	ND	0.050		mg/Kg	1	3/18/2009 9:25:57 PM
Toluene	ND	0.050		mg/Kg	1	3/18/2009 9:25:57 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/18/2009 9:25:57 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/18/2009 9:25:57 PM
Surr: 4-Bromofluorobenzene	89.2	66.8-139		%REC	1	3/18/2009 9:25:57 PM
EPA METHOD 300.0: ANIONS						Analyst: **IC**
Chloride	4100	15		mg/Kg	50	3/18/2009 9:47:05 AM
Sulfate	1600	15		mg/Kg	10	3/16/2009 11:07:23 PM
EPA METHOD 7471: MERCURY						Analyst: **SNV**
Mercury	ND	0.033		mg/Kg	1	3/18/2009 2:12:51 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **TES**
Arsenic	ND	13		mg/Kg	5	3/13/2009 2:04:59 PM
Barium	81	0.50		mg/Kg	5	3/13/2009 2:04:59 PM
Cadmium	ND	0.50		mg/Kg	5	3/13/2009 2:04:59 PM
Calcium	740	130		mg/Kg	5	3/13/2009 2:04:59 PM
Chromium	2.9	1.5		mg/Kg	5	3/13/2009 2:04:59 PM
Lead	3.5	1.3		mg/Kg	5	3/13/2009 2:04:59 PM
Magnesium	830	130		mg/Kg	5	3/13/2009 2:04:59 PM
Potassium	680	250		mg/Kg	5	3/13/2009 2:04:59 PM
Selenium	ND	13		mg/Kg	5	3/13/2009 2:04:59 PM
Silver	ND	1.3		mg/Kg	5	3/13/2009 2:04:59 PM
Sodium	3600	130		mg/Kg	5	3/13/2009 2:04:59 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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: *20-Apr-09*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	GLF Crude Cell
Lab Order:	0903159	**Collection Date:**	3/6/2009 9:27:00 AM
Project:	Bisti Land Farm	**Date Received:**	3/11/2009
Lab ID:	0903159-02	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	250	10		mg/Kg	1	3/17/2009
Motor Oil Range Organics (MRO)	270	50		mg/Kg	1	3/17/2009
Surr: DNOP	103	61.7-135		%REC	1	3/17/2009
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **BDH**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/19/2009 1:32:09 PM
Surr: BFB	87.2	58.8-123		%REC	1	3/19/2009 1:32:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: **BDH**
Benzene	ND	0.050		mg/Kg	1	3/19/2009 1:32:09 PM
Toluene	ND	0.050		mg/Kg	1	3/19/2009 1:32:09 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/19/2009 1:32:09 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/19/2009 1:32:09 PM
Surr: 4-Bromofluorobenzene	91.7	66.8-139		%REC	1	3/19/2009 1:32:09 PM
EPA METHOD 300.0: ANIONS						Analyst: **RAGS**
Chloride	4.3	0.30		mg/Kg	1	3/17/2009 12:34:27 AM
Sulfate	860	15		mg/Kg	10	3/17/2009 12:51:51 AM
EPA METHOD 7471: MERCURY						Analyst: **SNV**
Mercury	ND	0.033		mg/Kg	1	3/18/2009 2:17:36 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **TES**
Arsenic	ND	12		mg/Kg	5	3/13/2009 2:13:19 PM
Barium	96	0.50		mg/Kg	5	3/13/2009 2:13:19 PM
Cadmium	ND	0.50		mg/Kg	5	3/13/2009 2:13:19 PM
Calcium	4500	120		mg/Kg	5	3/13/2009 2:13:19 PM
Chromium	4.0	1.5		mg/Kg	5	3/13/2009 2:13:19 PM
Lead	5.3	1.2		mg/Kg	5	3/13/2009 2:13:19 PM
Magnesium	1100	120		mg/Kg	5	3/13/2009 2:13:19 PM
Potassium	640	250		mg/Kg	5	3/13/2009 2:13:19 PM
Selenium	ND	12		mg/Kg	5	3/13/2009 2:13:19 PM
Silver	ND	1.2		mg/Kg	5	3/13/2009 2:13:19 PM
Sodium	ND	120		mg/Kg	5	3/13/2009 2:13:19 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	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		

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Site Name: 0903159 **Report Date:** 04/20/09

Lab ID: C09030605-001 **Collection Date:** 03/06/09 09:09
Client Sample ID: GLF API Cell **DateReceived:** 03/19/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
Alkalinity, sat. paste	1.90	meq/L		0.10		ASA10-3	04/02/09 09:13 / ljl
Bicarbonate, sat. paste	1.90	meq/L		0.10		ASA10-3	04/02/09 09:13 / ljl
Carbonate, sat. paste	ND	meq/L		0.10		ASA10-3	04/02/09 09:13 / ljl

Lab ID: C09030605-002 **Collection Date:** 03/06/09 09:27
Client Sample ID: GLF Crude Cell **DateReceived:** 03/19/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
AGRONOMIC PROPERTIES							
Alkalinity, sat. paste	1.80	meq/L		0.10		ASA10-3	04/02/09 09:13 / ljl
Bicarbonate, sat. paste	1.80	meq/L		0.10		ASA10-3	04/02/09 09:13 / ljl
Carbonate, sat. paste	ND	meq/L		0.10		ASA10-3	04/02/09 09:13 / ljl

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

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

QA/QC Summary Report

Client: Hall Environmental
Project: 0903159

Report Date: 04/20/09
Work Order: C09030605

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA10-3									Batch: 21860
Sample ID: MB-21860	Method Blank				Run: TTR-ALK_090402A				04/02/09 09:13
Alkalinity, sat. paste	ND	meq/L	0.1						
Bicarbonate, sat. paste	ND	meq/L	0.1						
Carbonate, sat. paste	ND	meq/L	0.1						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Bisti Land Farm **Work Order:** 0903159

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions									
Sample ID: MB-18545		*MBLK*			Batch ID:	**18545**	Analysis Date:		3/16/2009 8:30:42 PM
Chloride	ND	mg/Kg	0.30						
Sulfate	ND	mg/Kg	1.5						
Sample ID: LCS-18545		*LCS*			Batch ID:	**18545**	Analysis Date:		3/16/2009 8:48:07 PM
Chloride	15.53	mg/Kg	0.30	104	90	110			
Sulfate	31.68	mg/Kg	1.5	106	90	110			
Method: EPA Method 8015B: Diesel Range Organics									
Sample ID: MB-18519		*MBLK*			Batch ID:	**18519**	Analysis Date:		3/13/2009
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-18519		*LCS*			Batch ID:	**18519**	Analysis Date:		3/13/2009
Diesel Range Organics (DRO)	41.89	mg/Kg	10	83.8	64.6	116			
Sample ID: LCSD-18519		*LCSD*			Batch ID:	**18519**	Analysis Date:		3/13/2009
Diesel Range Organics (DRO)	45.77	mg/Kg	10	91.5	64.6	116	8.85	17.4	
Method: EPA Method 8015B: Gasoline Range									
Sample ID: MB-18517		*MBLK*			Batch ID:	**18517**	Analysis Date:		3/18/2009 2:50:01 PM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: LCS-18517		*LCS*			Batch ID:	**18517**	Analysis Date:		3/18/2009 4:51:37 PM
Gasoline Range Organics (GRO)	28.46	mg/Kg	5.0	109	64.4	133			
Sample ID: LCSD-18517		*LCSD*			Batch ID:	**18517**	Analysis Date:		3/18/2009 5:22:08 PM
Gasoline Range Organics (GRO)	28.75	mg/Kg	5.0	110	69.5	120	1.01	11.6	
Method: EPA Method 8021B: Volatiles									
Sample ID: MB-18517		*MBLK*			Batch ID:	**18517**	Analysis Date:		3/18/2009 2:50:01 PM
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: LCS-18517		*LCS*			Batch ID:	**18517**	Analysis Date:		3/18/2009 5:52:40 PM
Benzene	1.091	mg/Kg	0.050	108	78.8	132			
Toluene	1.063	mg/Kg	0.050	104	78.9	112			
Ethylbenzene	1.108	mg/Kg	0.050	111	69.3	125			
Xylenes, Total	3.296	mg/Kg	0.10	108	73	128			
Sample ID: LCSD-18517		*LCSD*			Batch ID:	**18517**	Analysis Date:		3/18/2009 6:23:10 PM
Benzene	1.127	mg/Kg	0.050	112	78.8	132	3.23	27	
Toluene	1.097	mg/Kg	0.050	108	78.9	112	3.06	19	
Ethylbenzene	1.173	mg/Kg	0.050	117	69.3	125	5.70	10	
Xylenes, Total	3.463	mg/Kg	0.10	113	73	128	4.95	13	

Qualifiers:

E	Estimated value	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: Western Refining Southwest, Inc.
Project: Bisti Land Farm **Work Order:** 0903159

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 7471: Mercury									
Sample ID: 0903159-01BMSD		*MSD*			Batch ID:	**18559**	Analysis Date:		3/18/2009 2:16:00 PM
Mercury	0.1575	mg/Kg	0.033	91.3	75	125	1.74	20	
Sample ID: MB-18559		*MBLK*			Batch ID:	**18559**	Analysis Date:		3/18/2009 2:09:45 PM
Mercury	ND	mg/Kg	0.033						
Sample ID: LCS-18559		*LCS*			Batch ID:	**18559**	Analysis Date:		3/18/2009 2:11:18 PM
Mercury	0.1619	mg/Kg	0.033	97.1	80	120			
Sample ID: 0903159-01BMS		*MS*			Batch ID:	**18559**	Analysis Date:		3/18/2009 2:14:26 PM
Mercury	0.1603	mg/Kg	0.033	92.7	75	125			
Method: EPA Method 6010B: Soil Metals									
Sample ID: 0903159-01BMSD		*MSD*			Batch ID:	**18523**	Analysis Date:		3/13/2009 2:10:30 PM
Arsenic	24.98	mg/Kg	13	100	75	125	4.42	30	
Barium	105.2	mg/Kg	0.50	98.2	75	125	0.375	30	
Cadmium	23.77	mg/Kg	0.50	95.6	75	125	5.40	30	
Calcium	3193	mg/Kg	130	98.5	75	125	2.06	30	
Chromium	26.53	mg/Kg	1.5	95.2	75	125	4.75	30	
Lead	26.76	mg/Kg	1.3	93.5	75	125	4.82	30	
Magnesium	3438	mg/Kg	130	105	75	125	0.635	30	
Potassium	3345	mg/Kg	250	107	75	125	0.821	30	
Selenium	24.16	mg/Kg	13	97.1	75	125	17.4	30	
Silver	23.97	mg/Kg	1.3	96.4	75	125	1.46	30	
Sodium	6568	mg/Kg	130	118	75	125	0.186	30	
Sample ID: MB-18523		*MBLK*			Batch ID:	**18523**	Analysis Date:		3/13/2009 11:11:13 AM
Arsenic	ND	mg/Kg	2.5						
Sample ID: LCS-18523		*LCS*			Batch ID:	**18523**	Analysis Date:		3/13/2009 11:14:14 AM
Arsenic	21.55	mg/Kg	2.5	86.2	80	120			
Sample ID: 0903159-01BMS		*MS*			Batch ID:	**18523**	Analysis Date:		3/13/2009 2:07:43 PM
Arsenic	26.11	mg/Kg	13	105	75	125			
Barium	105.6	mg/Kg	0.50	99.4	75	125			
Cadmium	25.09	mg/Kg	0.50	101	75	125			
Calcium	3259	mg/Kg	130	101	75	125			
Chromium	27.82	mg/Kg	1.5	100	75	125			
Lead	28.08	mg/Kg	1.3	98.5	75	125			
Magnesium	3460	mg/Kg	130	105	75	125			
Potassium	3373	mg/Kg	250	108	75	125			
Selenium	20.29	mg/Kg	13	81.3	75	125			
Silver	24.32	mg/Kg	1.3	97.5	75	125			
Sodium	6580	mg/Kg	130	118	75	125			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING SOUT | Date Received: 3/11/2009

Work Order Number 0903159 | Received by: ARS

Checklist completed by: _____ 3/11/09 | Sample ID labels checked by: _____

Signature | Date | Initials

Matrix: | Carrier name: Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted	☑	Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	1°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

_____

_____

Corrective Action _____

_____

_____

Chain-of-Custody Record

Client: Western Refining
Bruce Cauthen
Mailing Address: 111 CR 4990
Bloomfield NM 87413
Phone #: 505 632 4035
email or Fax#:
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Bisti Land Farm
Project #:
Project Manager: Bruce Cauthen
Sampler: Steven Ager
On Ice: ☒ Yes ☐ No
Sample Temperature: °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0903159	BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals + cations	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	soil alkalinity				Air Bubbles (Y or N)
3/6/09	0909	soil	GLF API cell	3x 4oz		1	X		X				X	X				X				
3/6/09	0927	soil	GLF Crude cell	3x 4oz		2	X		X				X	X				X				

Analysis Request

Date	Time	Relinquished by:	Received by:	Date	Time
3/10/09	0700	M. Gn			
				3/11/09	15:10

Remarks: Please copy results to ala@lodestarservices.com

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

April 14, 2008

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, 87505

RE: Annual Sampling at Western Refining,'s (formerly Giant's) Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Mr. Price,

On March 11, 2008, Lodestar Services, Inc. collected annual samples from Western Refining Company, L.P.'s (formerly Giant Industries Arizona, Inc.) landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. One crude cell sample and one API cell sample was collected as shown on Figure 1. Each sample was collected using a hand powered auger from three feet beneath native ground surface. Each sample was placed in an eight ounce glass jar and stored on ice during shipping to Pinnacle Laboratories in Albuquerque, NM. Strict chain-of-custody procedures were followed. Pinnacle Laboratories analyzed the samples for the following constituents:

- Total Petroleum Hydrorcarbons;
- Benzene, Toluene, Ethyl benzene, and Xylenes;
- Major Ions (Na, Ca, Mg, K, Cl-,SO4, CO3, and HCO3); and
- RCRA Metals (As, Ba, Cd, Cr, Pb, Se, Ag, and Hg).

The analytical results are attached and can be compared to the original baseline data collected on March 27, 1998.

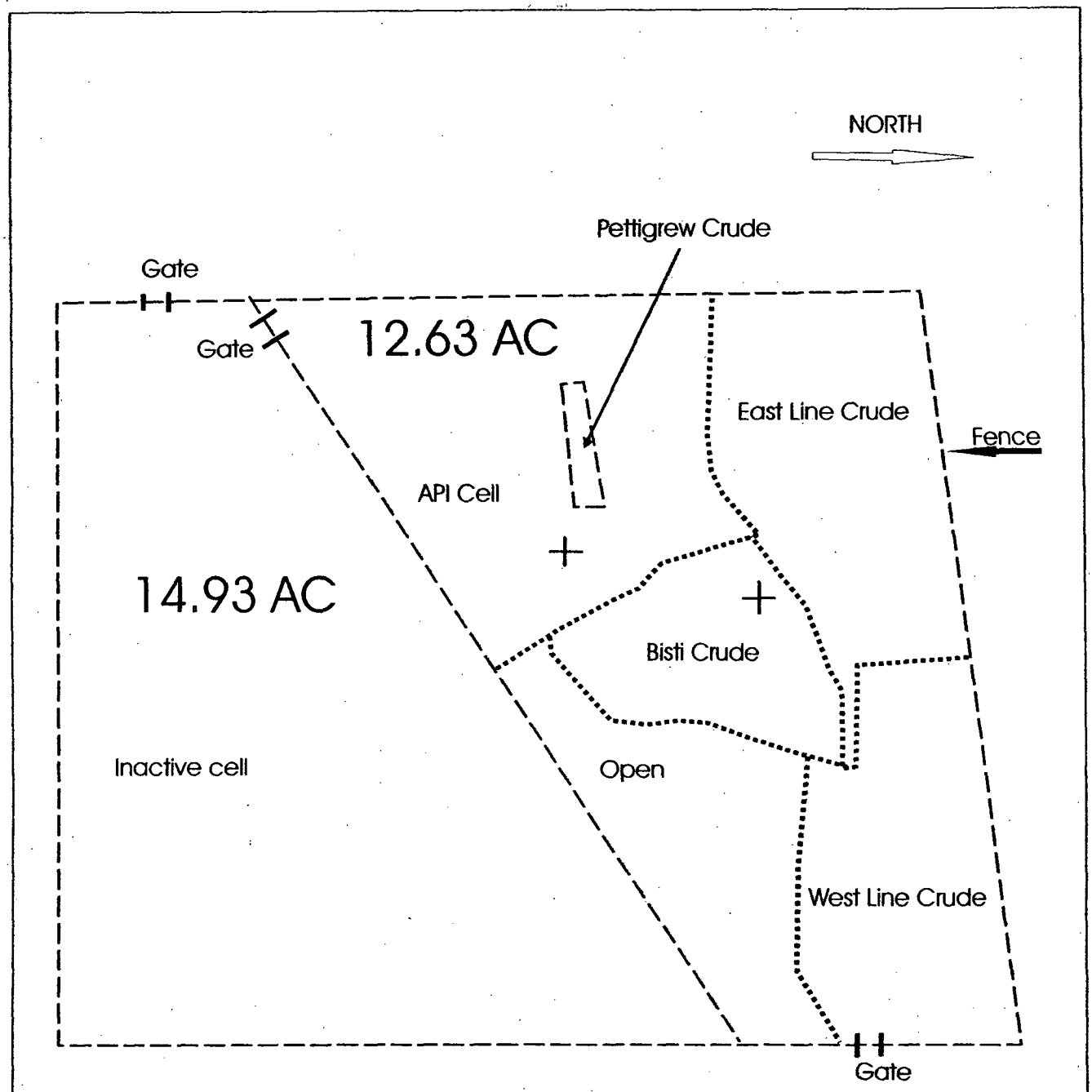
Should you have any questions or require additional information please do not hesitate to call me at (505) 632-4077.

Respectfully Submitted,
Western Refining, LP

Ashley L. Ager for Bill Robertson

Bill Robertson
Safety, Environmental & Regulatory Manager

Cc. Mr. Dave Richards, Western Refining Company, L.P.
Mr. Carlos Guerra, Western Refining Company, L.P.
Ms. Ann Allen, Western Refining Company, L.P.
File



March 11, 2008
Annual Sampling
Sample Location

Scale: 1inch equals 200 feet

Lodestar Services, Inc
PO Box 3861
Farmington, NM 87499

Landfarm Cell Diagram

Figure 1

Drawn By **ALA 04/14/08**
Cell dimensions are based on
GPS Survey Completed 3/31/06

PINNACLE LABS
Environmental Testing

Pinnacle Lab ID number **803045**
April 02, 2008

LODESTAR
1588 CR 204
DURANGO CO 81302

Project Name LANDFARM
Project Number (NONE)

Attention: ASHLEY AGER

On 3/13/2008 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), received a request to analyze **non-aq** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA Methods 8021 and 8015 analyses were performed by Pinnacle Laboratories, Inc. (PLI).

All remaining analyses were performed by TestAmerica Laboratories, Inc. (TA), Pensacola, FL.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

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PINNACLE LABS
Environmental Testing

CLIENT	: LODESTAR	PINNACLE ID	: 803045
PROJECT #	: (NONE)	DATE RECEIVED	: 3/13/2008
PROJECT NAME	: LANDFARM	REPORT DATE	: 4/2/2008

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
803045 - 01	LANDFARM API CELL	NON-AQ	3/11/2008
803045 - 02	LANDFARM CRUDE CELL	NON-AQ	3/11/2008

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B / 8015B GRO
CLIENT : LODESTAR
PROJECT # : (NONE)
PROJECT NAME : LANDFARM

PINNACLE I.D. : 803045
ANALYST : ARM

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	LANDFARM API CELL	NON-AQ	03/11/08	03/17/08	03/17/08	1
02	LANDFARM CRUDE CELL	NON-AQ	03/11/08	03/17/08	03/17/08	1

PARAMETER	DET. LIMIT	UNITS	LANDFARM API CELL	LANDFARM CRUDE CELL
FUEL HYDROCARBONS	**10**	**MG/KG**	**31**	< 10
HYDROCARBON RANGE			C6-C10	C6-C10
HYDROCARBONS QUANTITATED USING			GASOLINE	GASOLINE
BENZENE	0.025	MG/KG	< 0.025	< 0.025
TOLUENE	**0.025**	**MG/KG**	**0.064**	< 0.025
ETHYLBENZENE	**0.025**	**MG/KG**	**0.082**	< 0.025
TOTAL XYLENES	**0.10**	**MG/KG**	**0.54**	< 0.10
SURROGATE:				
BROMOFLUOROBENZENE (%)			105	97
SURROGATE LIMITS	(65 - 120)			

CHEMIST NOTES:
N/A

PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS
METHOD BLANK

TEST	: EPA 8021B / 8015B GRO	PINNACLE I.D.	: 803045
BLANK I.D.	: 031708B	DATE EXTRACTED	: 03/17/08
CLIENT	: LODESTAR	DATE ANALYZED	: 03/17/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	ANALYST	: ARM

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/KG	<10
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE
BENZENE	MG/KG	<0.025
TOLUENE	MG/KG	<0.025
ETHYLBENZENE	MG/KG	<0.025
TOTAL XYLENES	MG/KG	<0.10
SURROGATE:		
BROMOFLUOROBENZENE (%)		103
SURROGATE LIMITS (80 - 120)		

CHEMIST NOTES:
N/A

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B	PINNACLE I.D.	: 803045
BATCH ID	: 031708B	DATE EXTRACTED	: 03/17/08
CLIENT	: LODESTAR	DATE ANALYZED	: 03/17/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.025	1.00	0.964	96	1.00	100	4	(68 - 120)	20
TOLUENE	<0.025	1.00	0.952	95	0.988	99	4	(64 - 120)	20
ETHYLBENZENE	<0.025	1.00	0.940	94	0.980	98	4	(49 - 127)	20
TOTAL XYLENES	<0.10	3.00	2.89	96	2.95	98	2	(58 - 120)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 803045
BATCH ID	: 031708B	DATE EXTRACTED	: 03/17/08
CLIENT	: LODESTAR	DATE ANALYZED	: 03/17/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	BLANK RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<10	50.0	54.9	110	49.6	99	10	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B	PINNACLE I.D.	: 803045
SAMPLE ID	: 803045-01	DATE EXTRACTED	: 03/17/08
CLIENT	: LODESTAR	DATE ANALYZED	: 03/17/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.025	1.00	0.958	96	0.885	89	8	(68 - 120)	20
TOLUENE	**0.064**	1.00	0.935	87	0.879	82	6	(64 - 120)	20
ETHYLBENZENE	**0.082**	1.00	0.928	85	0.876	79	6	(49 - 127)	20
TOTAL XYLENES	**0.542**	3.00	2.81	76	2.66	71	5	(58 - 120)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 803045
SAMPLE ID	: 803045-01	DATE EXTRACTED	: 03/17/08
CLIENT	: LODESTAR	DATE ANALYZED	: 03/17/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	**30.9**	50.0	48.0	**34 M4**	49.5	**37 M4**	3	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:
M4 = %REC is outside of PLI criteria.

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8015 MODIFIED (DIRECT INJECT)
CLIENT : LODESTAR — PINNACLE I.D. : 803045
PROJECT # : (NONE) — ANALYST : STH
PROJECT NAME : LANDFARM

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	LANDFARM API CELL	NON-AQ	3/11/2008	3/18/2008	3/19/2008	1
02	LANDFARM CRUDE CELL	NON-AQ	3/11/2008	3/18/2008	3/19/2008	1

PARAMETER	DET. LIMIT	UNITS	LANDFARM API CELL	LANDFARM CRUDE CELL
FUEL HYDROCARBONS, C10-C22	10	MG/KG	< 10	< 10
FUEL HYDROCARBONS, C22-C36	10	MG/KG	< 10	< 10
SURROGATE:				
O-TERPHENYL (%)			94	95
SURROGATE LIMITS	(70-130)			

CHEMIST NOTES:
N/A

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS
METHOD BLANK

TEST	: EPA 8015 MODIFIED (DIRECT INJECT)	PINNACLE I.D.	: 803045
BLANK I.D.	: 031808FS	DATE EXTRACTED	: 3/18/2008
CLIENT	: LODESTAR	DATE ANALYZED	: 3/19/2008
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	ANALYST	: STH

PARAMETER	UNITS	
FUEL HYDROCARBONS, C10-C22	MG/KG	< 10
FUEL HYDROCARBONS, C22-C36	MG/KG	< 10
SURROGATE:		
O-TERPHENYL (%)		97
SURROGATE LIMITS (70-130)		

CHEMIST NOTES:
N/A

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015 MODIFIED (DIRECT INJECT)	PINNACLE I.D.	: 803045
BATCH ID	: 031808FS	DATE EXTRACTED	: 3/18/2008
CLIENT	: LODESTAR	DATE ANALYZED	: 3/19/2008
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	BLANK RESULT	CONC SPIKE	SPIKED BLANK	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<10	200	193	97	194	97	0	(75-125)	20
HYDROCARBON RANGE		C10-C32							

HYDROCARBONS QUANTITATED USING DIESEL FUEL

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015 MODIFIED (DIRECT INJECT)	PINNACLE I.D.	: 803045
SAMPLE ID	: 803045-01	DATE EXTRACTED	: 3/18/2008
CLIENT	: LODESTAR	DATE ANALYZED	: 3/19/2008
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<10	200	188	94	189	94	1	(70-130)	20
HYDROCARBON RANGE		C10-C32							

HYDROCARBONS QUANTITATED USING DIESEL FUEL

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 400-29326-1

Job Description: 803045

For:
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Attention: Francine Torivio

Marty Edwards
Project Manager I
marty.edwards@testamericainc.com
04/01/2008

The test results in this report meet all NELAP requirements for accredited parameters and relate only to the referenced samples. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory.

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TestAmerica Laboratories, Inc.
TestAmerica Pensacola 3355 McLemore Drive, Pensacola, FL 32514
Tel (850) 474-1001 Fax (850) 478-2671 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

METHOD SUMMARY

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Inductively Coupled Plasma - Atomic Emission Spectrometry	TAL PEN	SW846 6010B	
Acid Digestion of Sediments, Sludges, and Soils	TAL PEN		SW846 3050B
Mercury	TAL PEN	SW846 7471A	
Mercury in Solid or Semi-Solid Waste (Manual Cold	TAL PEN		SW846 7471A
Sulfate (Turbidimetric)	TAL PEN	SW846 9038	
Deionized Water Leaching Procedure (Routine)	TAL PEN		ASTM DI Leach
Chloride (Colormetric, Automated Ferricyanide)	TAL PEN	SW846 9251	
Deionized Water Leaching Procedure (Routine)	TAL PEN		ASTM DI Leach
Alkalinity, Titration Method	TAL PEN	SM18 SM 2320B	
Deionized Water Leaching Procedure (Routine)	TAL PEN		ASTM DI Leach

Lab References:

TAL PEN = TestAmerica Pensacola

Method References:

ASTM = ASTM International

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Method	Analyst	Analyst ID
SW846 6010B	St. Pere, Gary	GS
SW846 7471A	Cortez, Maria	MC
SW846 9038	Gimlin, Wendy	WG
SW846 9251	Gimlin, Wendy	WG
EPA PercentMoisture	Hor, Koma	KH
SM18 SM 2320B	Gill, Jennifer	JG

SAMPLE SUMMARY

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
400-29326-1	LANDFORM API CELL/ 803045-01	Solid	03/11/2008 1120	03/18/2008 1007
400-29326-2	LANDFORM CRUDE CELL/ 803045-02	Solid	03/11/2008 1125	03/18/2008 1007

SAMPLE RESULTS

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Client Sample ID: **LANDFORM API CELL/ 803045-01**

Lab Sample ID:	400-29326-1			Date Sampled:	03/11/2008 1120
Client Matrix:	Solid	% Moisture:	6.3	Date Received:	03/18/2008 1007

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Method:	6010B	Analysis Batch: 400-66239		Instrument ID:	ICP-AES
Preparation:	3050B	Prep Batch: 400-66137		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.22 g
Date Analyzed:	03/20/2008 1816			Final Weight/Volume:	100 mL
Date Prepared:	03/19/2008 1610				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		2.5		0.44
Barium		130		0.88
Cadmium		<0.44		0.44
Calcium		7300		44
Chromium		4.4		0.44
Lead		4.1		0.44
Magnesium		1800		44
Potassium		1300		88
Selenium		<0.88		0.88
Silver		<0.44		0.44
Sodium		150		88

7471A Mercury

Method:	7471A	Analysis Batch: 400-66444		Instrument ID:	PE FLOW
Preparation:	7471A	Prep Batch: 400-66380		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.6430 g
Date Analyzed:	03/25/2008 0834			Final Weight/Volume:	25 mL
Date Prepared:	03/24/2008 0955				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		<0.0083		0.0083

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Client Sample ID: LANDFORM CRUDE CELL/ 803045-02

Lab Sample ID:	400-29326-2	Date Sampled:	03/11/2008 1125
Client Matrix:	Solid % Moisture: 4.7	Date Received:	03/18/2008 1007

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Method:	6010B	Analysis Batch: 400-66239	Instrument ID: ICP-AES
Preparation:	3050B	Prep Batch: 400-66137	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1.09 g
Date Analyzed:	03/20/2008 1840		Final Weight/Volume: 100 mL
Date Prepared:	03/19/2008 1610		

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Arsenic		1.9		0.48
Barium		140		0.96
Cadmium		<0.48		0.48
Calcium		2800		48
Chromium		3.7		0.48
Lead		3.8		0.48
Magnesium		1200		48
Potassium		1100		96
Selenium		<0.96		0.96
Silver		<0.48		0.48
Sodium		<96		96

7471A Mercury

Method:	7471A	Analysis Batch: 400-66444	Instrument ID: PE FLOW
Preparation:	7471A	Prep Batch: 400-66380	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: .6182 g
Date Analyzed:	03/25/2008 0835		Final Weight/Volume: 25 mL
Date Prepared:	03/24/2008 0955		

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	RL
Mercury		<0.0085		0.0085

General Chemistry

Client Sample ID: **LANDFORM API CELL/ 803045-01**

Lab Sample ID: 400-29326-1 Date Sampled: 03/11/2008 1120
Client Matrix: Solid Date Received: 03/18/2008 1007

Analyte	Result	Qual	Units		RL	Dil	Method
Alkalinity, Total	3500		mg/Kg		20	1.0	SM 2320B
Anly Batch: 400-66547		Date Analyzed		03/25/2008 1615		DryWt Corrected: N	
Bicarbonate Alkalinity as CaCO3	2900		mg/Kg		20	1.0	SM 2320B
Anly Batch: 400-66547		Date Analyzed		03/25/2008 1615		DryWt Corrected: N	
Carbonate Alkalinity as CaCO3	540		mg/Kg		20	1.0	SM 2320B
Anly Batch: 400-66547		Date Analyzed		03/25/2008 1615		DryWt Corrected: N	
Sulfate	<100		mg/Kg		100	1.0	9038
Anly Batch: 400-66767		Date Analyzed		03/28/2008 1230		DryWt Corrected: N	
Chloride	660		mg/Kg		40	1.0	9251
Anly Batch: 400-66764		Date Analyzed		03/28/2008 1223		DryWt Corrected: N	
Percent Solids	94		%		0.10	1.0	PercentMoisture
Anly Batch: 400-66080		Date Analyzed		03/18/2008 0000			

Client Sample ID: **LANDFORM CRUDE CELL/ 803045-02**

Lab Sample ID: 400-29326-2 Date Sampled: 03/11/2008 1125
Client Matrix: Solid Date Received: 03/18/2008 1007

Analyte	Result	Qual	Units		RL	Dil	Method
Alkalinity, Total	1200		mg/Kg		20	1.0	SM 2320B
Anly Batch: 400-66547		Date Analyzed		03/25/2008 1615		DryWt Corrected: N	
Bicarbonate Alkalinity as CaCO3	880		mg/Kg		20	1.0	SM 2320B
Anly Batch: 400-66547		Date Analyzed		03/25/2008 1615		DryWt Corrected: N	
Carbonate Alkalinity as CaCO3	280		mg/Kg		20	1.0	SM 2320B
Anly Batch: 400-66547		Date Analyzed		03/25/2008 1615		DryWt Corrected: N	
Sulfate	690		mg/Kg		100	1.0	9038
Anly Batch: 400-66767		Date Analyzed		03/28/2008 1231		DryWt Corrected: N	
Chloride	110		mg/Kg		40	1.0	9251
Anly Batch: 400-66764		Date Analyzed		03/28/2008 1223		DryWt Corrected: N	
Percent Solids	95		%		0.10	1.0	PercentMoisture
Anly Batch: 400-66080		Date Analyzed		03/18/2008 0000			

QUALITY CONTROL RESULTS

Client: Pinnacle Laboratories

Job Number: 400-29326-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 400-66137					
LCS 400-66137/19-A	Lab Control Spike	T	Solid	3050B	
MB 400-66137/18-A	Method Blank	T	Solid	3050B	
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	3050B	
400-29326-1MS	Matrix Spike	T	Solid	3050B	
400-29326-1MSD	Matrix Spike Duplicate	T	Solid	3050B	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	3050B	
Analysis Batch:400-66239					
LCS 400-66137/19-A	Lab Control Spike	T	Solid	6010B	400-66137
MB 400-66137/18-A	Method Blank	T	Solid	6010B	400-66137
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	6010B	400-66137
400-29326-1MS	Matrix Spike	T	Solid	6010B	400-66137
400-29326-1MSD	Matrix Spike Duplicate	T	Solid	6010B	400-66137
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	6010B	400-66137
Prep Batch: 400-66380					
LCS 400-66380/15-A	Lab Control Spike	T	Solid	7471A	
MB 400-66380/14-A	Method Blank	T	Solid	7471A	
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	7471A	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	7471A	
400-29326-2MS	Matrix Spike	T	Solid	7471A	
400-29326-2MSD	Matrix Spike Duplicate	T	Solid	7471A	
Analysis Batch:400-66444					
LCS 400-66380/15-A	Lab Control Spike	T	Solid	7471A	400-66380
MB 400-66380/14-A	Method Blank	T	Solid	7471A	400-66380
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	7471A	400-66380
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	7471A	400-66380
400-29326-2MS	Matrix Spike	T	Solid	7471A	400-66380
400-29326-2MSD	Matrix Spike Duplicate	T	Solid	7471A	400-66380

Report Basis
T = Total

Client: Pinnacle Laboratories

Job Number: 400-29326-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:400-66080					
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	PercentMoisture	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	PercentMoisture	
Prep Batch: 400-66490					
MB 400-66490/1-A	Method Blank	S	Solid	DI Leach	
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	DI Leach	
400-29326-1DU	Duplicate	T	Solid	DI Leach	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	DI Leach	
Analysis Batch:400-66547					
MB 400-66490/1-A	Method Blank	S	Solid	SM 2320B	
LCS 400-66547/5	Lab Control Spike	T	Water	SM 2320B	
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	SM 2320B	
400-29326-1DU	Duplicate	T	Solid	SM 2320B	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	SM 2320B	
Prep Batch: 400-66763					
LCS 400-66763/2-A	Lab Control Spike	S	Solid	DI Leach	
LCS 400-66763/3-A	Lab Control Spike	S	Solid	DI Leach	
MB 400-66763/1-A	Method Blank	S	Solid	DI Leach	
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	DI Leach	
400-29326-1MS	Matrix Spike	T	Solid	DI Leach	
400-29326-1MSD	Matrix Spike Duplicate	T	Solid	DI Leach	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	DI Leach	
Analysis Batch:400-66764					
LCS 400-66763/2-A	Lab Control Spike	S	Solid	9251	
MB 400-66763/1-A	Method Blank	S	Solid	9251	
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	9251	
400-29326-1MS	Matrix Spike	T	Solid	9251	
400-29326-1MSD	Matrix Spike Duplicate	T	Solid	9251	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	9251	
Analysis Batch:400-66767					
LCS 400-66763/3-A	Lab Control Spike	S	Solid	9038	
MB 400-66763/1-A	Method Blank	S	Solid	9038	
400-29326-1	LANDFORM API CELL/ 803045-01	T	Solid	9038	
400-29326-1MS	Matrix Spike	T	Solid	9038	
400-29326-1MSD	Matrix Spike Duplicate	T	Solid	9038	
400-29326-2	LANDFORM CRUDE CELL/	T	Solid	9038	

Report Basis
S = Soluble
T = Total

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Method Blank - Batch: 400-66137

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 400-66137/18-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2008 1754
Date Prepared: 03/19/2008 1610

Analysis Batch: 400-66239
Prep Batch: 400-66137
Units: mg/Kg

Instrument ID: ICP-AES
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	RL
Arsenic	<0.50		0.50
Barium	<1.0		1.0
Cadmium	<0.50		0.50
Calcium	<50		50
Chromium	<0.50		0.50
Lead	<0.50		0.50
Magnesium	<50		50
Potassium	<100		100
Selenium	<1.0		1.0
Silver	<0.50		0.50
Sodium	<100		100

Lab Control Spike - Batch: 400-66137

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 400-66137/19-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2008 1759
Date Prepared: 03/19/2008 1610

Analysis Batch: 400-66239
Prep Batch: 400-66137
Units: mg/Kg

Instrument ID: ICP-AES
Lab File ID: N/A
Initial Weight/Volume: 1.03 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	347	334	96	80 - 120	
Barium	555	558	100	82 - 118	
Cadmium	162	151	93	82 - 119	
Calcium	4500	4540	101	79 - 121	
Chromium	168	163	97	79 - 121	
Lead	258	249	96	81 - 119	
Magnesium	3880	4180	108	77 - 123	
Potassium	3310	4150	125	71 - 129	
Selenium	265	253	95	76 - 124	
Silver	168	173	103	61 - 139	
Sodium	1530	1700	111	56 - 144	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 400-66137

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	400-29326-1	Analysis Batch: 400-66239	Instrument ID: ICP-AES
Client Matrix:	Solid	Prep Batch: 400-66137	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1.22 g
Date Analyzed:	03/20/2008 1825		Final Weight/Volume: 100 mL
Date Prepared:	03/19/2008 1610		

MSD Lab Sample ID:	400-29326-1	Analysis Batch: 400-66239	Instrument ID: ICP-AES
Client Matrix:	Solid	Prep Batch: 400-66137	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1.09 g
Date Analyzed:	03/20/2008 1830		Final Weight/Volume: 100 mL
Date Prepared:	03/19/2008 1610		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	96	98	75 - 125	13	20		
Barium	182	54	75 - 125	45	20	F	F
Cadmium	96	98	75 - 125	14	20		
Calcium	-172	-205	75 - 125	9	20	4	4
Chromium	97	100	75 - 125	13	20		
Lead	97	99	75 - 125	13	20		
Magnesium	114	113	75 - 125	4	20		
Potassium	159	162	75 - 125	7	20	F	F
Selenium	92	95	75 - 125	15	20		
Silver	100	101	75 - 125	12	20		
Sodium	113	114	75 - 125	10	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Method Blank - Batch: 400-66380

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 400-66380/14-A	Analysis Batch:	400-66444	Instrument ID:	PE FLOW INJECTION
Client Matrix:	Solid	Prep Batch:	400-66380	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	.6000 g
Date Analyzed:	03/25/2008 0827			Final Weight/Volume:	25 mL
Date Prepared:	03/24/2008 0955				

Analyte	Result	Qual	RL
Mercury	<0.0083		0.0083

Lab Control Spike - Batch: 400-66380

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 400-66380/15-A	Analysis Batch:	400-66444	Instrument ID:	PE FLOW INJECTION
Client Matrix:	Solid	Prep Batch:	400-66380	Lab File ID:	N/A
Dilution:	5.0	Units:	mg/Kg	Initial Weight/Volume:	.2016 g
Date Analyzed:	03/25/2008 0828			Final Weight/Volume:	25 mL
Date Prepared:	03/24/2008 0955				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.76	1.65	94	68 - 132	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 400-66380

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	400-29326-2	Analysis Batch:	400-66444	Instrument ID:	PE FLOW INJECTION
Client Matrix:	Solid	Prep Batch:	400-66380	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.6189 g
Date Analyzed:	03/25/2008 0839			Final Weight/Volume:	25 mL
Date Prepared:	03/24/2008 0955				

MSD Lab Sample ID:	400-29326-2	Analysis Batch:	400-66444	Instrument ID:	PE FLOW INJECTION
Client Matrix:	Solid	Prep Batch:	400-66380	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.6320 g
Date Analyzed:	03/25/2008 0841			Final Weight/Volume:	25 mL
Date Prepared:	03/24/2008 0955				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	104	105	75 - 125	1	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Method Blank - Batch: 400-66767

Method: 9038
Preparation: N/A

Lab Sample ID:	MB 400-66763/1-A	Analysis Batch:	400-66767	Instrument ID:	Konelab 1
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	1.0 mL
Date Analyzed:	03/28/2008 1230			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				
Date Leached:	03/27/2008 0930	Leachate Batch:	400-66763		

Analyte	Result	Qual	RL
Sulfate	<100		100

Lab Control Spike - Batch: 400-66767

Method: 9038
Preparation: N/A

Lab Sample ID:	LCS 400-66763/3-A	Analysis Batch:	400-66767	Instrument ID:	Konelab 1
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/Kg	Initial Weight/Volume:	1.0 mL
Date Analyzed:	03/28/2008 1254			Final Weight/Volume:	10 mL
Date Prepared:	N/A				
Date Leached:	03/27/2008 0930	Leachate Batch:	400-66763		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	20.0	20.4	102	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 400-66767

Method: 9038
Preparation: N/A

MS Lab Sample ID:	400-29326-1	Analysis Batch:	400-66767	Instrument ID:	Konelab 1
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	03/28/2008 1230			Final Weight/Volume:	10 mL
Date Prepared:	N/A				
Date Leached:	03/27/2008 0930	Leachate Batch:	400-66763		
MSD Lab Sample ID:	400-29326-1	Analysis Batch:	400-66767	Instrument ID:	Konelab 1
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	03/28/2008 1231			Final Weight/Volume:	10 mL
Date Prepared:	N/A				
Date Leached:	03/27/2008 0930	Leachate Batch:	400-66763		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Sulfate	103	99	59 - 146	4	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Method Blank - Batch: 400-66764

Method: 9251
Preparation: N/A

Lab Sample ID:	MB 400-66763/1-A	Analysis Batch: 400-66764	Instrument ID: Konelab 1
Client Matrix:	Solid	Prep Batch: N/A	Lab File ID: N/A
Dilution:	1.0	Units: mg/Kg	Initial Weight/Volume: 1.0 mL
Date Analyzed:	03/28/2008 1223		Final Weight/Volume: 1.0 mL
Date Prepared:	N/A		
Date Leached:	03/27/2008 0930	Leachate Batch: 400-66763	

Analyte	Result	Qual	RL
Chloride	<40		40

Lab Control Spike - Batch: 400-66764

Method: 9251
Preparation: N/A

Lab Sample ID:	LCS 400-66763/2-A	Analysis Batch: 400-66764	Instrument ID: Konelab 1
Client Matrix:	Solid	Prep Batch: N/A	Lab File ID: N/A
Dilution:	1.0	Units: mg/Kg	Initial Weight/Volume: 1.0 mL
Date Analyzed:	03/28/2008 1223		Final Weight/Volume: 10 mL
Date Prepared:	N/A		
Date Leached:	03/27/2008 0930	Leachate Batch: 400-66763	

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	50.0	47.8	96	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 400-66764

Method: 9251
Preparation: N/A

MS Lab Sample ID:	400-29326-1	Analysis Batch: 400-66764	Instrument ID: Konelab 1
Client Matrix:	Solid	Prep Batch: N/A	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1.0 mL
Date Analyzed:	03/28/2008 1223		Final Weight/Volume: 10 mL
Date Prepared:	N/A		
Date Leached:	03/27/2008 0930	Leachate Batch: 400-66763	
MSD Lab Sample ID:	400-29326-1	Analysis Batch: 400-66764	Instrument ID: Konelab 1
Client Matrix:	Solid	Prep Batch: N/A	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1.0 mL
Date Analyzed:	03/28/2008 1223		Final Weight/Volume: 10 mL
Date Prepared:	N/A		
Date Leached:	03/27/2008 0930	Leachate Batch: 400-66763	

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	116	119	75 - 125	1	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Method Blank - Batch: 400-66547

Method: SM 2320B
Preparation: N/A

Lab Sample ID: MB 400-66490/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/25/2008 1615
Date Prepared: N/A
Date Leached: 03/25/2008 1525

Analysis Batch: 400-66547
Prep Batch: N/A
Units: mg/Kg

Leachate Batch: 400-66490

Instrument ID: Accumet AB 15+
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL
Alkalinity, Total	<20		20

Lab Control Spike - Batch: 400-66547

Method: SM 2320B
Preparation: N/A

Lab Sample ID: LCS 400-66547/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/25/2008 1615
Date Prepared: N/A

Analysis Batch: 400-66547
Prep Batch: N/A
Units: mg/Kg

Instrument ID: Accumet AB 15+
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 50.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity, Total	250	271	108	90 - 110	

Duplicate - Batch: 400-66547

Method: SM 2320B
Preparation: N/A

Lab Sample ID: 400-29326-1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/25/2008 1615
Date Prepared: N/A
Date Leached: 03/25/2008 1525

Analysis Batch: 400-66547
Prep Batch: N/A
Units: mg/Kg

Leachate Batch: 400-66490

Instrument ID: Accumet AB 15+
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity, Total	3500	3360	4	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Lab Section	Qualifier	Description
Metals		
	F	MS or MSD exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	F	RPD of the MS and MSD exceeds the control limits

400-29326

Pinnacle Laboratories, Inc.

Interlab Chain of Custody

Date: 3-13-08 Page: 1 of 1

PINNACLE LABORATORIES Network Project Manager: Jacinta Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107
(505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals)	Dissolved Fe, Mn, Pb (6010)	Ca, Mg, K, Na	TOC	Gen Chemistry:	Alkalinity+Bicarb/Carb	Cl, SO4	Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8260 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	Uranium (ICP-MS)	Radium 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
Landfarm API cell/803045-01	3-11-08	1120	NAQ		X					X			X	X														
Landfarm Cruder cell/803045-02	↓	1125	↓		X					X			X	X														

Page 19 of 20

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:		RELINQUISED BY: 1.	RELINQUISED BY: 2.
PROJECT #: 803045		Total Number of Containers		APEX LABS		Signature: Time: 1700	Signature: Time:
PROJ. NAME: LODE		Chain of Custody Seals		ARS		Printed Name: David Gallegos Date: 3-17-08	Printed Name: Date:
QC LEVEL: (STD) IV		Received Intact?		BIOVIR		Pinnacle Laboratories, Inc.	Company
QC REQUIRED: (MS MSD BLANK)		Received Good Cond./Cold		BSK ANALYTICAL		RECEIVED BY: 1.	RECEIVED BY: 2.
TAT: (STANDARD) RUSH!!		LAB NUMBER:		GEL			
				MWH LABS			
DUE DATE: 3-27-08	COMMENTS:			TEST AMERICA-FL	V	Signature: Time: 10:07	Signature: Time:
RUSH SURCHARGE: —				WCAS			
CLIENT DISCOUNT: —	5.8%			WOHL		Printed Name: Vanda L. Chan Date: 03/18/08	Printed Name: Date:
SPECIAL CERTIFICATION REQUIRED: YES (NO)						Company TAL	Company

Login Sample Receipt Check List

Client: Pinnacle Laboratories

Job Number: 400-29326-1

Login Number: 29326

List Source: TestAmerica Pensacola

Creator: Chea, Vanda

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	5.8°C
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 03-11-08 PAGE: 1 OF 1

PLI Accession #: 803045

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	Ashley Ager
COMPANY:	Lodestar Services
ADDRESS:	1588 CR 204
	Durango, CO 81302
PHONE:	970-946-1093
FAX:	
BILL TO:	Bill Robertson
COMPANY:	Giant Industries
ADDRESS:	111 CR 4990
	Bloomfield NM 87413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) ~~MTBE~~	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐/DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics ☐PBMS	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry: Alk, cr, Cl, SO4, Br, NO3	Metals (Giant LF list)	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8) Ca, Mg, K, Na	RCRA Metals by TCLP (Method1311)	Metals:		NUMBER OF CONTAINERS
Landfarm API cell	3-11-08	1120	soil	01		✓		✓															✓	✓			✓				3
Landfarm Crude cell	3-11-08	1125	soil	02		✓		✓															✓	✓			✓				3

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION	
PROJ. NO.:	
PROJ. NAME:	Landfarm
P.O. NO.:	
SHIPPED VIA:	

SAMPLE RECEIPT	
NO CONTAINERS	6
CUSTODY SEALS	Y (N) NA
RECEIVED INTACT	*no
BLUE ICE/ICE	13.7°C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr* ☐48hr* ☐72hr* ☐ 1 WEEK (NORMAL) ☑

*NOT AVAILABLE ON ALL ANALYSES

CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER

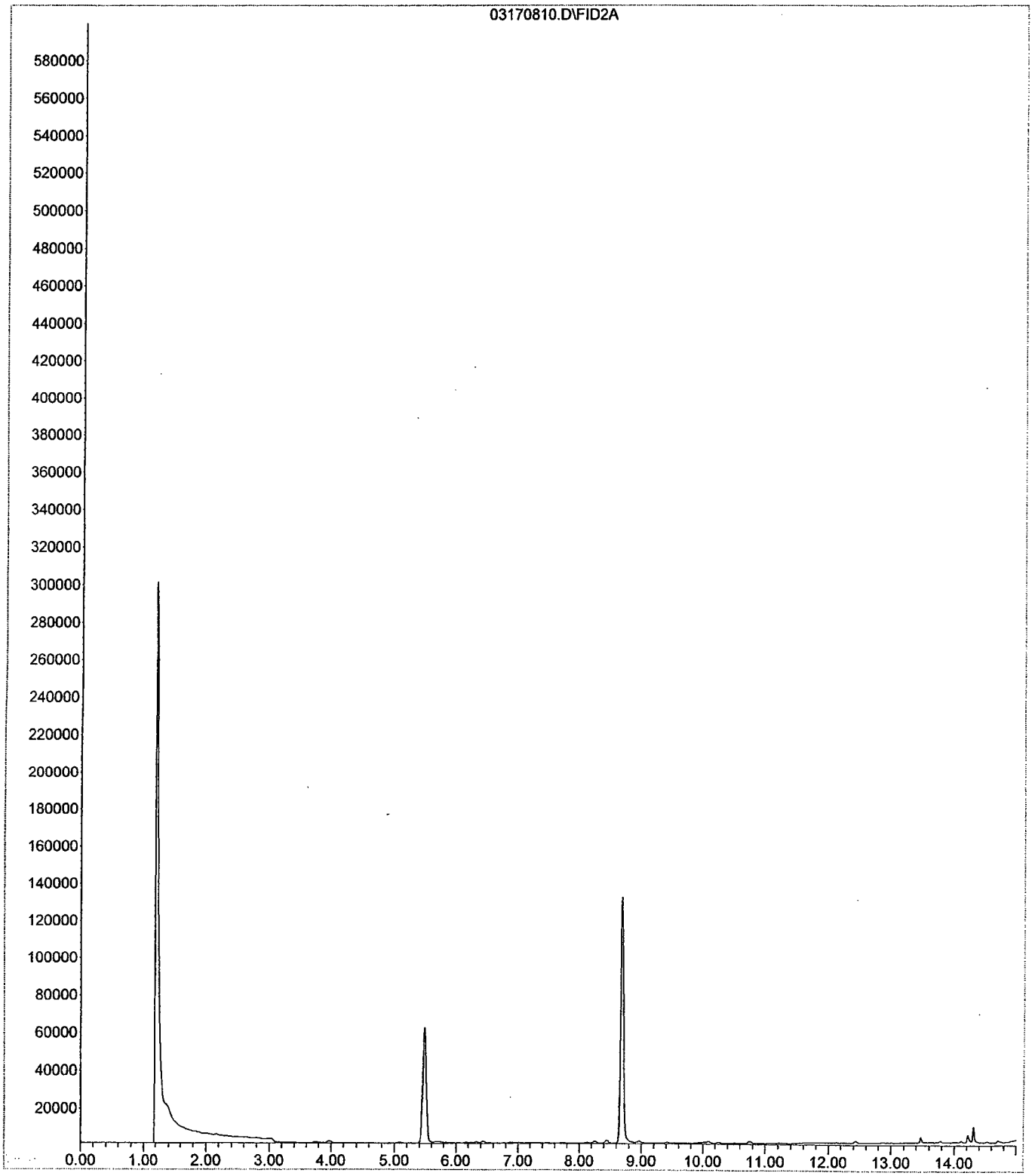
METHANOL PRESERVATION ☐ | METALS ☐ TOTAL ☐ DISSOLVED

COMMENTS:

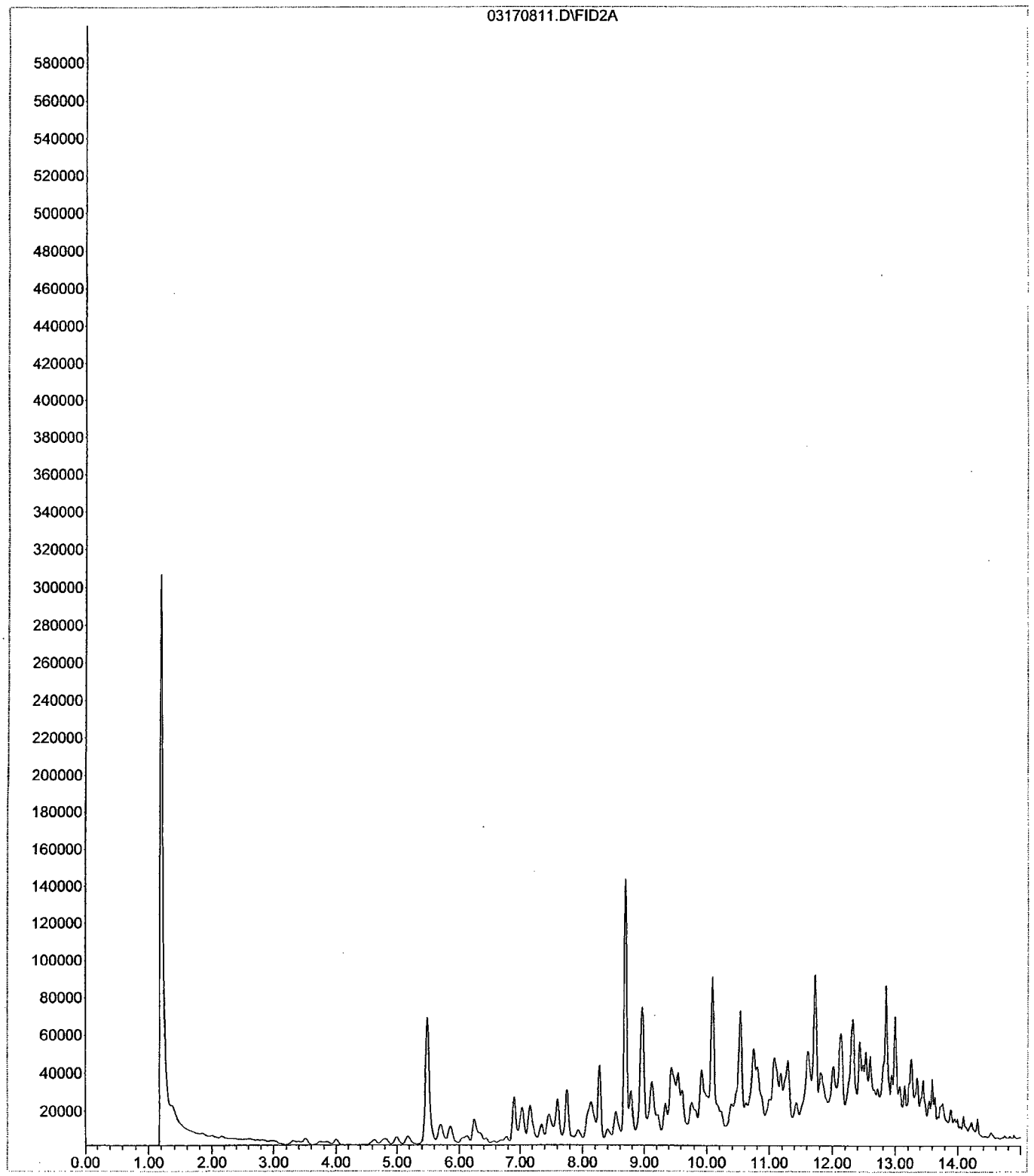
Giant Annual Landfarm list.
Please note Proj Man change. Send results to Ashley Ager
Lodestar Services
PO Box 4465
Durango, CO 81302 *temp out of range

RELINQUISHED BY: 1	RELINQUISHED BY: 2
Signature: Ashley Ager Time: 1400	Signature: Time:
Printed Name: Ashley Ager Date: 3-12-08	Printed Name: Date:
Company: Lodestar Services	Company:
See Reverse Side (Force Majeure)	
RECEIVED BY: 1	**RECEIVED BY: (LAB) 2**
Signature: Time:	Signature: Time: 12:17
Printed Name: Date:	Printed Name: David Gallegos Date: 3-13-08
Company:	Pinnacle Laboratories Inc.

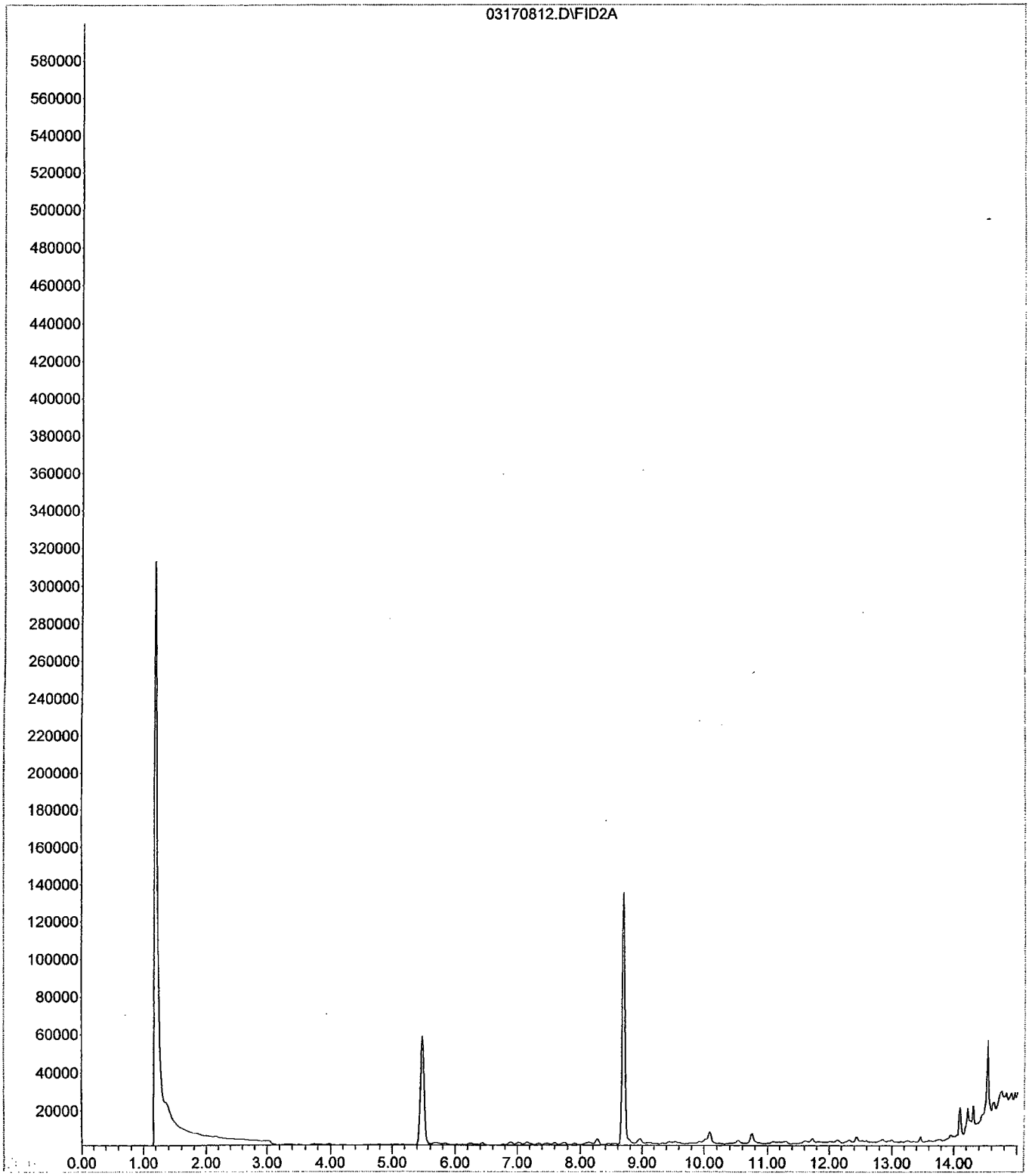
File : C:\HPCHEM\1\DATA\031708B\03170810.D
Operator : ARM
Acquired : 17 Mar 2008 2:28 pm using AcqMethod GCB80305.M
Instrument : GC-2 PID/
Sample Name: BLK031708 [001B]
Misc Info : EXTRACTION BLANK EXT SOIL
Vial Number: 10



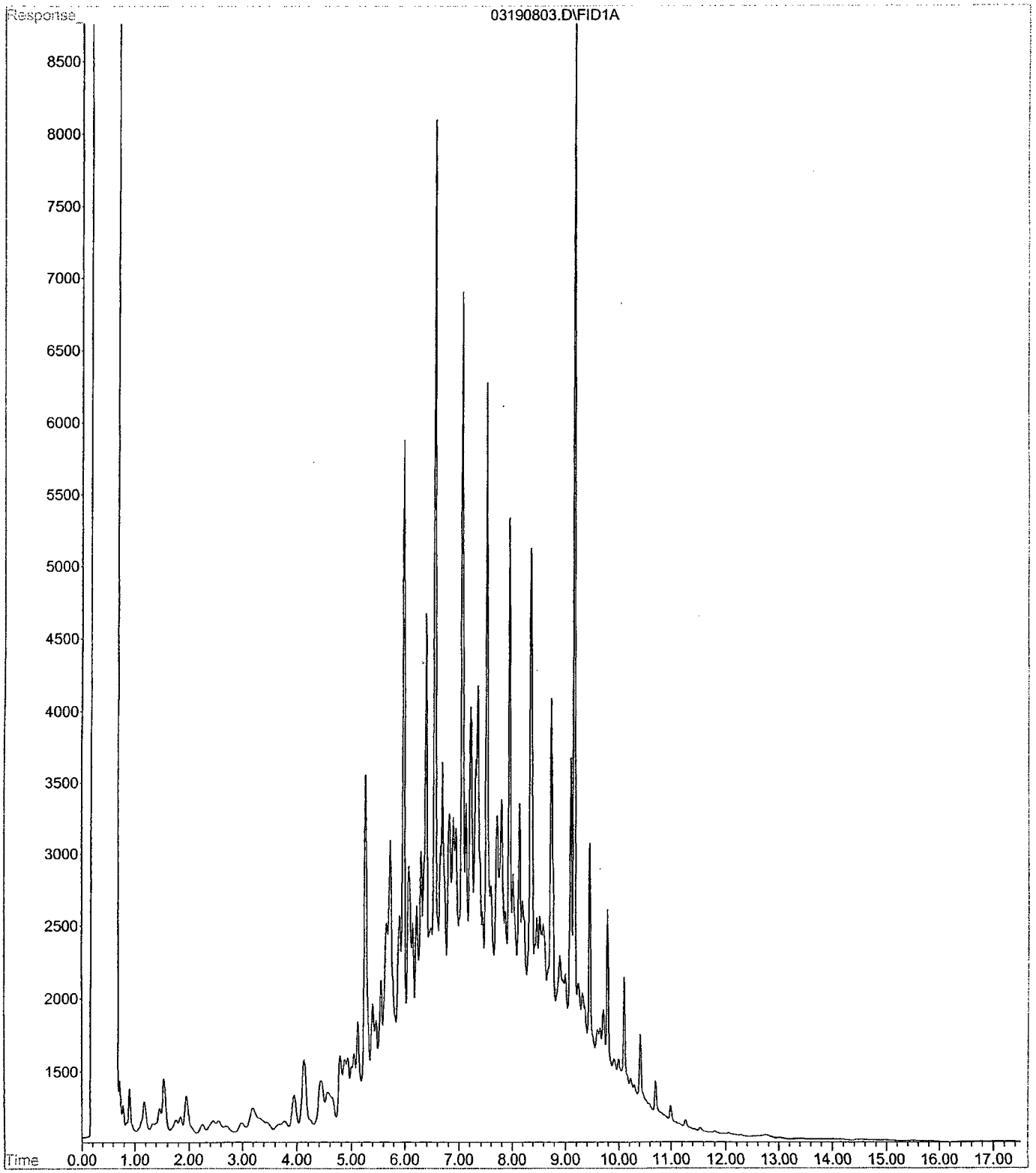
File : C:\HPCHEM\1\DATA\031708B\03170811.D
Operator : ARM
Acquired : 17 Mar 2008 3:01 pm using AcqMethod GCB80305.M
Instrument : GC-2 PID/
Sample Name: 803045.01 [001X]
Misc Info : LANDFARM API CELL EXT SOIL
Vial Number: 11



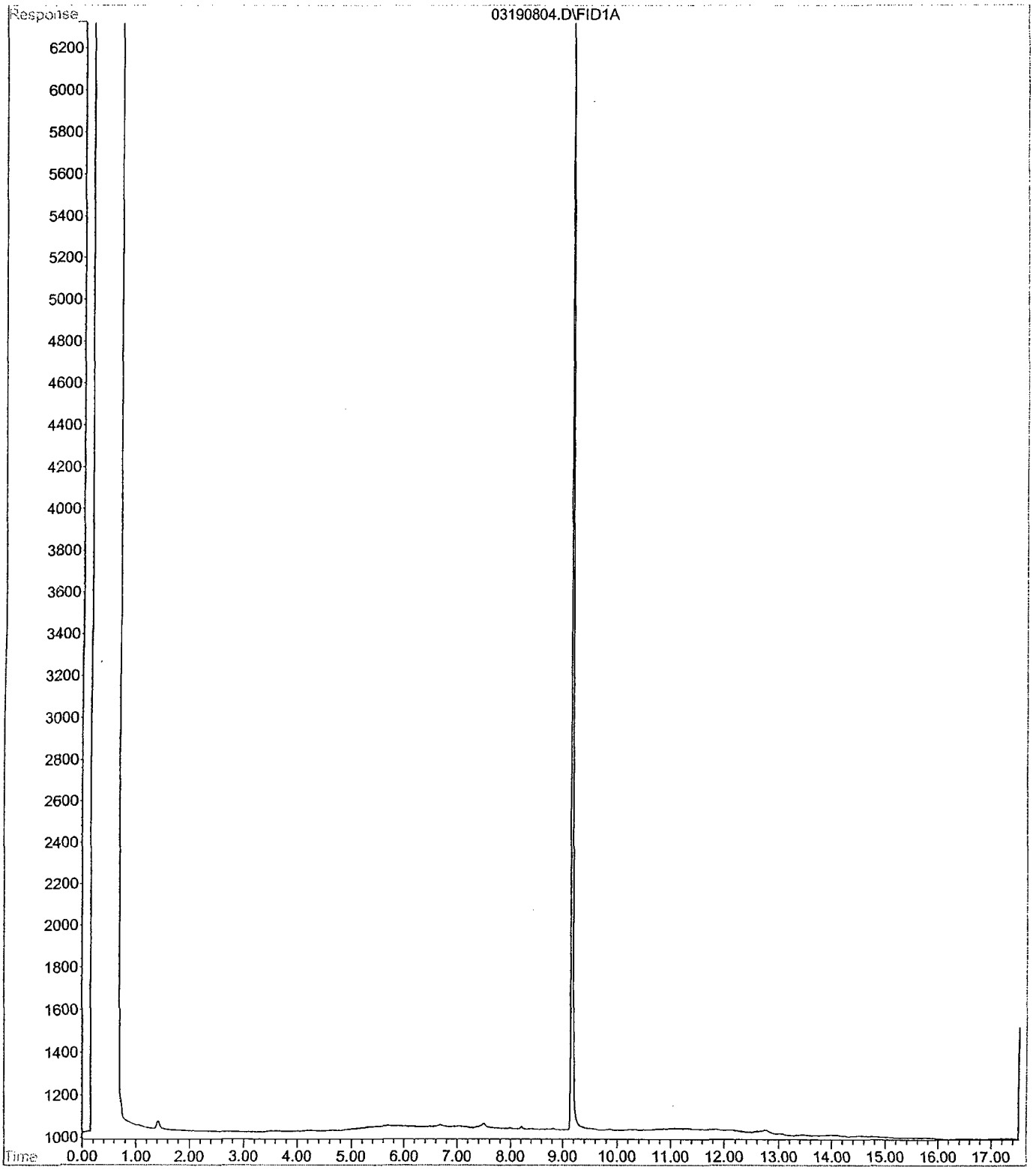
File : C:\HPCHEM\1\DATA\031708B\03170812.D
Operator : ARM
Acquired : 17 Mar 2008 3:30 pm using AcqMethod GCB80305.M
Instrument : GC-2 PID/
Sample Name: 803045.02 [001X]
Misc Info : LANDFARM CRUDE CELL EXT SOIL
Vial Number: 12



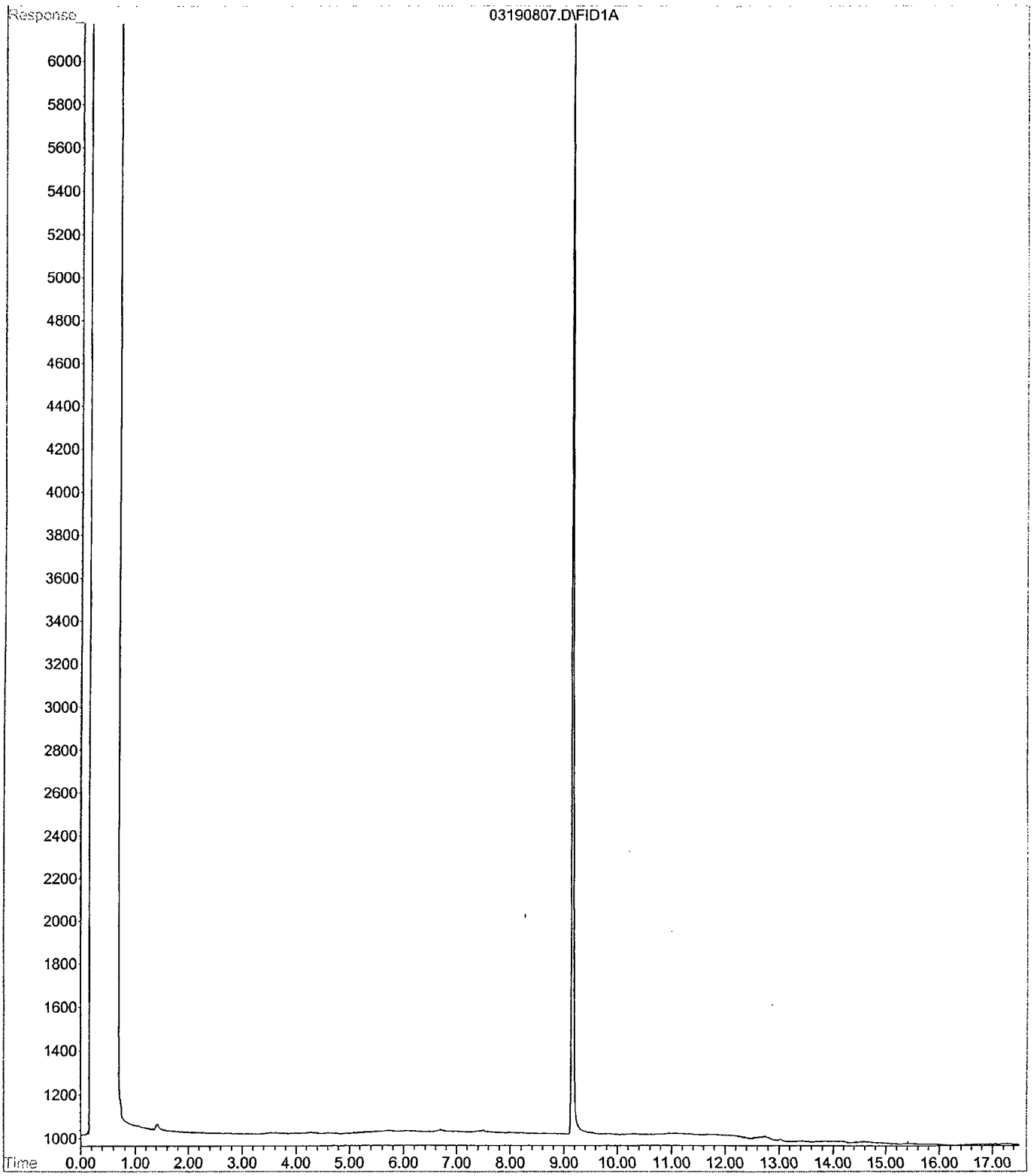
File : C:\HPCHEM\2\DATA\031908F\03190803.D
Operator : STH
Acquired : 19 Mar 2008 8:54 am using AcqMethod GCF80318.M
Instrument : FID-1
Sample Name: CCV031908 [200C]
Misc Info : DRO CCV 200UG/ML
Vial Number: 3



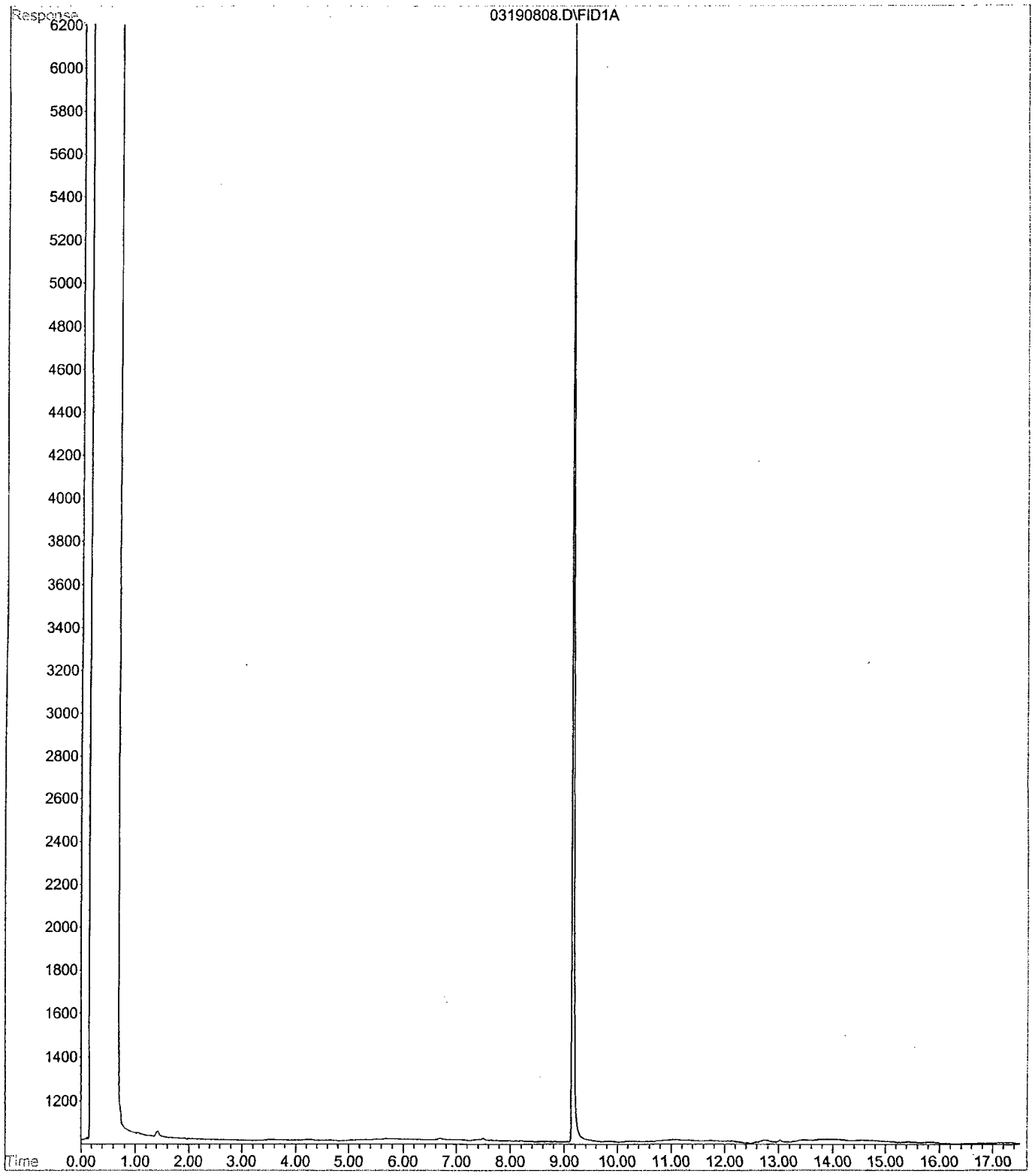
File : C:\HPCHEM\2\DATA\031908F\03190804.D
Operator : STH
Acquired : 19 Mar 2008 9:45 am using AcqMethod GCF80318.M
Instrument : FID-1
Sample Name: BLK031908 [001B]
Misc Info : SOIL METHOD BLANK 03/18/08@1701 STH
Vial Number: 4



File : C:\HPCHEM\2\DATA\031908F\03190807.D
Operator : STH
Acquired : 19 Mar 2008 11:00 am using AcqMethod GCF80318.M
Instrument : FID-1
Sample Name: 803045.01 [001X]
Misc Info : LANDFARM API CELL 03/18/08@1701 STH
Vial Number: 7



File : C:\HPCHEM\2\DATA\031908F\03190808.D
Operator : STH
Acquired : 19 Mar 2008 11:24 am using AcqMethod GCF80318.M
Instrument : FID-1
Sample Name: 803045.02 [001X]
Misc Info : LANDFARM CRUDE CELL 03/18/08@1701 STH
Vial Number: 8



Cation-Anion Balance Worksheet

Accession Number: 803045-01

Anions	Result (mg/l)	Factor	Total (me/l)
Alkalinity	3500		
Chloride	660	0.02821	18.61860
Fluoride		0.05264	0.00000
Nitrate as N		0.01613	0.00000
Sulfate		0.02082	0.00000
Carbonate	540	0.03333	17.99820
Bi-Carbonate	2900	0.01639	47.53100
	Total Anions =		**84.1478**

Cations	Result (mg/l)	Factor	Total (me/l)
Calcium	7300	0.04990	364.27000
Potassium	1300	0.02558	33.25400
Magnesium	1800	0.08229	148.12200
Sodium	150	0.04350	6.52500
Copper		0.03147	0.00000
Iron		0.05372	0.00000
Manganese		0.03640	0.00000
Zinc		0.03059	0.00000
	Total Cations =		**552.171**

Anion/Cation Balance (% difference) = 73.6%

Total Anions+Cations =	13310	mg/l	(calculated)
Total Dissolved Solids =	N/A	mg/l	(measured)
TDS/ion sum ratio =	N/A		
Electrical Cond =	N/R	umh/cm	(measured)
TDS/EC ratio =	N/A		

N/A = not applicable
N/R = not requested

Cation-Anion Balance Worksheet

Accession Number: 803045-02

Anions	Result (mg/l)	Factor	Total (me/l)
Alkalinity	1200		
Chloride	110	0.02821	3.10310
Fluoride		0.05264	0.00000
Nitrate as N		0.01613	0.00000
Sulfate	690	0.02082	14.36580
Carbonate	280	0.03333	9.33240
Bi-Carbonate	880	0.01639	14.42320
	Total Anions =		**41.2245**

Cations	Result (mg/l)	Factor	Total (me/l)
Calcium	2800	0.04990	139.72000
Potassium	1100	0.02558	28.13800
Magnesium	1200	0.08229	98.74800
Sodium		0.04350	0.00000
Copper		0.03147	0.00000
Iron		0.05372	0.00000
Manganese		0.03640	0.00000
Zinc		0.03059	0.00000
	Total Cations =		**266.606**

Anion/Cation Balance (% difference) = 73.2%

Total Anions+Cations =	6620	mg/l	(calculated)
Total Dissolved Solids =	N/A	mg/l	(measured)
TDS/ion sum ratio =	N/A		
Electrical Cond =	N/R	umh/cm	(measured)
TDS/EC ratio =	N/A		

N/A = not applicable
N/R = not requested

RECEIVED
2008 MAR 7 PM 1 23

March 4, 2008

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, 87505

CERTIFIED MAIL 7006 2150 0002 6417 2629

RE: FourthQuarter Sampling at Giant Industries Arizona, Inc. Centralized Surface Waste Management Landfarm Facility NM -02-0010

Dear Mr. Price,

On December 29, 2007, Lodestar Services, Inc. collected fourth quarter samples from Giant Industries Arizona, Inc.'s landfarm, permit number NM-02-0010, located in the NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM, San Juan County, NM. One crude cell sample and one API cell sample was collected as shown on Figure 1. Each sample was collected using a hand powered auger from three feet beneath native ground surface. Each sample was placed in an eight ounce glass jar and stored on ice during shipping to Pinnacle Laboratories in Albuquerque, NM. Strict chain-of-custody procedures were followed during shipping. Pinnacle laboratories analyzed the samples for the following constituents: total petroleum hydrocarbons, benzene, toluene, ethyl benzene, and xylenes.

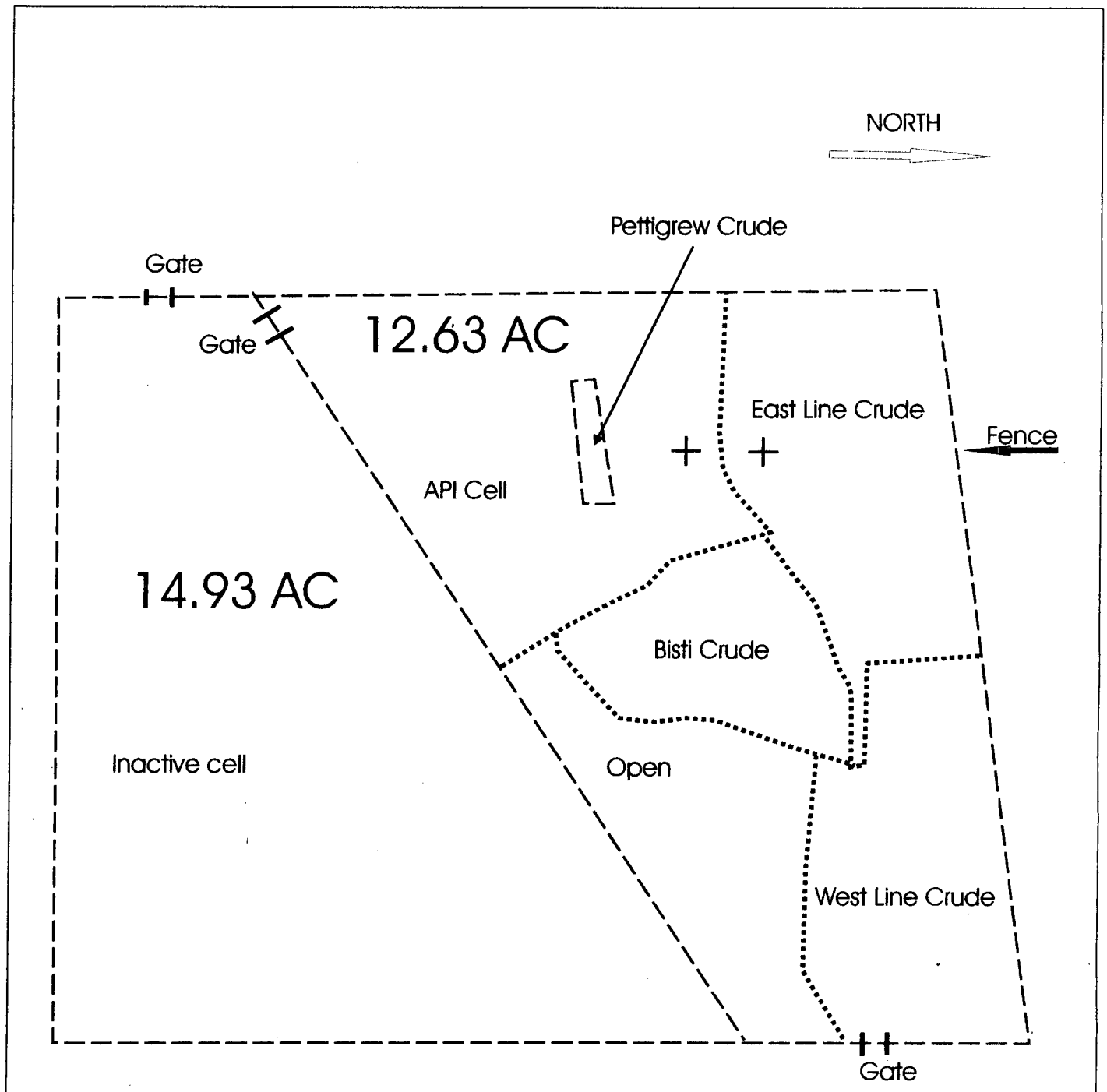
No target analytes were detected in the samples. Laboratory reports are included for your review.

Should you have any questions or require additional information please do not hesitate to call me at (505) 632-4077.

Respectfully Submitted,
Giant Industries Arizona, Inc.

for Bill Robertson
Bill Robertson
Safety, Environmental & Regulatory Manager

Cc. Mr. Dave Richards, Giant
Mr. Carlos Guerra, Giant
Ms. Ann Allen, Western Refining Company, L.P.
File



+ December 29,2007
Fourth Quarter Sampling
Sample Location

Scale: 1inch equals 200 feet

Lodestar Services, Inc
PO Box 3861
Farmington, NM 87499

Landfarm Cell Diagram

Figure 1

Drawn By MJN 1/8/08
Cell dimensions are based on GPS Survey Completed 3/31/06

PINNACLE LABS
Environmental Testing

Pinnacle Lab ID number **801008**
January 14, 2008

LODESTAR
26 CR 3500
FLORA VISTA, NM 87415

Project Name LANDFARM
Project Number (NONE)

Attention: MARTIN NEE/BILL ROBERTSON

On 01/03/2008 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), received a request to analyze **non-aq** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE Labs
Environmental Testing

CLIENT	: LODESTAR	PINNACLE ID	: 801008
PROJECT #	: (NONE)	DATE RECEIVED	: 01/03/2008
PROJECT NAME	: LANDFARM	REPORT DATE	: 01/14/2008

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
801008 - 01	APICELL	NON-AQ	12/29/2007
801008 - 02	WESTLINE CELL	NON-AQ	12/29/2007

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B / 8015B GRO
CLIENT : LODESTAR
PROJECT # : (NONE)
PROJECT NAME : LANDFARM

PINNACLE I.D. : 801008
ANALYST : ARM

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	APICELL	NON-AQ	12/29/07	01/09/08	01/10/08	1
02	WESTLINE CELL	NON-AQ	12/29/07	01/09/08	01/10/08	1

PARAMETER	DET. LIMIT	UNITS	APICELL	WESTLINE CELL
FUEL HYDROCARBONS	10	MG/KG	< 10	< 10
HYDROCARBON RANGE			C6-C10	C6-C10
HYDROCARBONS QUANTITATED USING			GASOLINE	GASOLINE
BENZENE	0.025	MG/KG	< 0.025	< 0.025
TOLUENE	0.025	MG/KG	< 0.025	< 0.025
ETHYLBENZENE	0.025	MG/KG	< 0.025	< 0.025
TOTAL XYLENES	0.10	MG/KG	< 0.10	< 0.10
SURROGATE:				
BROMOFLUOROBENZENE (%)			102	98
SURROGATE LIMITS	(65 - 120)			

CHEMIST NOTES:
N/A

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY RESULTS
METHOD BLANK

TEST	: EPA 8021B / 8015B GRO	PINNACLE I.D.	: 801008
BLANK I.D.	: 010908B	DATE EXTRACTED	: 01/09/08
CLIENT	: LODESTAR	DATE ANALYZED	: 01/10/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	ANALYST	: ARM

PARAMETER	UNITS	
FUEL HYDROCARBONS	MG/KG	<10
HYDROCARBON RANGE		C6-C10
HYDROCARBONS QUANTITATED USING		GASOLINE
BENZENE	MG/KG	<0.025
TOLUENE	MG/KG	<0.025
ETHYLBENZENE	MG/KG	<0.025
TOTAL XYLENES	MG/KG	<0.10
SURROGATE:		
BROMOFLUOROBENZENE (%)		106
SURROGATE LIMITS (80 - 120)		

CHEMIST NOTES:
N/A

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 801008
BATCH ID	: 010908B	DATE EXTRACTED	: 01/09/08
CLIENT	: LODESTAR	DATE ANALYZED	: 01/10/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	BLANK RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<10	50.0	61.0	122	63.0	126	3	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8015B GRO	PINNACLE I.D.	: 801008
SAMPLE ID	: 801008-01	DATE EXTRACTED	: 01/09/08
CLIENT	: LODESTAR	DATE ANALYZED	: 01/10/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
FUEL HYDROCARBONS	<10	50.0	58.4	117	67.0	**134 M4**	14	(70 - 130)	20
HYDROCARBON RANGE		C6-C10							

HYDROCARBONS QUANTITATED USING GASOLINE

CHEMIST NOTES:
M4 = %REC is outside of PLI criteria.

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B	PINNACLE I.D.	: 801008
BATCH ID	: 010908B	DATE EXTRACTED	: 01/09/08
CLIENT	: LODESTAR	DATE ANALYZED	: 01/10/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.025	1.00	0.976	98	0.974	97	0	(68 - 120)	20
TOLUENE	<0.025	1.00	1.03	103	1.03	103	0	(64 - 120)	20
ETHYLBENZENE	<0.025	1.00	1.03	103	1.04	104	1	(49 - 127)	20
TOTAL XYLENES	<0.10	3.00	3.13	104	3.15	105	1	(58 - 120)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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PINNACLE LABS
Environmental Testing

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B	PINNACLE I.D.	: 801008
SAMPLE ID	: 801008-01	DATE EXTRACTED	: 01/09/08
CLIENT	: LODESTAR	DATE ANALYZED	: 01/10/08
PROJECT #	: (NONE)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: LANDFARM	UNITS	: MG/KG

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.025	1.00	0.902	90	0.928	93	3	(68 - 120)	20
TOLUENE	<0.025	1.00	0.949	95	0.978	98	3	(64 - 120)	20
ETHYLBENZENE	<0.025	1.00	0.969	97	0.993	99	2	(49 - 127)	20
TOTAL XYLENES	<0.10	3.00	2.92	97	3.01	100	3	(58 - 120)	20

CHEMIST NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

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Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 1/2/08 PAGE: 1 OF 1

PLI Accession #: 801008

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	Marbie Nee
COMPANY:	Lodestar Services
ADDRESS:	26 CR 3500
	Flora Vista, NM, 87415
PHONE:	505 320 9675
FAX:	
BILL TO:	Bill Robertson
COMPANY:	Giant
ADDRESS:	#1 CR 4990
	Bloomfield NM 87413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject		(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐/DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics ☐PBMS	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method1311)	Metals:		NUMBER OF CONTAINERS
APIcell	122907	1145	Soil	01				X		X																					2
WestLinecell	122907	1215	Soil	02				X		X																					2

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION	
PROJ. NO.:	
PROJ. NAME:	Landfarm
P.O. NO.:	
SHIPPED VIA:	UPS

SAMPLE RECEIPT	
NO CONTAINERS	2
CUSTODY SEALS	Y / (N) NA
RECEIVED INTACT	Yes
BLUE ICE/ICE	3.1°C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr* ☐48hr* ☐72hr* ☐ 1 WEEK (NORMAL) ☑
*NOT AVAILABLE ON ALL ANALYSES

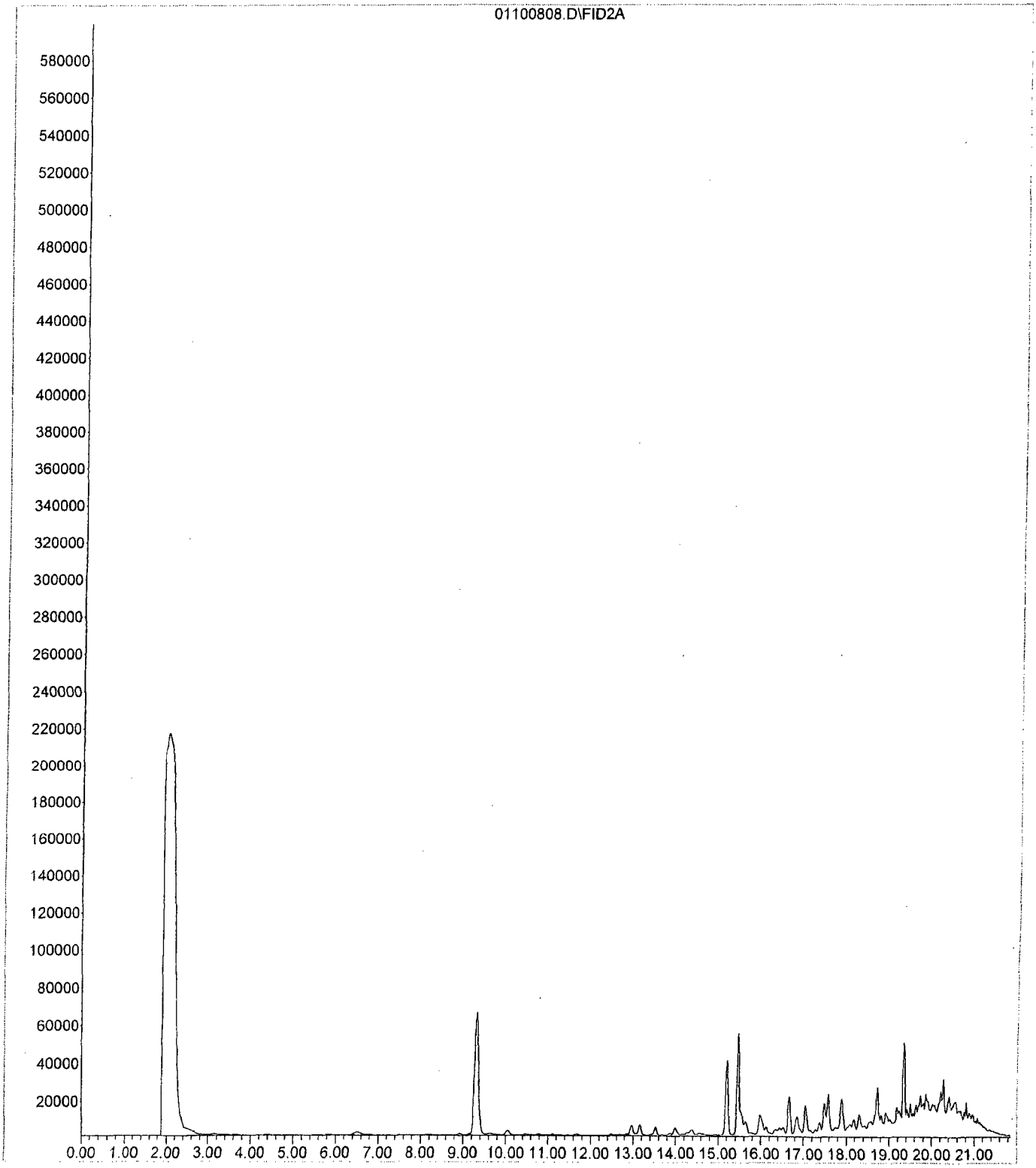
CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER

METHANOL PRESERVATION ☐ METALS ☐ TOTAL ☐ DISSOLVED

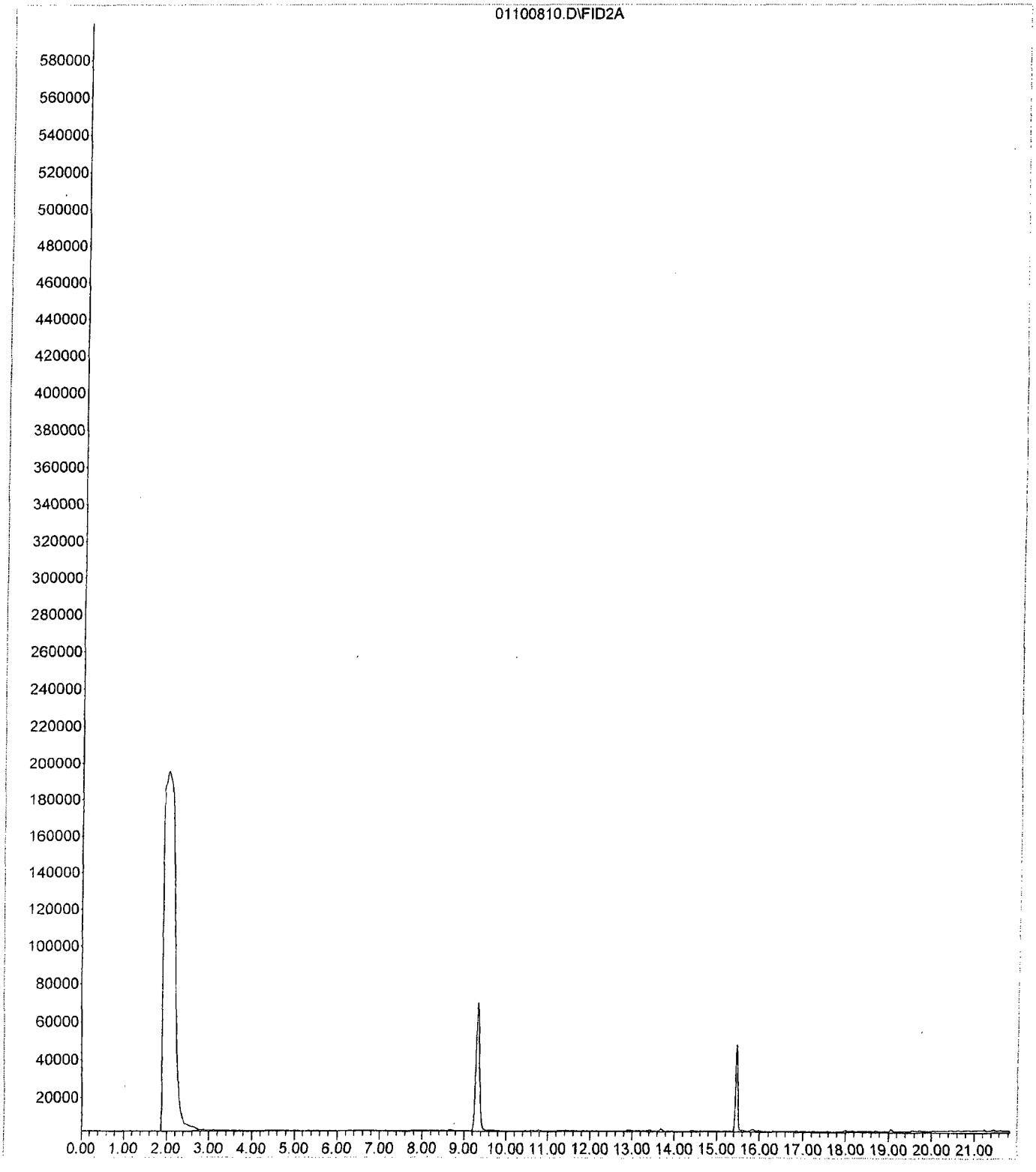
COMMENTS:
1/8/08 per client request please add 8015 GRO. ✓ 1/8/08

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: MJNee Time: 1800	Signature: Time:
Printed Name: MJNee Date: 1/2/08	Printed Name: Date:
Company: Lodestar Servs	Company:
See Reverse side (Force Majeure)	
RECEIVED BY: 1.	**RECEIVED BY: (LAB) 2.**
Signature: Time:	Signature: Time: 11:30
Printed Name: Date:	Printed Name: Dave Gallegos Date: 1-3-08
Company:	Pinnacle Laboratories Inc.

File : C:\HPCHEM\1\DATA\011008B\01100808.D
Operator : ARM
Acquired : 10 Jan 2008 12:48 pm using AcqMethod BG100207.M
Instrument : GC-2 PID/
Sample Name: METHOD BLANK EXT SOIL
Misc Info : 0.10ML/5ML + 10UL MS5-98-19 EXT SOIL
Vial Number: 8



File : C:\HPCHEM\1\DATA\011008B\01100810.D
Operator : ARM
Acquired : 10 Jan 2008 2:05 pm using AcqMethod BG100207.M
Instrument : GC-2 PID/
Sample Name: 801008.01 [1X] 1145 EXT SOIL
Misc Info : 0.10ML/5ML + 10UL MS5-98-19 EXT SOIL
Vial Number: 10



File : C:\HPCHEM\1\DATA\011008B\01100811.D
Operator : ARM
Acquired : 10 Jan 2008 2:36 pm using AcqMethod BG100207.M
Instrument : GC-2 PID/
Sample Name: 801008.02 [1X] 1215 EXT SOIL
Misc Info : 0.10ML/5ML + 10UL MS5-98-19 EXT SOIL
Vial Number: 11