



BTA OIL PRODUCERS
104 SOUTH PECOS STREET
MIDLAND, TEXAS 79701
OFFICE: 432-682-3753 Fax: 432-683-0325

AUG 15 2008
OCD-ARTESIA

August 14, 2008

NEW MEXICO OIL CONSERVATION DIVISION
DISTRICT II
Artesia Field Office
1301 W. Grand Avenue
Artesia, New Mexico 88210

Re: Pardue, 8808 JV-P SWD Injection Facility
NE/4, NE/4, Section 11, T23S, R28E,
Eddy County, New Mexico

Dear Ms. Bonham,

This is a copy of the site remediation plan, for the 8709 JV-P Pardue SWD Injection Facility site. We will not begin work on the project until BTA Oil Producers, LLC have received approval of the plan. Thank you for your time in this matter. Should you have any questions, feel free to contact me at 432.553.5352.

Regards,

A handwritten signature in black ink, appearing to read 'Joseph A. Baca'.

Joseph A. (Skip) Baca, P.G.
Environmental Coordinator
BTA Oil Producers
104 South Pecos
Midland, Texas 79701




PARDUE SWD SITE REMEDIATION PLAN

8808 JV-P Pardue SWD Injection Facility
20 Miles southeast of Carlsbad, New Mexico
Carlsbad, New Mexico
BTA Project Number Env. 2008-025

Prepared for:
New Mexico Oil Conservation Division
1301 W. Grand Avenue
Artesia, New Mexico 88210

Prepared By:
BTA Oil Producers
104 S. Pecos St.
Midland, Texas 79701



Joseph A. Baca, P.G.
Environmental Coordinator
BTA Oil Producers, LLC

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	PURPOSE OF PLAN.....	2
3.0	SUMMARY OF FIELD ACTIVITIES.....	3
4.0	WATER WELLS AND SURFACE WATER.....	3
5.0	LIMITATIONS	3
6.0	DISTRIBUTION LIST	5

ATTACHMENTS

FIGURES

Figure 1	Site Location Map
Figure 2	Site Map of Pardue SWD Injection Facility with sample points and other details
Figure 3	Site Map of Pardue SWD Injection Facility with Closest Water Wells
Figure 4	Exaggerated Cross-Sectional Diagrammatic Representation Showing Excavation, Liner and Backfill Materials
Figure 5	Contour maps of Chloride concentrations at 3-feet, 6-feet, and 8-feet

TABLES

Table 1	Analytical Results
---------	--------------------

APPENDICES

Appendix A	Analytical Reports
Appendix B	Bore Hole Logs

1.0 INTRODUCTION

BTA Oil Producers (BTA) is pleased to submit this Pardue SWD Site Remediation Plan for the 8808 JV-P Pardue SWD Injection Facility (Pardue). The Pardue site is located approximately 20 miles southeast of the town of Carlsbad, in the NE/4, NE/4, of Section 11, Township 23 South, Range 28 East, and Eddy County, New Mexico. Ground Positioning Satellite (GPS) coordinates are N32°18.771' and W104°03.633'. A site map is provided with this report as Figure 1.

BTA's Pardue SWD Injection Facility (Pardue) is located on top of an east trending topographic nose, approximately 40-feet above the west bank of the Pecos River. The area of interest is located on the southern end of the topographic nose. The overall nose area measures approximately 541-feet long by 485-feet wide. The impacted site measures approximately 177-feet on the west side, 77-feet on the east side and is approximately 163-feet long. The area is parallelogram shaped with the wider end to the west. Soil in the site area is composed of fine sandy loam with large limestone cobbles on the surface and solid rock at approximately 2 to 3 feet below ground surface (bgs). During the sample event of February 15, 2008 and the sampling event of April 16, 2008, while excavating to collecting bottom hole soil samples, it was found that solid rock existed below 1-foot in some places and 3-foot in other places within the impacted area and was difficult to excavate.

On February 15, 2008 soil samples were collected from the floor of the impacted site and submitted for laboratory analysis. Three soil samples, identified as 1-1'-Spl, 2-2'-Spl and 2-3'-Spl were collected from two (2) separate sample excavations within the impacted area. Sample 1-1'-Spl was collected from an excavation labeled Sample Excavation No. 1 on the floor of the impacted area at a depth of approximately 1-foot below ground surface (bgs). Samples 2-2'-Spl and 2-3'-Spl were collected from an excavation labeled Sample Excavation No. 2 also on the floor of the impacted area at a depth of 2-feet and 3-feet bgs (Figure 2). The samples were submitted for laboratory analysis and the analytical results indicated that the samples exhibited GRO and DRO (8015) concentrations of <50.0 mg/Kg to 680 mg/Kg. The sample exhibiting the highest GRO and DRO was subsequently run for BTEX (8021B) and exhibited <0.100 mg/Kg for Benzene, 0.712 mg/Kg Toluene, .0322 for Ethylbenzene and 2.01 mg/Kg for Xylene. Chloride analytical results ranged from 2,430 mg/Kg to 15,900 mg/Kg (Table 1).

On March 19, 2008 soil samples were collected from the floor of the impacted site and submitted for laboratory analysis. Four (4) soil samples, identified as North-1@1', South-2-1', East-3@1' and West-4@1' were collected from four (4) separate sample excavations within the impacted area (Figure 2). All samples were collected from the bottom of excavations 1-foot deep. The samples were submitted for laboratory analysis and the analytical results indicated that the samples exhibited Chloride concentrations ranging from 898 mg/Kg to 3,110 mg/Kg (Table 1).

On April 16, 2008 soil samples were collected from the floor of the impacted site and submitted for laboratory analysis. Three (3) grab samples from five sample points were used and totaled fifteen (15) samples. The samples were collected in one (1') foot intervals down to a depth of 3-feet. The samples are identified as NS-1@1', NS-1@2' and NS-1@3' (N32° 18.788; W104° 03.650), SS-1@1', SS-1@2' and SS-1@3' (N32° 18.777; W104° 03.661), ES-1@1', ES-1@2' and ES-1@3' (N32° 18.781, W104°03.644) and WS-1@1', WS-1@2', WS-1@3' (N32° 18.785, W104° 03.664) and Central @ 1', Central @ 2' and Central @ 3' (N32° 18.782, W104° 03.652) (Appendix B). The samples were submitted for DRO, GRO, BTEX and Chloride analysis. The analytical

results indicated DRO concentrations ranging from <50.0 mg/Kg to 396.0 mg/Kg, DRO concentrations of <1.00 mg/Kg to 30.5 mg/Kg, Benzene concentrations of <0.0100 mg/Kg, Toluene concentrations of <0.0100 mg/Kg, Ethylene concentration of <0.0100 mg/Kg and Xylene concentration of <0.0100. Chloride analytical results ranged from 294 mg/Kg to 4,950 mg/Kg (Table 1). The sample from each sampling point exhibiting the highest GRO and DRO was subsequently run for BTEX (8021B). Only one sample out of the sampling event identified as Central @1' exhibited GRO and DRO greater than regulatory limits and was subsequently analyzed for BTEX (Table 1).

On July 24, 2008 six mechanical auger borings were advanced to a depth of 8-feet. Soil samples were collected and soil descriptions were prepared from each boring at 3-feet, 6-feet and 8-feet below ground surface (bgs) (Appendix C). The borings were advanced at select locations around the remediation site (Figure 2). The boring locations were selected in areas that would define the limits of impact to soils and receptors. All soil boring samples were submitted for laboratory analysis. Six mechanical auger borings were advanced to 8-feet and three (3) soil samples were collected from each boring. The samples were collected at 3-feet, 6-feet and 8-feet intervals. The samples are identified as N@3', N@6' and N@8' (N32° 18.804; W104° 03.669), S@3', S@6' and S@8' (N32° 18.774; W104° 03.664), E@3', E@6' and E@8' (N32° 18.790, W104° 03.647) and W@3', W@6', W@8' (N32° 18.784, W104° 03.684) and Central@3', Central@6' and Central@8' (N32° 18.789, W104° 03.665) and Back@3', Back@6' and Back@8' (N32° 18.869, W104° 03.706) (Figure 2). The samples were submitted for DRO, GRO, BTEX and Chloride analysis. The analytical results indicated DRO concentrations ranging from <50.0 mg/Kg to 947.0 mg/Kg, DRO concentrations of <1.00 mg/Kg to 2.47 mg/Kg, Benzene concentrations of <0.0100 mg/Kg, Toluene concentrations of <0.0100 mg/Kg, Ethylene concentration of <0.0100 mg/Kg and Xylene concentration of <0.0100. Chloride analytical results ranged from 429 mg/Kg to 3,240 mg/Kg (Table 1). The sample from each sampling point exhibiting the highest GRO was subsequently run for BTEX (8021B). Only one soil from the sampling event identified as Central@8' exhibited a DRO of 947.0 mg/Kg, which is greater than regulatory limits (Table 1).

Laboratory submitted samples were placed in a new sterile glass container, equipped with a Teflon-lined lid furnished by the laboratory. The samples were labeled, placed on ice, chilled to a temperature of approximately 4°C and transported to Trace Analysis, Inc in Midland, Texas for analysis of Chlorides by titration. Appropriate chain-of-custody documentation and shipping protocols were followed. The laboratory analytical reports are provided in Appendix A. Figure 2 displays the excavation limits and the location of each confirmation soil sample. Table 1 displays the analytical results of field tested and laboratory analyzed confirmation soil samples.

2.0 PURPOSE OF PLAN

The purpose of this report is to document field activities that will take place at the Pardue in order to remediate the site and present supporting data to meet that end. Using data from four (4) sampling events, BTA has evaluated the vertical and horizontal impact of contaminants on the remediation site. BTA's will remove up to three-feet (3) of impacted soil from the existing project surface. We will backfill the excavation with clean caliche to prevent further issues, and crown the caliche surface. A 20 mil poly-liner will be installed and trenches measuring approximately 1-foot wide by 3-feet deep will be excavated around the perimeter of the remediation site. The edge of the liner will be "Z" folded placed into the trench and backfilled. The poly-liner surface will be backfilled with approximately 4-feet of clean soil and brought up

to the existing facility grade (Figure 4). The area will be leveled to meet the overall existing surface grade.

The Pardue SWD is an active facility and BTA Oil Producers, LLC respectfully requests that the OCD accept this plan as an assessment of risk in lieu of total remediation. The remediation plan and removal of the pipeline to the pit as a best management practice (BMP) demonstrates that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh waters, public health and the environment. Three chloride concentration contour maps, drawn from data collected at 3-feet, 6-feet and 8-feet are included with this plan (Figure 5). Drawing number 1 demonstrates the chloride in the soil at 3-feet (Map 1). This map uses all data collected in subsequent sampling events and demonstrates that the majority of chloride concentration is located within the project site. Data from the 6-foot and 8-foot sampling event of July 24, 2008 are used to draw maps 2 and 3. These contour maps demonstrate that the majority of the chloride concentration is contained within the project site boundary. The use of a poly-liner is an excellent barrier and will prevent movement of chlorides away from the project site. The background sample point identified as Back@3, 6, 8 samples is approximately 300 feet from the center of the Pardue remediation site (Figure 5). The chemical analysis of these samples indicates that chloride concentration is above state limits for chloride (Table 1). The six (6) bore holes are the only data stations deep enough to collect sample from 6-feet and 8-feet.

3.0 SUMMARY OF FIELD ACTIVITIES

BTA will move in a track-hoe and a front-end loader onto the Pardue site. The track-hoe will excavate the approximate top 3-feet, remove the material, and level the excavation floor. A 20-mil poly liner would be installed and new fresh soil placed over the new liner and backfilled to existing grade.

4.0 WATER WELLS AND SURFACE WATER

There are no water wells in the immediate area. There is surface water in close proximity and there are two water wells approximately 3,600-feet (0.68 miles) north of the impacted site in SE/4, NW/4, NW/4, Section 11, Township 23 South, Range 28 East, Eddy County, New Mexico. Well C00512 has a depth to water at 15-feet and is used for irrigation. Well C 00608 has no depth to water recorded according to the New Mexico Office of the State Engineer and it is used as a domestic well (Figure 3). Fifty (50) feet below the project site and directly east, approximately 249-feet is the Pecos River. The river flows approximately north to south and the area is characterized by salt cedar brush on the both banks and a crust of alkali that is easily visible on both banks of the Pecos River.

5.0 LIMITATIONS

BTA has prepared this Site Remediation Plan to the best of its ability. No other warranty, expressed or implied, is made or intended. BTA has examined and relied upon documents referenced in the plan and on oral statements made by certain individuals. BTA has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements are true and accurate. BTA has prepared this plan in a professional manner, using a degree of skill and care. BTA also notes that the facts and

conditions referenced in this report may change over time, and the conclusions set forth herein are applicable only to the facts and conditions as described at the time of this plan.

6.0 DISTRIBUTION LIST
Pardue SWD Injection Facility Remediation Plan
BTA Oil Producers
8808 JV-P Pardue SWD Injection Facility
BTA Project No. Env. 2008-025

Copy 1

Oil Conservation Division (OCD)
1301 W. Grand Avenue
Artesia, New Mexico 88210

Copy 2

BTA Central File

ATTACHMENTS

FIGURES

Figure 1

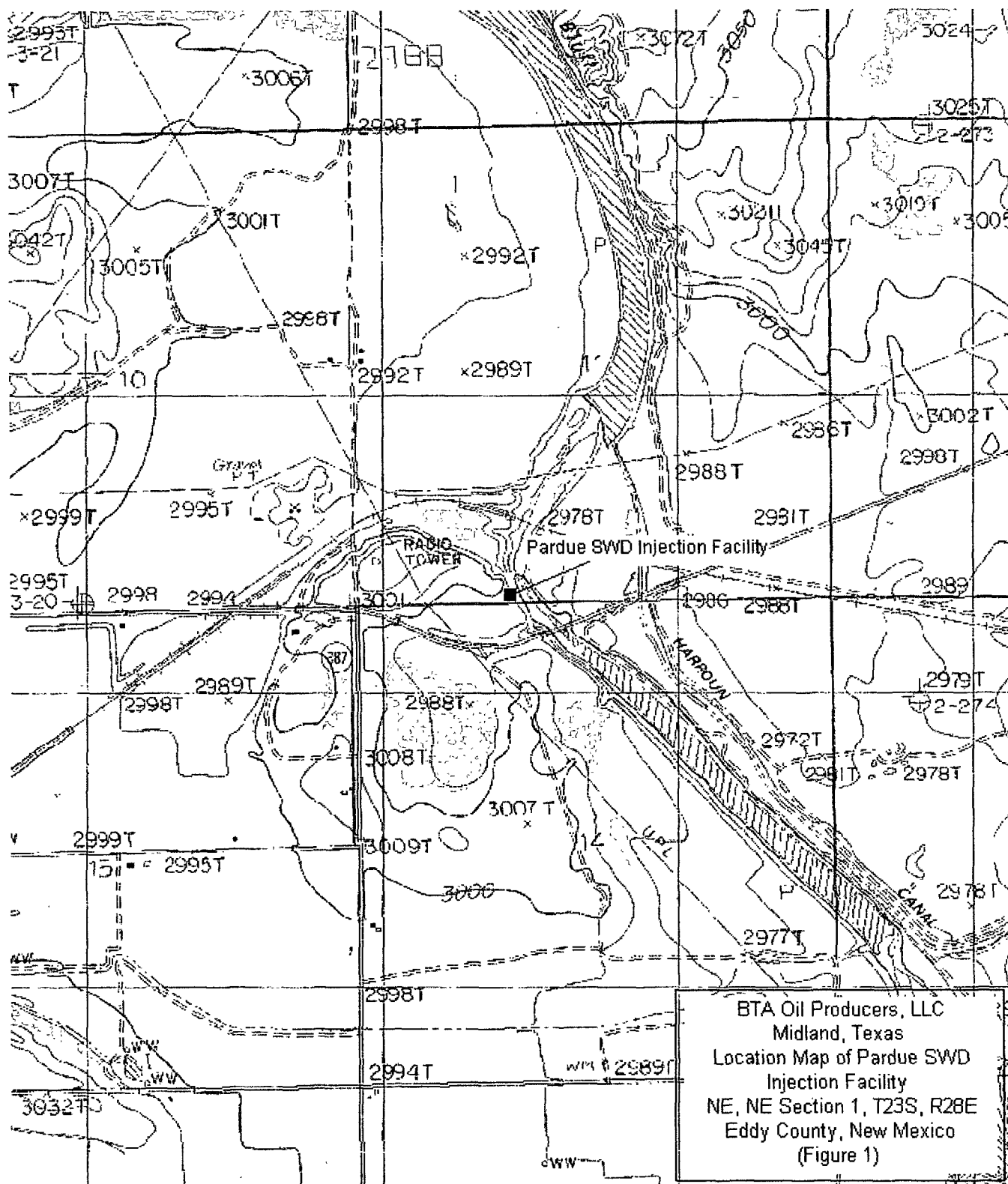


Figure 2

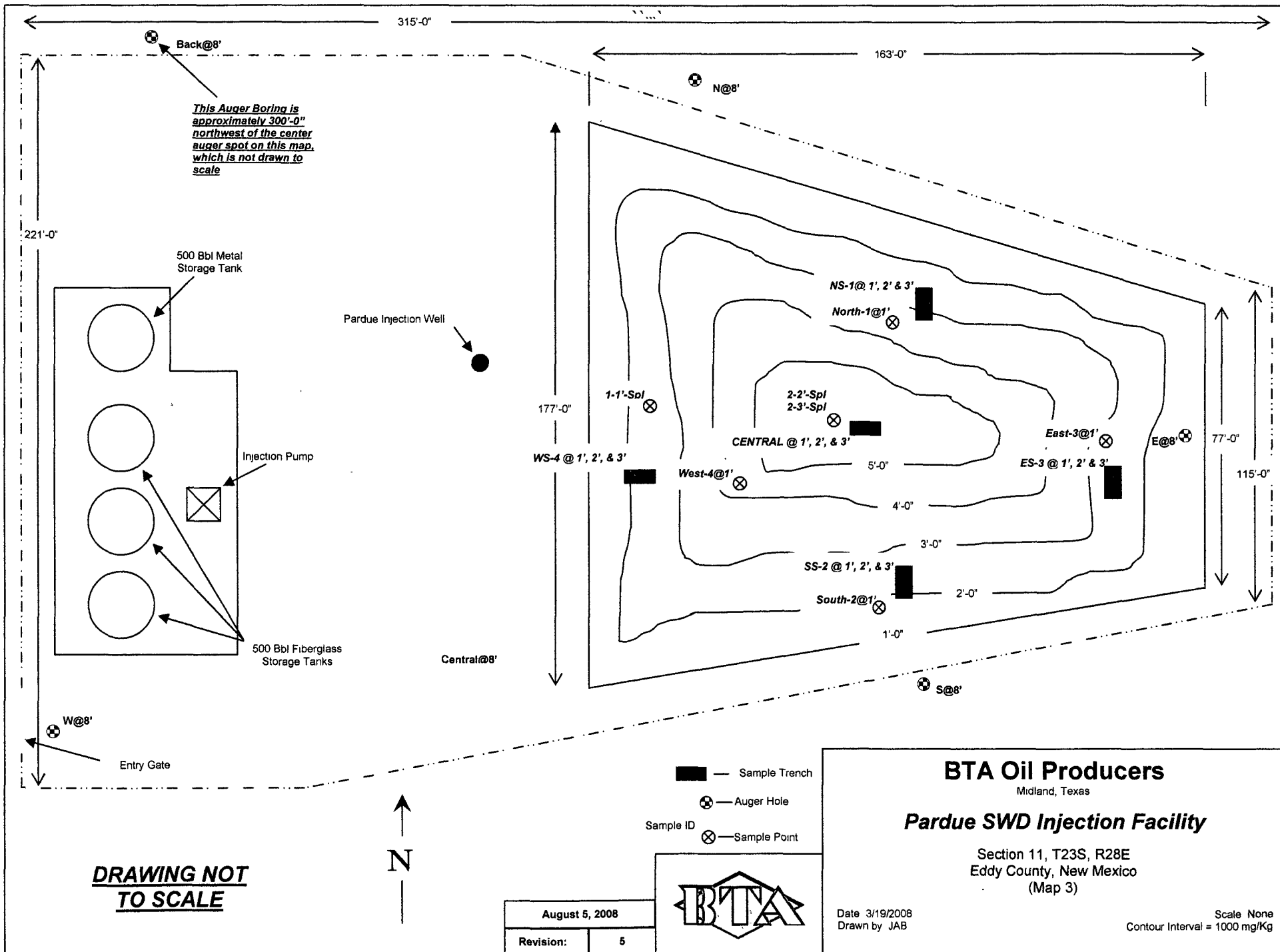
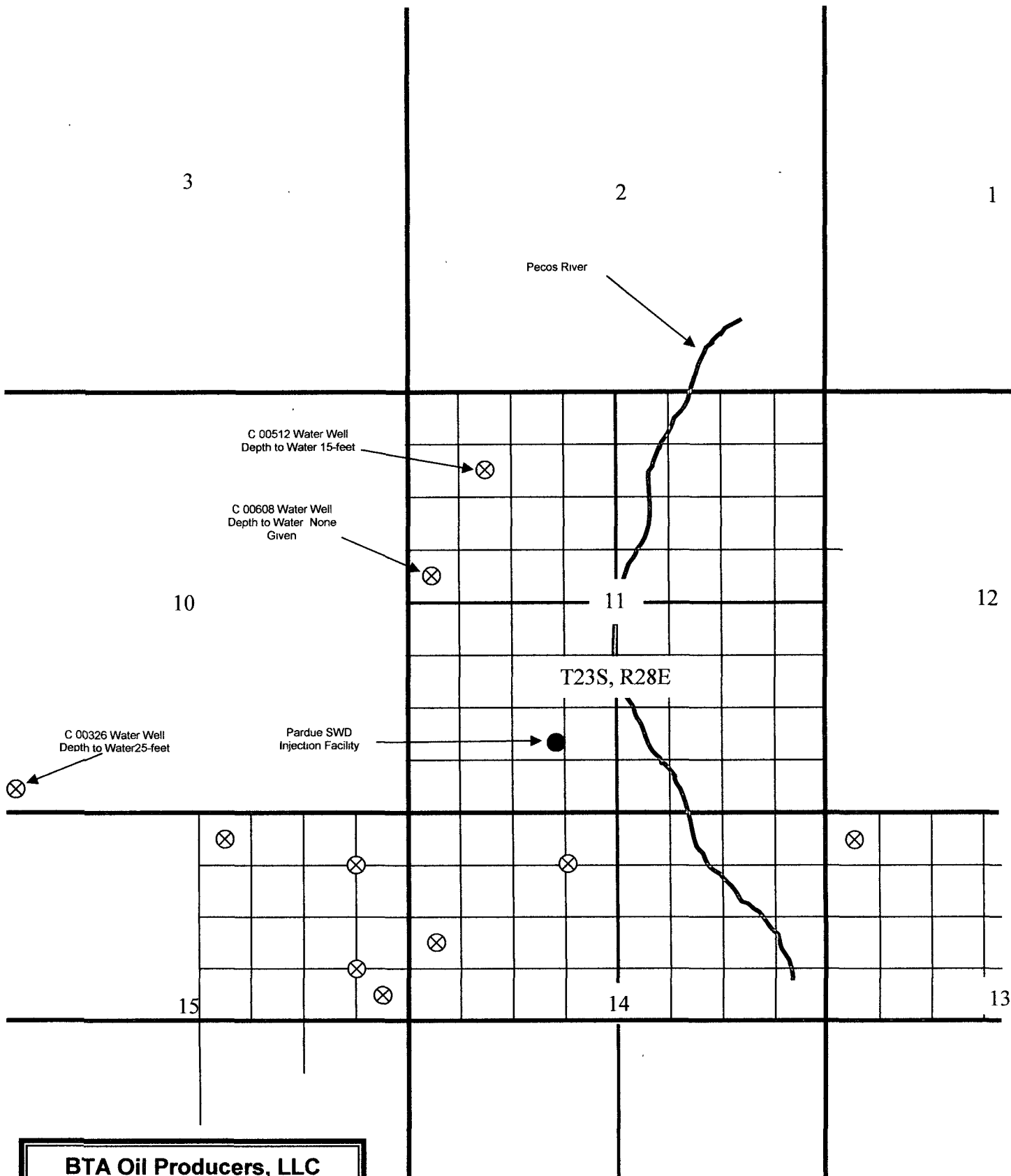


Figure 3



BTA Oil Producers, LLC

Midland, Texas

Site Map of Pardue SWD Injection Facility with Closest Water Wells

NE, NE, Sec. 11, T18S, R28E, Eddy County New Mexico
(Figure 3)

Drawn By: JAB
Scale: None

Checked By: JAB
Date 03/11/2008

● - Pardue SWD Injection Facility

⊗ - Water Well

Figure 4

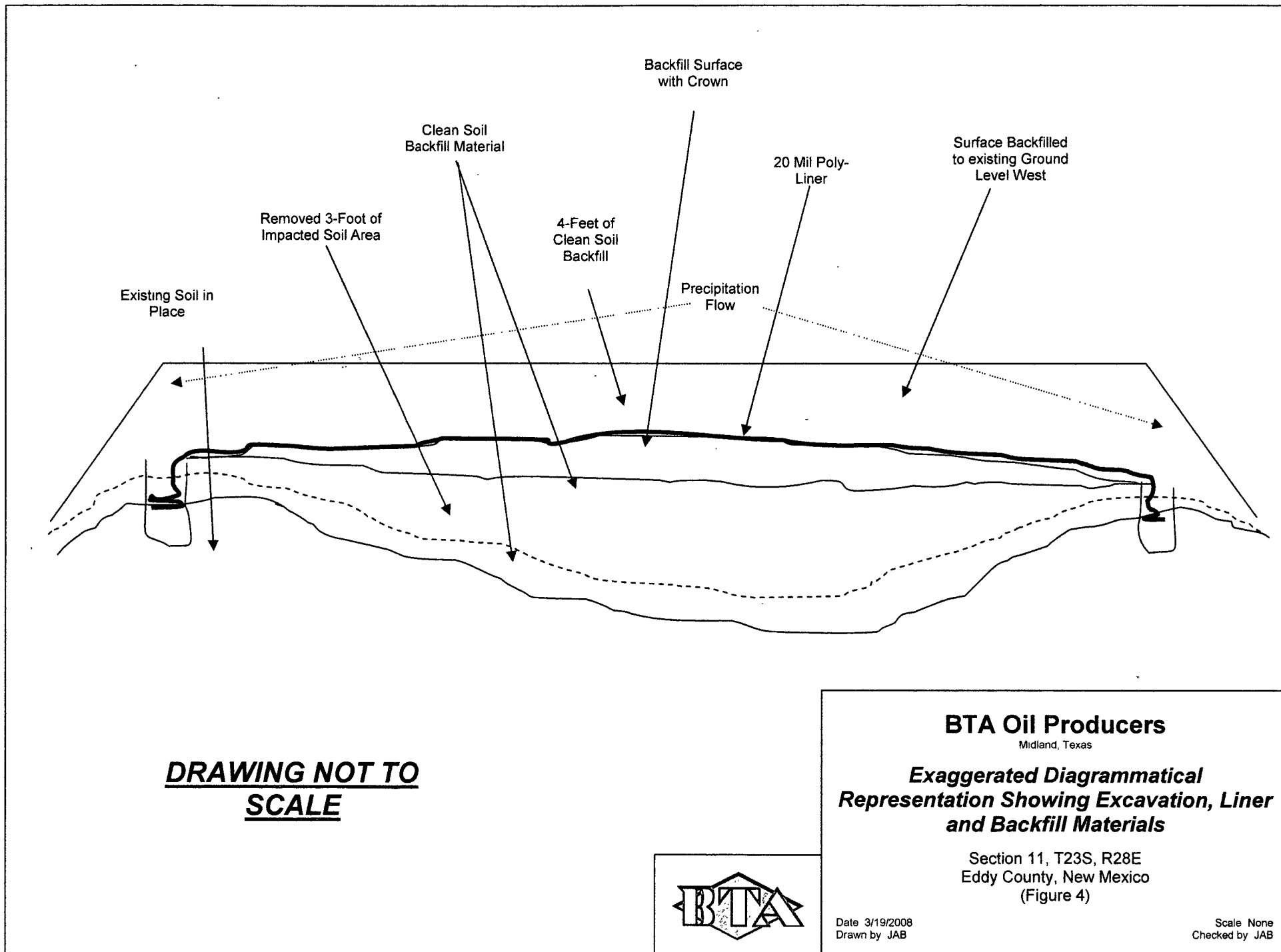
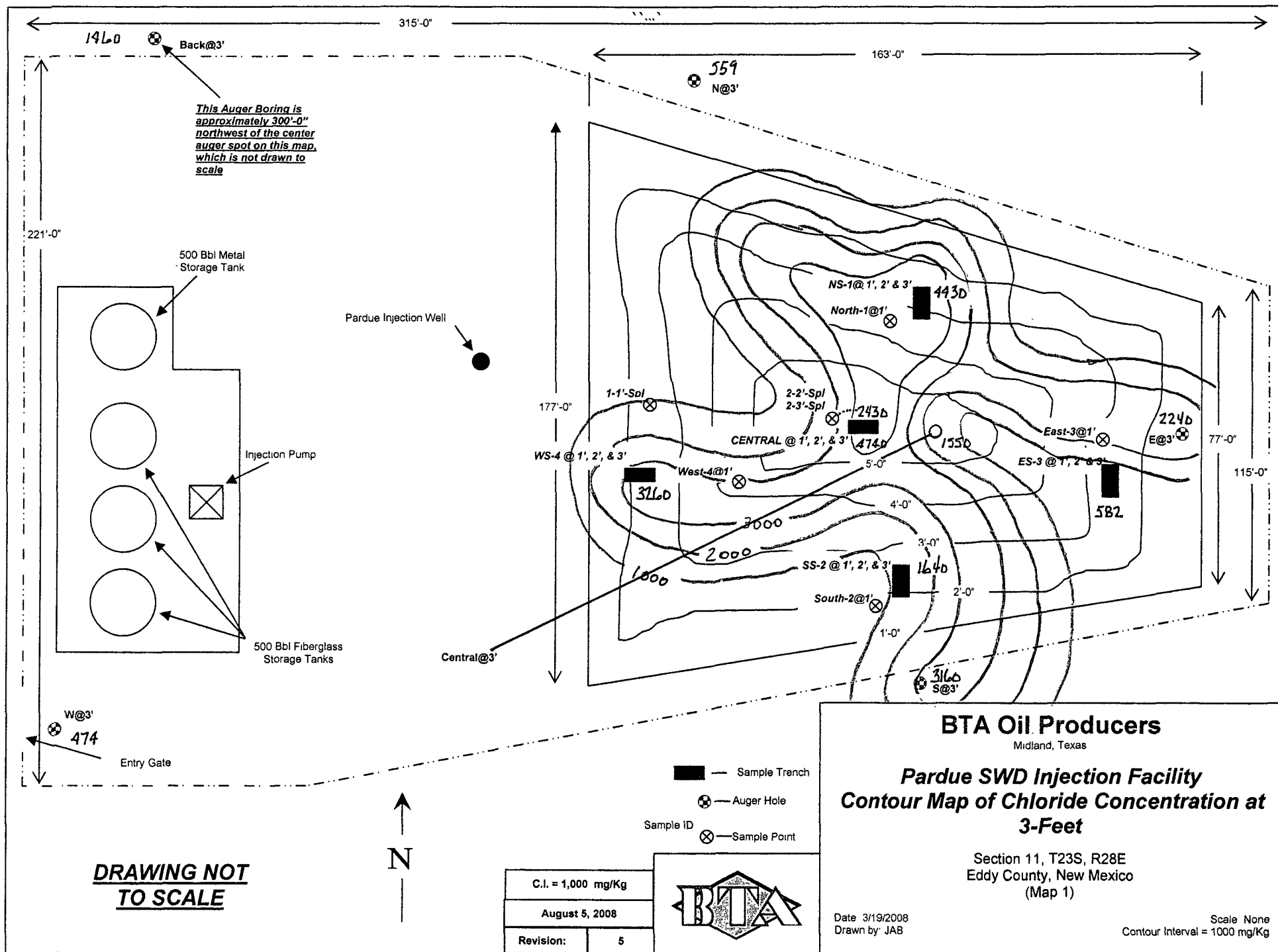
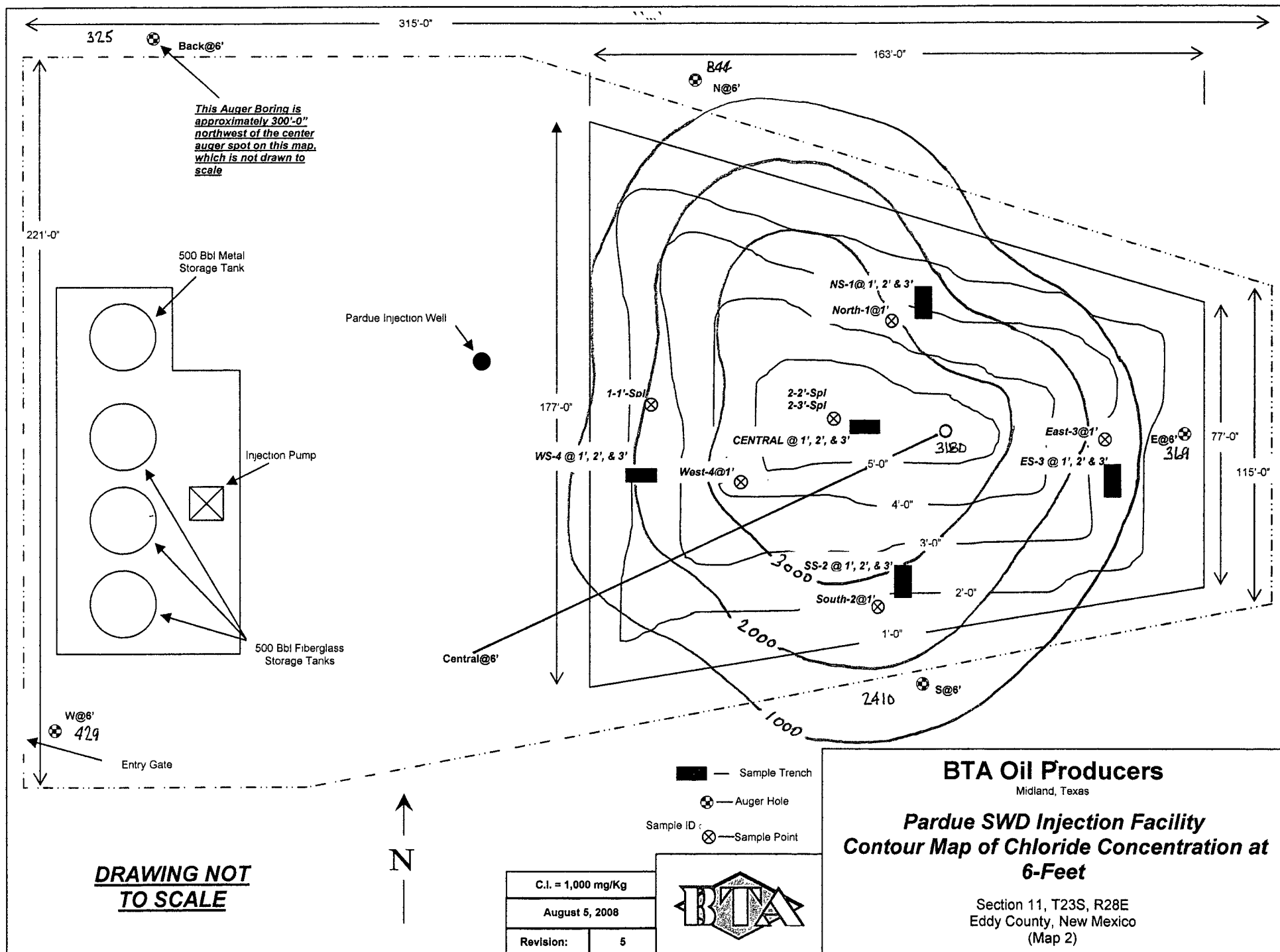
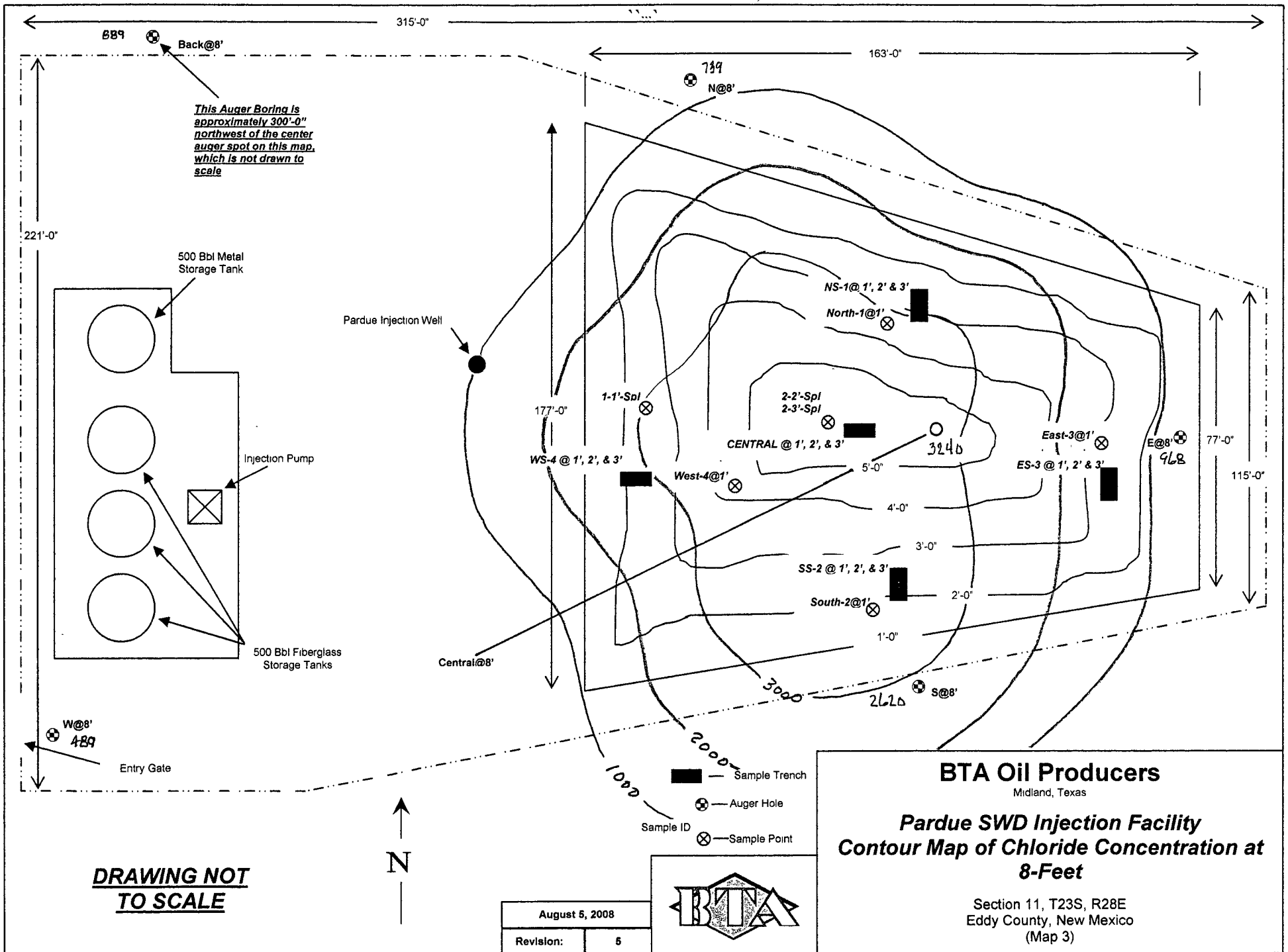


Figure 5







TABLES

Table I
Excavation Soil TPH GRO and DRO Analytical Results
Excavation Soil BTEX Analysis
Excavation Soil Chloride Analysis
BTA - Pardue SWD Injection Facility - Lea County, New Mexico
New Mexico NMOCD Inspection # iREI0724042324
BTA Project Number Env. 2008-025

GLE 2,990'			Analytical Methods						
ANALYTICAL METHOD			Mod. 8015B	S 8015B	S 8021B			SM 4500-CL B	
SAMPLE DATE	SAMPLE IDENTIFICATION	TOTAL TPH	TPH DRO mg/Kg	TPH GRO mg/Kg	BENZENE mg/Kg	TOLUENE mg/Kg	ETHYLBENZE NE mg/Kg	XYLENE mg/Kg	CHLORIDES (mg/Kg)
Excavation									
2/15/2008	1-1'-Spl	685.00	455.00	230.00	<0.100	0.71	0.32	2.01	15,900
2/15/2008	2-2'-Spl	216.80	139.00	77.80	NA	NA	NA	NA	3,510
2/15/2008	2-3'-Spl	51.80	<50.0	1.08	NA	NA	NA	NA	2,430
3/19/2008	North-1@1'	NA	NA	NA	NA	NA	NA	NA	3,110
3/19/2008	South-2@1'	NA	NA	NA	NA	NA	NA	NA	1,190
3/19/2008	East-3@1'	NA	NA	NA	NA	NA	NA	NA	898
3/19/2008	West-4@1'	NA	NA	NA	NA	NA	NA	NA	2,540
4/16/2008	NS-1@1'	<51.00	<50.0	<1.00	NA	NA	NA	NA	NA
4/16/2008	NS-1@2'	<51.00	<50.0	<1.00	NA	NA	NA	NA	3,980
4/16/2008	NS-1@3'	<51.00	<50.0	<1.00	NA	NA	NA	NA	4,430
4/16/2008	SS-2@1'	<51.00	<50.0	<1.00	NA	NA	NA	NA	NA
4/16/2008	SS-2@2'	<51.00	<50.0	<1.00	NA	NA	NA	NA	2,590
4/16/2008	SS-2@3'	<51.00	<50.0	<1.00	NA	NA	NA	NA	1,640
4/16/2008	ES-3@1'	<51.00	<50.0	<1.00	NA	NA	NA	NA	NA
4/16/2008	ES-3@2'	<51.00	<50.0	<1.00	NA	NA	NA	NA	294
4/16/2008	ES-3@3'	<51.00	<50.0	<1.00	NA	NA	NA	NA	582
4/16/2008	WS-4@1'	<51.00	<50.0	<1.00	NA	NA	NA	NA	NA
4/16/2008	WS-4@2'	<51.00	<50.0	<1.00	NA	NA	NA	NA	4,320
4/16/2008	WS-4@3'	<51.00	<50.0	<1.00	NA	NA	NA	NA	3,260
4/16/2008	Central @1'	426.50	396.0	30.50	<0.0100	<0.0100	<0.0100	<0.0100	NA
4/16/2008	Central @2'	<51.01	<50.0	1.01	NA	NA	NA	NA	4,950
4/16/2008	Central @3'	58.43	56.0	2.43	NA	NA	NA	NA	4,740
7/24/2008	N @ 3"	<51.25	<50.0	1.25	NA	NA	NA	NA	559
7/24/2008	N @ 6"	<51.28	<50.0	1.28	<0.0100	<0.0100	<0.0100	<0.0100	739
7/24/2008	N @ 8"	<51.22	<50.0	1.22	NA	NA	NA	NA	844
7/24/2008	S @ 3"	<51.07	<50.0	1.07	<0.0100	<0.0100	<0.0100	<0.0100	3,160
7/24/2008	S @ 6"	<51.00	<50.0	<1.00	NA	NA	NA	NA	2,620
7/24/2008	S @ 8"	<51.00	<50.0	<1.00	NA	NA	NA	NA	2,410
7/24/2008	E @ 3"	<51.00	<50.0	<1.00	NA	NA	NA	NA	2,240
7/24/2008	E @ 6"	<51.00	<50.0	<1.00	NA	NA	NA	NA	968
7/24/2008	E @ 8"	<52.00	<50.0	<2.00	NA	NA	NA	NA	369
7/24/2008	W @ 3"	<51.09	<50.0	1.09	NA	NA	NA	NA	474
7/24/2008	W @ 6"	<51.13	<50.0	1.13	<0.0100	<0.0100	<0.0100	<0.0100	489
7/24/2008	W @ 8"	<51.01	<50.0	1.01	NA	NA	NA	NA	429
7/24/2008	Central @ 3'	<51.65	<50.0	1.65	NA	NA	NA	NA	1,550
7/24/2008	Central @ 6'	<51.78	<50.0	1.78	<0.0100	<0.0100	<0.0100	<0.0100	3,240
7/24/2008	Central @ 8'	948.32	947.0	1.32	NA	NA	NA	NA	3,180
7/24/2008	Back @ 3'	<52.47	<50.0	2.47	<0.0100	<0.0100	<0.0100	<0.0100	1,460
7/24/2008	Back @ 6'	<51.09	<50.0	1.09	NA	NA	NA	NA	889
7/24/2008	Back @ 8'	<51.10	<50.0	1.10	NA	NA	NA	NA	325

Note: Values in bold are outside regulatory limits

APPENDICES

Appendix A

Summary Report

Skip Baca
BTA Oil Producers
104 S. Pecos
Midland, TX, 79701

Report Date: July 31, 2008

Work Order: 8072448



Project Location: 20 miles SE Carlsbad, NM
Project Name: Pardue SWD Facility
Project Number: ENV 2008-025

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168281	N @ 3'	soil	2008-07-24	09:19	2008-07-24
168282	N @ 6'	soil	2008-07-24	09:28	2008-07-24
168283	N @ 8'	soil	2008-07-24	09:41	2008-07-24
168284	S @ 3'	soil	2008-07-24	08:35	2008-07-24
168285	S @ 6'	soil	2008-07-24	08:48	2008-07-24
168286	S @ 8'	soil	2008-07-24	08:55	2008-07-24
168287	E @ 3'	soil	2008-07-24	11:21	2008-07-24
168288	E @ 6'	soil	2008-07-24	11:29	2008-07-24
168289	E @ 8'	soil	2008-07-24	11:37	2008-07-24
168290	W @ 3'	soil	2008-07-24	13:17	2008-07-24
168291	W @ 6'	soil	2008-07-24	13:25	2008-07-24
168292	W @ 8'	soil	2008-07-24	13:34	2008-07-24

Sample - Field Code	BTEX				TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
168281 - N @ 3'					<50.0	1.25
168282 - N @ 6'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	1.28
168283 - N @ 8'					<50.0	1.22
168284 - S @ 3'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	1.07
168285 - S @ 6'					<50.0	<1.00
168286 - S @ 8'					<50.0	<1.00
168287 - E @ 3'					<50.0	<1.00
168288 - E @ 6'					<50.0	<1.00
168289 - E @ 8'					<50.0	<2.00
168290 - W @ 3'					<50.0	1.09
168291 - W @ 6'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	1.13
168292 - W @ 8'					<50.0	1.01

Sample: 168281 - N @ 3'

Param	Flag	Result	Units	RL
Chloride		559	mg/Kg	2.00

Sample: 168282 - N @ 6'

Param	Flag	Result	Units	RL
Chloride		739	mg/Kg	2.00

Sample: 168283 - N @ 8'

Param	Flag	Result	Units	RL
Chloride		844	mg/Kg	2.00

Sample: 168284 - S @ 3'

Param	Flag	Result	Units	RL
Chloride		3160	mg/Kg	2.00

Sample: 168285 - S @ 6'

Param	Flag	Result	Units	RL
Chloride		2620	mg/Kg	2.00

Sample: 168286 - S @ 8'

Param	Flag	Result	Units	RL
Chloride		2410	mg/Kg	2.00

Sample: 168287 - E @ 3'

Param	Flag	Result	Units	RL
Chloride		2240	mg/Kg	2.00

Sample: 168288 - E @ 6'

Param	Flag	Result	Units	RL
Chloride		968	mg/Kg	2.00

Report Date: July 31, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 3 of 3
20 miles SE Carlsbad, NM

Sample: 168289 - E @ 8'

Param	Flag	Result	Units	RL
Chloride		369	mg/Kg	2.00

Sample: 168290 - W @ 3'

Param	Flag	Result	Units	RL
Chloride		474	mg/Kg	2.00

Sample: 168291 - W @ 6'

Param	Flag	Result	Units	RL
Chloride		489	mg/Kg	2.00

Sample: 168292 - W @ 8'

Param	Flag	Result	Units	RL
Chloride		429	mg/Kg	2.00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Skip Baca
BTA Oil Producers
104 S. Pecos
Midland, TX, 79701

Report Date: August 8, 2008

Work Order: 8072448



Project Location: 20 miles SE Carlsbad, NM
Project Name: Pardue SWD Facility
Project Number: ENV 2008-025

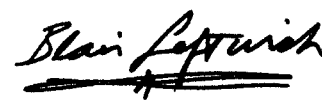
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168281	N @ 3'	soil	2008-07-24	09:19	2008-07-24
168282	N @ 6'	soil	2008-07-24	09:28	2008-07-24
168283	N @ 8'	soil	2008-07-24	09:41	2008-07-24
168284	S @ 3'	soil	2008-07-24	08:35	2008-07-24
168285	S @ 6'	soil	2008-07-24	08:48	2008-07-24
168286	S @ 8'	soil	2008-07-24	08:55	2008-07-24
168287	E @ 3'	soil	2008-07-24	11:21	2008-07-24
168288	E @ 6'	soil	2008-07-24	11:29	2008-07-24
168289	E @ 8'	soil	2008-07-24	11:37	2008-07-24
168290	W @ 3'	soil	2008-07-24	13:17	2008-07-24

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168291	W @ 6'	soil	2008-07-24	13:25	2008-07-24
168292	W @ 8'	soil	2008-07-24	13:34	2008-07-24

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 29 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Pardue SWD Facility were received by TraceAnalysis, Inc. on 2008-07-24 and assigned to work order 8072448. Samples for work order 8072448 were received intact at a temperature of 3.9 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
Chloride (Titration)	SM 4500-Cl B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8072448 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 4 of 29
20 miles SE Carlsbad, NM

Analytical Report

Sample: 168281 - N @ 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		559	mg/Kg	50	2.00

Sample: 168281 - N @ 3'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		43.1	mg/Kg	1	100	43	10 - 250.4

Sample: 168281 - N @ 3'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.25	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.07	mg/Kg	1	1.00	107	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	1.00	111	63.8 - 141

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 5 of 29
20 miles SE Carlsbad, NM

Sample: 168282 - N @ 6'

Laboratory: Midland
Analysis: BTEX
QC Batch: 50899
Prep Batch: 43655

Analytical Method: S 8021B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.845	mg/Kg	1	1.00	84	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.879	mg/Kg	1	1.00	88	48.2 - 155

Sample: 168282 - N @ 6'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		739	mg/Kg	50	2.00

Sample: 168282 - N @ 6'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		104	mg/Kg	1	100	104	10 - 250.4

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 6 of 29
20 miles SE Carlsbad, NM

Sample: 168282 - N @ 6'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.28	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.06	mg/Kg	1	1.00	106	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.09	mg/Kg	1	1.00	109	63.8 - 141

Sample: 168283 - N @ 8'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		844	mg/Kg	50	2.00

Sample: 168283 - N @ 8'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹	298	mg/Kg	1	100	298	10 - 250.4

¹High surrogate recovery. Sample non-detect, result bias high.

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 7 of 29
20 miles SE Carlsbad, NM

Sample: 168283 - N @ 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.22	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.03	mg/Kg	1	1.00	103	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	63.8 - 141

Sample: 168284 - S @ 3'

Laboratory: Midland
Analysis: BTEX
QC Batch: 50899
Prep Batch: 43655

Analytical Method: S 8021B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.790	mg/Kg	1	1.00	79	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.829	mg/Kg	1	1.00	83	48.2 - 155

Sample: 168284 - S @ 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3160	mg/Kg	50	2.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 8 of 29
20 miles SE Carlsbad, NM

Sample: 168284 - S @ 3'

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2008-07-25	Analyzed By:	LD
QC Batch:	50791	Sample Preparation:	2008-07-25	Prepared By:	LD
Prep Batch:	43548				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		119	mg/Kg	1	100	119	10 - 250.4

Sample: 168284 - S @ 3'

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2008-07-29	Analyzed By:	DC
QC Batch:	50869	Sample Preparation:	2008-07-29	Prepared By:	DC
Prep Batch:	43655				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.07	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.993	mg/Kg	1	1.00	99	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.03	mg/Kg	1	1.00	103	63.8 - 141

Sample: 168285 - S @ 6'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2008-07-31	Analyzed By:	AR
QC Batch:	50957	Sample Preparation:	2008-07-29	Prepared By:	AR
Prep Batch:	43720				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2620	mg/Kg	50	2.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 9 of 29
20 miles SE Carlsbad, NM

Sample: 168285 - S @ 6'

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2008-07-25	Analyzed By:	LD
QC Batch:	50791	Sample Preparation:	2008-07-25	Prepared By:	LD
Prep Batch:	43548				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		167	mg/Kg	1	100	167	10 - 250.4

Sample: 168285 - S @ 6'

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2008-07-29	Analyzed By:	DC
QC Batch:	50869	Sample Preparation:	2008-07-29	Prepared By:	DC
Prep Batch:	43655				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.03	mg/Kg	1	1.00	103	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.08	mg/Kg	1	1.00	108	63.8 - 141

Sample: 168286 - S @ 8'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2008-07-31	Analyzed By:	AR
QC Batch:	50957	Sample Preparation:	2008-07-29	Prepared By:	AR
Prep Batch:	43720				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2410	mg/Kg	50	2.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 10 of 29
20 miles SE Carlsbad, NM

Sample: 168286 - S @ 8'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		123	mg/Kg	1	100	123	10 - 250.4

Sample: 168286 - S @ 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.05	mg/Kg	1	1.00	105	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.08	mg/Kg	1	1.00	108	63.8 - 141

Sample: 168287 - E @ 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50957
Prep Batch: 43720

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2240	mg/Kg	50	2.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 11 of 29
20 miles SE Carlsbad, NM

Sample: 168287 - E @ 3'

Laboratory:	Midland		
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B
QC Batch:	50791	Date Analyzed:	2008-07-25
Prep Batch:	43548	Sample Preparation:	2008-07-25
		Prep Method:	N/A
		Analyzed By:	LD
		Prepared By:	LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		200	mg/Kg	1	100	200	10 - 250.4

Sample: 168287 - E @ 3'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	50869	Date Analyzed:	2008-07-29
Prep Batch:	43655	Sample Preparation:	2008-07-29
		Prep Method:	S 5035
		Analyzed By:	DC
		Prepared By:	DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.03	mg/Kg	1	1.00	103	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	63.8 - 141

Sample: 168288 - E @ 6'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	50957	Date Analyzed:	2008-07-31
Prep Batch:	43720	Sample Preparation:	2008-07-29
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		968	mg/Kg	50	2.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 12 of 29
20 miles SE Carlsbad, NM

Sample: 168288 - E @ 6'

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2008-07-25	Analyzed By:	LD
QC Batch:	50791	Sample Preparation:	2008-07-25	Prepared By:	LD
Prep Batch:	43548				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		113	mg/Kg	1	100	113	10 - 250.4

Sample: 168288 - E @ 6'

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2008-07-29	Analyzed By:	DC
QC Batch:	50869	Sample Preparation:	2008-07-29	Prepared By:	DC
Prep Batch:	43655				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.02	mg/Kg	1	1.00	102	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.06	mg/Kg	1	1.00	106	63.8 - 141

Sample: 168289 - E @ 8'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2008-07-31	Analyzed By:	AR
QC Batch:	50957	Sample Preparation:	2008-07-29	Prepared By:	AR
Prep Batch:	43720				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		369	mg/Kg	50	2.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 13 of 29
20 miles SE Carlsbad, NM

Sample: 168289 - E @ 8'

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2008-07-25	Analyzed By:	LD
QC Batch:	50791	Sample Preparation:	2008-07-25	Prepared By:	LD
Prep Batch:	43548				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		67.1	mg/Kg	1	100	67	10 - 250.4

Sample: 168289 - E @ 8'

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2008-07-29	Analyzed By:	DC
QC Batch:	50869	Sample Preparation:	2008-07-29	Prepared By:	DC
Prep Batch:	43655				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	2	2.00	100	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.07	mg/Kg	2	2.00	104	63.8 - 141

Sample: 168290 - W @ 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2008-07-31	Analyzed By:	AR
QC Batch:	50957	Sample Preparation:	2008-07-29	Prepared By:	AR
Prep Batch:	43720				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		474	mg/Kg	50	2.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 14 of 29
20 miles SE Carlsbad, NM

Sample: 168290 - W @ 3'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		160	mg/Kg	1	100	160	10 - 250.4

Sample: 168290 - W @ 3'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50944
Prep Batch: 43698

Analytical Method: S 8015B
Date Analyzed: 2008-07-30
Sample Preparation: 2008-07-30

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.09	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.05	mg/Kg	1	1.00	105	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	63.8 - 141

Sample: 168291 - W @ 6'

Laboratory: Midland
Analysis: BTEX
QC Batch: 50943
Prep Batch: 43698

Analytical Method: S 8021B
Date Analyzed: 2008-07-30
Sample Preparation: 2008-07-30

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 15 of 29
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.870	mg/Kg	1	1.00	87	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.899	mg/Kg	1	1.00	90	48.2 - 155

Sample: 168291 - W @ 6'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 50957 Date Analyzed: 2008-07-31 Analyzed By: AR
Prep Batch: 43720 Sample Preparation: 2008-07-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		489	mg/Kg	50	2.00

Sample: 168291 - W @ 6'

Laboratory: Midland
Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 50791 Date Analyzed: 2008-07-25 Analyzed By: LD
Prep Batch: 43548 Sample Preparation: 2008-07-25 Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		155	mg/Kg	1	100	155	10 - 250.4

Sample: 168291 - W @ 6'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 50944 Date Analyzed: 2008-07-30 Analyzed By: DC
Prep Batch: 43698 Sample Preparation: 2008-07-30 Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.13	mg/Kg	1	1.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 16 of 29
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.02	mg/Kg	1	1.00	102	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.00	mg/Kg	1	1.00	100	63.8 - 141

Sample: 168292 - W @ 8'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 50957 Date Analyzed: 2008-07-31 Analyzed By: AR
Prep Batch: 43720 Sample Preparation: 2008-07-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		429	mg/Kg	50	2.00

Sample: 168292 - W @ 8'

Laboratory: Midland
Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 50791 Date Analyzed: 2008-07-25 Analyzed By: LD
Prep Batch: 43548 Sample Preparation: 2008-07-25 Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		155	mg/Kg	1	100	155	10 - 250.4

Sample: 168292 - W @ 8'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 50944 Date Analyzed: 2008-07-30 Analyzed By: DC
Prep Batch: 43698 Sample Preparation: 2008-07-30 Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.01	mg/Kg	1	1.00

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 17 of 29
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.991	mg/Kg	1	1.00	99	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.950	mg/Kg	1	1.00	95	63.8 - 141

Method Blank (1) QC Batch: 50791

QC Batch: 50791 Date Analyzed: 2008-07-25 Analyzed By: LD
Prep Batch: 43548 QC Preparation: 2008-07-25 Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<15.8	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		68.4	mg/Kg	1	100	68	30.9 - 146.4

Method Blank (1) QC Batch: 50869

QC Batch: 50869 Date Analyzed: 2008-07-29 Analyzed By: DC
Prep Batch: 43655 QC Preparation: 2008-07-29 Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
GRO		0.915	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.07	mg/Kg	1	1.00	107	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		1.05	mg/Kg	1	1.00	105	16.8 - 138.1

Method Blank (1) QC Batch: 50899

QC Batch: 50899 Date Analyzed: 2008-07-29 Analyzed By: DC
Prep Batch: 43655 QC Preparation: 2008-07-29 Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00580	mg/Kg	0.01
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01
Xylene		<0.0136	mg/Kg	0.01

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 18 of 29
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.876	mg/Kg	1	1.00	88	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.883	mg/Kg	1	1.00	88	37.7 - 128.9

Method Blank (1) QC Batch: 50943

QC Batch: 50943
Prep Batch: 43698

Date Analyzed: 2008-07-30
QC Preparation: 2008-07-30

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00580	mg/Kg	0.01
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01
Xylene		<0.0136	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.845	mg/Kg	1	1.00	84	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.854	mg/Kg	1	1.00	85	37.7 - 128.9

Method Blank (1) QC Batch: 50944

QC Batch: 50944
Prep Batch: 43698

Date Analyzed: 2008-07-30
QC Preparation: 2008-07-30

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
GRO		0.971	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.967	mg/Kg	1	1.00	97	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		0.894	mg/Kg	1	1.00	89	16.8 - 138.1

Method Blank (1) QC Batch: 50956

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 19 of 29
20 miles SE Carlsbad, NM

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.500	mg/Kg	2

Method Blank (1) QC Batch: 50957

QC Batch: 50957 Date Analyzed: 2008-07-31 Analyzed By: AR
Prep Batch: 43720 QC Preparation: 2008-07-29 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.500	mg/Kg	2

Laboratory Control Spike (LCS-1)

QC Batch: 50791 Date Analyzed: 2008-07-25 Analyzed By: LD
Prep Batch: 43548 QC Preparation: 2008-07-25 Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	145	mg/Kg	1	250	<15.8	58	27.8 - 152.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	147	mg/Kg	1	250	<15.8	59	27.8 - 152.1	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	125	123	mg/Kg	1	100	125	123	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 50869 Date Analyzed: 2008-07-29 Analyzed By: DC
Prep Batch: 43655 QC Preparation: 2008-07-29 Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.57	mg/Kg	1	10.0	0.915	86	57.5 - 106.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 20 of 29
20 miles SE Carlsbad, NM

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	9.02	mg/Kg	1	10.0	0.915	81	57.5 - 106.4	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.16	1.11	mg/Kg	1	1.00	116	111	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	1.16	1.13	mg/Kg	1	1.00	116	113	53.3 - 123.6

Laboratory Control Spike (LCS-1)

QC Batch: 50899
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.955	mg/Kg	1	1.00	<0.00580	96	73.3 - 116.6
Toluene	0.981	mg/Kg	1	1.00	<0.00470	98	78.6 - 115.1
Ethylbenzene	0.980	mg/Kg	1	1.00	<0.00530	98	77.4 - 114.9
Xylene	2.93	mg/Kg	1	3.00	<0.0136	98	78.2 - 114.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.00	mg/Kg	1	1.00	<0.00580	100	73.3 - 116.6	5	20
Toluene	1.03	mg/Kg	1	1.00	<0.00470	103	78.6 - 115.1	5	20
Ethylbenzene	1.03	mg/Kg	1	1.00	<0.00530	103	77.4 - 114.9	5	20
Xylene	3.08	mg/Kg	1	3.00	<0.0136	103	78.2 - 114.7	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.847	0.886	mg/Kg	1	1.00	85	89	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.869	0.902	mg/Kg	1	1.00	87	90	47.2 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 50943
Prep Batch: 43698

Date Analyzed: 2008-07-30
QC Preparation: 2008-07-30

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.970	mg/Kg	1	1.00	<0.00580	97	73.3 - 116.6

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Toluene	0.985	mg/Kg	1	1.00	<0.00470	98	78.6 - 115.1
Ethylbenzene	0.979	mg/Kg	1	1.00	<0.00530	98	77.4 - 114.9
Xylene	2.94	mg/Kg	1	3.00	<0.0136	98	78.2 - 114.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.04	mg/Kg	1	1.00	<0.00580	104	73.3 - 116.6	7	20
Toluene	1.05	mg/Kg	1	1.00	<0.00470	105	78.6 - 115.1	6	20
Ethylbenzene	1.05	mg/Kg	1	1.00	<0.00530	105	77.4 - 114.9	7	20
Xylene	3.15	mg/Kg	1	3.00	<0.0136	105	78.2 - 114.7	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.843	0.886	mg/Kg	1	1.00	84	89	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.881	0.914	mg/Kg	1	1.00	88	91	47.2 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 50944
Prep Batch: 43698

Date Analyzed: 2008-07-30
QC Preparation: 2008-07-30

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	10.8	mg/Kg	1	10.0	0.971	98	57.5 - 106.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	10.9	mg/Kg	1	10.0	0.971	99	57.5 - 106.4	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.07	1.08	mg/Kg	1	1.00	107	108	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	1.06	1.04	mg/Kg	1	1.00	106	104	53.3 - 123.6

Laboratory Control Spike (LCS-1)

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 22 of 29
20 miles SE Carlsbad, NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<0.500	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<0.500	101	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 50957
Prep Batch: 43720

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.0	mg/Kg	1	100	<0.500	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<0.500	102	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 168275

QC Batch: 50791
Prep Batch: 43548

Date Analyzed: 2008-07-25
QC Preparation: 2008-07-25

Analyzed By: LD
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	187	mg/Kg	1	250	<15.8	75	18 - 179.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	193	mg/Kg	1	250	<15.8	77	18 - 179.5	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 23 of 29
20 miles SE Carlsbad, NM

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane ^{2 3}	174	174	mg/Kg	1	100	174	174	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 168289

QC Batch: 50869 Date Analyzed: 2008-07-29 Analyzed By: DC
Prep Batch: 43655 QC Preparation: 2008-07-29 Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	19.6	mg/Kg	2	20.0	<1.48	98	10 - 139.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.8	mg/Kg	2	20.0	<1.48	84	10 - 139.3	15	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.10	2.08	mg/Kg	2	2	105	104	21.3 - 119
4-Bromofluorobenzene (4-BFB)	2.15	2.17	mg/Kg	2	2	108	108	52.5 - 154

Matrix Spike (MS-1) Spiked Sample: 168158

QC Batch: 50899 Date Analyzed: 2008-07-29 Analyzed By: DC
Prep Batch: 43655 QC Preparation: 2008-07-29 Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	4.53	mg/Kg	5	5.00	<0.0290	91	62.2 - 134.3
Toluene	4.70	mg/Kg	5	5.00	0.0451	93	62.6 - 145.4
Ethylbenzene	4.78	mg/Kg	5	5.00	0.0593	94	64.6 - 146.4
Xylene	14.4	mg/Kg	5	15.0	0.2089	95	64.3 - 148.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

²High surrogate recovery due to peak interference.

³High surrogate recovery due to peak interference.

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 24 of 29
20 miles SE Carlsbad, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	4.31	mg/Kg	5	5.00	<0.0290	86	62.2 - 134.3	5	20
Toluene	4.49	mg/Kg	5	5.00	0.0451	89	62.6 - 145.4	5	20
Ethylbenzene	4.58	mg/Kg	5	5.00	0.0593	90	64.6 - 146.4	4	20
Xylene	13.9	mg/Kg	5	15.0	0.2089	91	64.3 - 148.8	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.46	4.48	mg/Kg	5	5	89	90	38.8 - 127.5
4-Bromofluorobenzene (4-BFB)	4.57	4.59	mg/Kg	5	5	91	92	49.3 - 142.4

Matrix Spike (MS-1) Spiked Sample: 168755

QC Batch: 50943
Prep Batch: 43698

Date Analyzed: 2008-07-30
QC Preparation: 2008-07-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	190	mg/Kg	50	50.0	152.383	75	62.2 - 134.3
Toluene	4 540	mg/Kg	50	50.0	509.439	61	62.6 - 145.4
Ethylbenzene	5 273	mg/Kg	50	50.0	245.408	55	64.6 - 146.4
Xylene	584	mg/Kg	50	150	464.953	79	64.3 - 148.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	196	mg/Kg	50	50.0	152.383	87	62.2 - 134.3	3	20
Toluene	542	mg/Kg	50	50.0	509.439	65	62.6 - 145.4	0	20
Ethylbenzene	283	mg/Kg	50	50.0	245.408	75	64.6 - 146.4	4	20
Xylene	583	mg/Kg	50	150	464.953	79	64.3 - 148.8	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	42.0	43.8	mg/Kg	50	50	84	88	38.8 - 127.5
4-Bromofluorobenzene (4-BFB)	6 7 80.7	83.8	mg/Kg	50	50	161	168	49.3 - 142.4

⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

⁵Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

⁶High surrogate recovery due to peak interference.

⁷High surrogate recovery due to peak interference.

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 25 of 29
20 miles SE Carlsbad, NM

Matrix Spike (MS-1) Spiked Sample: 168290

QC Batch: 50944
Prep Batch: 43698

Date Analyzed: 2008-07-30
QC Preparation: 2008-07-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	10.2	mg/Kg	1	10.0	1.09	91	10 - 139.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	11.8	mg/Kg	1	10.0	1.09	107	10 - 139.3	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.980	0.944	mg/Kg	1	1	98	94	21.3 - 119
4-Bromofluorobenzene (4-BFB)	1.00	0.901	mg/Kg	1	1	100	90	52.5 - 154

Matrix Spike (MS-1) Spiked Sample: 168284

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	8120	mg/Kg	50	5000	3160	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	8180	mg/Kg	50	5000	3160	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 168292

QC Batch: 50957
Prep Batch: 43720

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	5380	mg/Kg	50	5000	429	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 26 of 29
20 miles SE Carlsbad, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	5450	mg/Kg	50	5000	429	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (CCV-1)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	231	92	85 - 115	2008-07-25

Standard (CCV-2)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	227	91	85 - 115	2008-07-25

Standard (CCV-3)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	230	92	85 - 115	2008-07-25

Standard (ICV-1)

QC Batch: 50869

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.03	103	85 - 115	2008-07-29

Standard (CCV-1)

QC Batch: 50869

Date Analyzed: 2008-07-29

Analyzed By: DC

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 27 of 29
20 miles SE Carlsbad, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.13	113	85 - 115	2008-07-29

Standard (ICV-1)

QC Batch: 50899

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0995	100	85 - 115	2008-07-29
Toluene		mg/Kg	0.100	0.102	102	85 - 115	2008-07-29
Ethylbenzene		mg/Kg	0.100	0.102	102	85 - 115	2008-07-29
Xylene		mg/Kg	0.300	0.303	101	85 - 115	2008-07-29

Standard (CCV-1)

QC Batch: 50899

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	⁸	mg/Kg	0.100	0.0832	83	85 - 115	2008-07-29
Toluene		mg/Kg	0.100	0.0899	90	85 - 115	2008-07-29
Ethylbenzene		mg/Kg	0.100	0.0914	91	85 - 115	2008-07-29
Xylene		mg/Kg	0.300	0.277	92	85 - 115	2008-07-29

Standard (ICV-1)

QC Batch: 50943

Date Analyzed: 2008-07-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0956	96	85 - 115	2008-07-30
Toluene		mg/Kg	0.100	0.0977	98	85 - 115	2008-07-30
Ethylbenzene		mg/Kg	0.100	0.0983	98	85 - 115	2008-07-30
Xylene		mg/Kg	0.300	0.296	99	85 - 115	2008-07-30

⁸Benzene outside of control limits on CCV. CCV component average is .09025 which is within acceptable range. This is acceptable by Method 8000.

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 28 of 29
20 miles SE Carlsbad, NM

Standard (CCV-1)

QC Batch: 50943

Date Analyzed: 2008-07-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0946	95	85 - 115	2008-07-30
Toluene		mg/Kg	0.100	0.100	100	85 - 115	2008-07-30
Ethylbenzene		mg/Kg	0.100	0.0969	97	85 - 115	2008-07-30
Xylene		mg/Kg	0.300	0.291	97	85 - 115	2008-07-30

Standard (ICV-1)

QC Batch: 50944

Date Analyzed: 2008-07-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.12	112	85 - 115	2008-07-30

Standard (CCV-1)

QC Batch: 50944

Date Analyzed: 2008-07-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.11	111	85 - 115	2008-07-30

Standard (ICV-1)

QC Batch: 50956

Date Analyzed: 2008-07-31

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2008-07-31

Standard (CCV-1)

QC Batch: 50956

Date Analyzed: 2008-07-31

Analyzed By: AR

Report Date: August 8, 2008
ENV 2008-025

Work Order: 8072448
Pardue SWD Facility

Page Number: 29 of 29
20 miles SE Carlsbad, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2008-07-31

Standard (ICV-1)

QC Batch: 50957

Date Analyzed: 2008-07-31

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2008-07-31

Standard (CCV-1)

QC Batch: 50957

Date Analyzed: 2008-07-31

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2008-07-31

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9	Lubbock, Texas 79424	Tel (806) 784-1296	Fax (806) 794-1288	1 (800) 378-1296
5002 Basin Street, Suite A1	Midland, Texas 79703	Tel (432) 689-6301	Fax (432) 689-6313	
200 East Sunset Rd., Suite E	El Paso, Texas 79922	Tel (915) 565-3443	Fax (915) 565-4944	1 (888) 568-3443
8808 Camp Bowie Blvd. West, Suite 180	Ft. Worth, Texas 76116	Tel (817) 201-5260	Fax (817) 560-4336	

ANALYSIS REQUEST
(Circle or Specify Method No.)

Company Name:	RTA Oil Producers, LLC
Address:	104 S. Pecos St. (Street, City, Zip)
Contact Person:	Skip Bata
Invoice to:	(if different from above)
Project #:	ENV. 2008-025
Project Location (including state):	20 miles SE of Coalbourn, NM
Project Name:	Padus SWD Facility
Phone #:	(432) 553-5352
Fax #:	(432) 683-0325
E-mail:	sbata@btaoil.com
Sampler Signature:	Sampled
DATE:	10/1/08
PRESERVATIVE:	None
SAMPLES:	1

LAB #		LAB USE (ONLY)	
FIELD CODE			
# CONTAINERS			
Volume / Amount			
WATER	MATRIX		
SOIL			
AIR			
SLUDGE			
HCl	METHOD		
HNO ₃			
H ₂ SO ₄			
NaOH			
ICE			
NONE			
DATE	SAMPLING		
TIME			

Time	Location	Observer	Notes
11:37	11:37	11:37	11:37
11:29	11:29	11:29	11:29
11:21	11:21	11:21	11:21
8:55	8:55	8:55	8:55
8:48	8:48	8:48	8:48
8:35	8:35	8:35	8:35
9:41	9:41	9:41	9:41
9:28	9:28	9:28	9:28
7/2/4	7/2/4	7/2/4	7/2/4

Relinquished by:	Company:	Date:	Time:	Relinquished by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Relinquished by:	Company:	Date:	Time:

REMARKS: BTEX on without TPH in
ord. set

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-12965002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-34438808 Camp Bowie Blvd. West, Suite 180
Ft. Worth, Texas 76116
Tel (817) 201-5260
Fax (817) 560-4336

Company Name: **BTA Oil Producers, LLC** Phone #: **(432) 553-5352**
 Address: **104 S. Pecos St** Fax #: **(432) 683-0325**
 Contact Person: **Skip BACA** E-mail: **sbaca@btaoil.com**

Invoice to:
(If different from above)

Project #: **ENV. 2008-025** Project Name: **Panhandle SWA Facility**

Project Location (including state): **20 miles SE of Carlsbad, NM** Sampler Signature: **Skip BACA**

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING		MTBE 8021B / 602	BTEX 8021B / 602	TPH 418.1 / TX1005	TPH 8015 GRO / DE	PAH 8270C / 625	Total Metals Ag As Ba Cd	TCLP Metals Ag As	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B /	GC/MS Semi. Vol. 8	PCB's 8082 / 608	Pesticides 8081A / 6	BOD, TSS, pH	Moisture Content	Chlorides	Turn Around Time if	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE																				
68290	W@3'	1	4oz	X						X		7/24	1:17				X														X		
291	W@6'	{	{	{						{		{	1:25	X		{															{		
292	W@8'	{	{	{						{		{	1:34			{															{		

Relinquished by: **Skip BACA** Company: **BTA** Date: **7/24** Time: **6:47** Received by: **Trace** Company: **Trace** Date: **7/24/08** Time: **18:47** Temp°C: **39C**
 Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Company: _____ Date: _____ Time: _____ Temp°C: _____

Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Company: _____ Date: _____ Time: _____ Temp°C: _____

LAB USE ONLYInitial: **Y/N**Headspace: **Y/N/NA**

3.9

Log-in-Review

REMARKS:**BTEX on highest TPH****All tests - Midland**

- ☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

Report Date: July 31, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 1 of 1
20 miles SE Carlsbad, NM

Summary Report

Skip Baca
BTA Oil Producers
104 S. Pecos
Midland, TX, 79701

Report Date: July 31, 2008

Work Order: 8072447



Project Location: 20 miles SE Carlsbad, NM
Project Name: Pardue SWD Facility
Project Number: ENV 2008-025

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168278	Center @ 3'	soil	2008-07-24	12:40	2008-07-24
168279	Center @ 6'	soil	2008-07-24	12:48	2008-07-24
168280	Center @ 8'	soil	2008-07-24	12:57	2008-07-24

Sample - Field Code	BTEX				TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
168278 - Center @ 3'					<50.0	1.65
168279 - Center @ 6'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	1.78
168280 - Center @ 8'					947	1.32

Sample: 168278 - Center @ 3'

Param	Flag	Result	Units	RL
Chloride		1550	mg/Kg	2.00

Sample: 168279 - Center @ 6'

Param	Flag	Result	Units	RL
Chloride		3240	mg/Kg	2.00

Sample: 168280 - Center @ 8'

Param	Flag	Result	Units	RL
Chloride		3180	mg/Kg	2.00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

NELAP Certifications

Lubbock T104704219-08-TX El Paso T104704221-08-TX Midland T104704392-08-TX

Analytical and Quality Control Report

Skip Baca
BTA Oil Producers
104 S. Pecos
Midland, TX, 79701

Report Date: August 1, 2008

Work Order: 8072447



Project Location: 20 miles SE Carlsbad, NM
Project Name: Pardue SWD Facility
Project Number: ENV 2008-025

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168278	Center @ 3'	soil	2008-07-24	12:40	2008-07-24
168279	Center @ 6'	soil	2008-07-24	12:48	2008-07-24
168280	Center @ 8'	soil	2008-07-24	12:57	2008-07-24

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 14 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Pardue SWD Facility were received by TraceAnalysis, Inc. on 2008-07-24 and assigned to work order 8072447. Samples for work order 8072447 were received intact at a temperature of 3.9 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
Chloride (Titration)	SM 4500-Cl B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8072447 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 4 of 14
20 miles SE Carlsbad, NM

Analytical Report

Sample: 168278 - Center @ 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2008-07-31	Analyzed By:	AR
QC Batch:	50956	Sample Preparation:	2008-07-29	Prepared By:	AR
Prep Batch:	43719				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1550	mg/Kg	50	2.00

Sample: 168278 - Center @ 3'

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2008-07-25	Analyzed By:	LD
QC Batch:	50791	Sample Preparation:	2008-07-25	Prepared By:	LD
Prep Batch:	43548				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		102	mg/Kg	1	100	102	10 - 250.4

Sample: 168278 - Center @ 3'

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2008-07-29	Analyzed By:	DC
QC Batch:	50869	Sample Preparation:	2008-07-29	Prepared By:	DC
Prep Batch:	43655				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.65	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.09	mg/Kg	1	1.00	109	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	1.00	111	63.8 - 141

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 5 of 14
20 miles SE Carlsbad, NM

Sample: 168279 - Center @ 6'

Laboratory: Midland

Analysis: BTEX

QC Batch: 50899

Prep Batch: 43655

Analytical Method: S 8021B

Date Analyzed: 2008-07-29

Sample Preparation: 2008-07-29

Prep Method: S 5035

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.840	mg/Kg	1	1.00	84	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.865	mg/Kg	1	1.00	86	48.2 - 155

Sample: 168279 - Center @ 6'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 50956

Prep Batch: 43719

Analytical Method: SM 4500-Cl B

Date Analyzed: 2008-07-31

Sample Preparation: 2008-07-29

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3240	mg/Kg	50	2.00

Sample: 168279 - Center @ 6'

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 50791

Prep Batch: 43548

Analytical Method: Mod. 8015B

Date Analyzed: 2008-07-25

Sample Preparation: 2008-07-25

Prep Method: N/A

Analyzed By: LD

Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		130	mg/Kg	1	100	130	10 - 250.4

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 6 of 14
20 miles SE Carlsbad, NM

Sample: 168279 - Center @ 6'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.78	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.05	mg/Kg	1	1.00	105	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	63.8 - 141

Sample: 168280 - Center @ 8'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3180	mg/Kg	50	2.00

Sample: 168280 - Center @ 8'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		947	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		239	mg/Kg	1	100	239	10 - 250.4

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 7 of 14
20 miles SE Carlsbad, NM

Sample: 168280 - Center @ 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.32	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.09	mg/Kg	1	1.00	109	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.12	mg/Kg	1	1.00	112	63.8 - 141

Method Blank (1) QC Batch: 50791

QC Batch: 50791
Prep Batch: 43548

Date Analyzed: 2008-07-25
QC Preparation: 2008-07-25

Analyzed By: LD
Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<15.8	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		68.4	mg/Kg	1	100	68	30.9 - 146.4

Method Blank (1) QC Batch: 50869

QC Batch: 50869
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
GRO		0.915	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.07	mg/Kg	1	1.00	107	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		1.05	mg/Kg	1	1.00	105	16.8 - 138.1

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 8 of 14
20 miles SE Carlsbad, NM

Method Blank (1) QC Batch: 50899

QC Batch: 50899
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00580	mg/Kg	0.01
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01
Xylene		<0.0136	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.876	mg/Kg	1	1.00	88	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.883	mg/Kg	1	1.00	88	37.7 - 128.9

Method Blank (1) QC Batch: 50956

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.500	mg/Kg	2

Laboratory Control Spike (LCS-1)

QC Batch: 50791
Prep Batch: 43548

Date Analyzed: 2008-07-25
QC Preparation: 2008-07-25

Analyzed By: LD
Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	145	mg/Kg	1	250	<15.8	58	27.8 - 152.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	147	mg/Kg	1	250	<15.8	59	27.8 - 152.1	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	125	123	mg/Kg	1	100	125	123	38 - 130.4

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 9 of 14
20 miles SE Carlsbad, NM

Laboratory Control Spike (LCS-1)

QC Batch: 50869
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.57	mg/Kg	1	10.0	0.915	86	57.5 - 106.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	9.02	mg/Kg	1	10.0	0.915	81	57.5 - 106.4	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.16	1.11	mg/Kg	1	1.00	116	111	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	1.16	1.13	mg/Kg	1	1.00	116	113	53.3 - 123.6

Laboratory Control Spike (LCS-1)

QC Batch: 50899
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.955	mg/Kg	1	1.00	<0.00580	96	73.3 - 116.6
Toluene	0.981	mg/Kg	1	1.00	<0.00470	98	78.6 - 115.1
Ethylbenzene	0.980	mg/Kg	1	1.00	<0.00530	98	77.4 - 114.9
Xylene	2.93	mg/Kg	1	3.00	<0.0136	98	78.2 - 114.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.00	mg/Kg	1	1.00	<0.00580	100	73.3 - 116.6	5	20
Toluene	1.03	mg/Kg	1	1.00	<0.00470	103	78.6 - 115.1	5	20
Ethylbenzene	1.03	mg/Kg	1	1.00	<0.00530	103	77.4 - 114.9	5	20
Xylene	3.08	mg/Kg	1	3.00	<0.0136	103	78.2 - 114.7	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.847	0.886	mg/Kg	1	1.00	85	89	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.869	0.902	mg/Kg	1	1.00	87	90	47.2 - 130.4

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 10 of 14
20 miles SE Carlsbad, NM

Laboratory Control Spike (LCS-1)

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<0.500	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<0.500	101	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 168275

QC Batch: 50791
Prep Batch: 43548

Date Analyzed: 2008-07-25
QC Preparation: 2008-07-25

Analyzed By: LD
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	187	mg/Kg	1	250	<15.8	75	18 - 179.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	193	mg/Kg	1	250	<15.8	77	18 - 179.5	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane ^{1 2}	174	174	mg/Kg	1	100	174	174	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 168289

QC Batch: 50869
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

continued ...

¹High surrogate recovery due to peak interference.

²High surrogate recovery due to peak interference.

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 11 of 14
20 miles SE Carlsbad, NM

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	19.6	mg/Kg	2	20.0	<1.48	98	10 - 139.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.8	mg/Kg	2	20.0	<1.48	84	10 - 139.3	15	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.10	2.08	mg/Kg	2	2	105	104	21.3 - 119
4-Bromofluorobenzene (4-BFB)	2.15	2.17	mg/Kg	2	2	108	108	52.5 - 154

Matrix Spike (MS-1) Spiked Sample: 168158

QC Batch: 50899
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	4.53	mg/Kg	5	5.00	<0.0290	91	62.2 - 134.3
Toluene	4.70	mg/Kg	5	5.00	0.0451	93	62.6 - 145.4
Ethylbenzene	4.78	mg/Kg	5	5.00	0.0593	94	64.6 - 146.4
Xylene	14.4	mg/Kg	5	15.0	0.2089	95	64.3 - 148.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	4.31	mg/Kg	5	5.00	<0.0290	86	62.2 - 134.3	5	20
Toluene	4.49	mg/Kg	5	5.00	0.0451	89	62.6 - 145.4	5	20
Ethylbenzene	4.58	mg/Kg	5	5.00	0.0593	90	64.6 - 146.4	4	20
Xylene	13.9	mg/Kg	5	15.0	0.2089	91	64.3 - 148.8	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.46	4.48	mg/Kg	5	5	89	90	38.8 - 127.5
4-Bromofluorobenzene (4-BFB)	4.57	4.59	mg/Kg	5	5	91	92	49.3 - 142.4

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 12 of 14
20 miles SE Carlsbad, NM

Matrix Spike (MS-1) Spiked Sample: 168284

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	8120	mg/Kg	50	5000	3160	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	8180	mg/Kg	50	5000	3160	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	228	91	85 - 115	2008-07-25

Standard (CCV-1)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	231	92	85 - 115	2008-07-25

Standard (CCV-2)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	227	91	85 - 115	2008-07-25

Standard (ICV-1)

QC Batch: 50869

Date Analyzed: 2008-07-29

Analyzed By: DC

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 13 of 14
20 miles SE Carlsbad, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.03	103	85 - 115	2008-07-29

Standard (CCV-1)

QC Batch: 50869

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.13	113	85 - 115	2008-07-29

Standard (ICV-1)

QC Batch: 50899

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0995	100	85 - 115	2008-07-29
Toluene		mg/Kg	0.100	0.102	102	85 - 115	2008-07-29
Ethylbenzene		mg/Kg	0.100	0.102	102	85 - 115	2008-07-29
Xylene		mg/Kg	0.300	0.303	101	85 - 115	2008-07-29

Standard (CCV-1)

QC Batch: 50899

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	³	mg/Kg	0.100	0.0832	83	85 - 115	2008-07-29
Toluene		mg/Kg	0.100	0.0899	90	85 - 115	2008-07-29
Ethylbenzene		mg/Kg	0.100	0.0914	91	85 - 115	2008-07-29
Xylene		mg/Kg	0.300	0.277	92	85 - 115	2008-07-29

Standard (ICV-1)

QC Batch: 50956

Date Analyzed: 2008-07-31

Analyzed By: AR

³Benzene outside of control limits on CCV. CCV component average is .09025 which is within acceptable range. This is acceptable by Method 8000.

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072447
Pardue SWD Facility

Page Number: 14 of 14
20 miles SE Carlsbad, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2008-07-31

Standard (CCV-1)

QC Batch: 50956

Date Analyzed: 2008-07-31

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2008-07-31

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

**5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313**

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

8808 Camp Bowie Blvd. West, Suite 180
Ft. Worth, Texas 76116
Tel (817) 201-5260
Fax (817) 560-4336

Company Name:	BTA Oil Producers, LLC	Phone #:	(432) 553-5352
Address:	(Street, City, Zip) 104 S. Peeros St.	Fax #:	(432) 683-0325
Contact Person:	Skip Ben	E-mail:	sbena@btaoil.com

Invoice to: _____
(If different from above)

Project #:		ENV. 2008-025		Project Name:		Parade SWO Facility	
Project Location (including state):		20 miles SE of Carlisle, NM		Sampler Signature:		Shirley Brown	
				MATRIX		PRESERVATIVE	

ANALYSIS REQUEST
(Circle or Specify Method No.)

[illegible]

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
Shrip Bana BTA		7/24	6:34	Andrew MACE		7/24/08	18:34	3.9
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:

LAB USE ONLY



THE NEW YORK PUBLIC LIBRARY

29

REMARKS:

REMARKS: BTEX on desludged TPH
All tests Mid level

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Cany in

ORIGINAL COPY

Summary Report

Skip Baca
BTA Oil Producers
104 S. Pecos
Midland, TX, 79701

Report Date: July 31, 2008

Work Order: 8072446



Project Location: 20 miles SE Carlsbad, NM
Project Name: Pardue SWD Facility
Project Number: ENV 2008-025

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168275	Back @ 3'	soil	2008-07-24	10:33	2008-07-24
168276	Back @ 6'	soil	2008-07-24	10:50	2008-07-24
168277	Back @ 8'	soil	2008-07-24	11:05	2008-07-24

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
168275 - Back @ 3'	<50.0	2.47
168276 - Back @ 6'	<50.0	1.09
168277 - Back @ 8'	<50.0	1.10

Sample: 168275 - Back @ 3'

Param	Flag	Result	Units	RL
Chloride		1460	mg/Kg	2.00

Sample: 168276 - Back @ 6'

Param	Flag	Result	Units	RL
Chloride		889	mg/Kg	2.00

Sample: 168277 - Back @ 8'

Param	Flag	Result	Units	RL
Chloride		325	mg/Kg	2.00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

NELAP Certifications

Lubbock T104704219-08-TX El Paso T104704221-08-TX Midland T104704392-08-TX

Analytical and Quality Control Report

Skip Baca
BTA Oil Producers
104 S. Pecos
Midland, TX, 79701

Report Date: August 1, 2008

Work Order: 8072446



Project Location: 20 miles SE Carlsbad, NM
Project Name: Pardue SWD Facility
Project Number: ENV 2008-025

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168275	Back @ 3'	soil	2008-07-24	10:33	2008-07-24
168276	Back @ 6'	soil	2008-07-24	10:50	2008-07-24
168277	Back @ 8'	soil	2008-07-24	11:05	2008-07-24

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 14 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Pardue SWD Facility were received by TraceAnalysis, Inc. on 2008-07-24 and assigned to work order 8072446. Samples for work order 8072446 were received intact at a temperature of 3.9 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
Chloride (Titration)	SM 4500-Cl B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8072446 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 4 of 14
20 miles SE Carlsbad, NM

Analytical Report

Sample: 168275 - Back @ 3'

Laboratory: Midland
Analysis: BTEX
QC Batch: 50899
Prep Batch: 43655

Analytical Method: S 8021B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.863	mg/Kg	1	1.00	86	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.900	mg/Kg	1	1.00	90	48.2 - 155

Sample: 168275 - Back @ 3'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1460	mg/Kg	50	2.00

Sample: 168275 - Back @ 3'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 5 of 14
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		156	mg/Kg	1	100	156	10 - 250.4

Sample: 168275 - Back @ 3'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	2.47	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.08	mg/Kg	1	1.00	108	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	1.00	111	63.8 - 141

Sample: 168276 - Back @ 6'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		889	mg/Kg	50	2.00

Sample: 168276 - Back @ 6'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 6 of 14
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		141	mg/Kg	1	100	141	10 - 250.4

Sample: 168276 - Back @ 6'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.09	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.07	mg/Kg	1	1.00	107	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	1.00	111	63.8 - 141

Sample: 168277 - Back @ 8'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 50956
Prep Batch: 43719

Analytical Method: SM 4500-Cl B
Date Analyzed: 2008-07-31
Sample Preparation: 2008-07-29

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		325	mg/Kg	50	2.00

Sample: 168277 - Back @ 8'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 50791
Prep Batch: 43548

Analytical Method: Mod. 8015B
Date Analyzed: 2008-07-25
Sample Preparation: 2008-07-25

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 7 of 14
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		176	mg/Kg	1	100	176	10 - 250.4

Sample: 168277 - Back @ 8'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 50869
Prep Batch: 43655

Analytical Method: S 8015B
Date Analyzed: 2008-07-29
Sample Preparation: 2008-07-29

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.10	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.10	mg/Kg	1	1.00	110	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.13	mg/Kg	1	1.00	113	63.8 - 141

Method Blank (1) QC Batch: 50791

QC Batch: 50791
Prep Batch: 43548

Date Analyzed: 2008-07-25
QC Preparation: 2008-07-25

Analyzed By: LD
Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<15.8	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		68.4	mg/Kg	1	100	68	30.9 - 146.4

Method Blank (1) QC Batch: 50869

QC Batch: 50869
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
GRO		0.915	mg/Kg	1

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 8 of 14
20 miles SE Carlsbad, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.07	mg/Kg	1	1.00	107	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		1.05	mg/Kg	1	1.00	105	16.8 - 138.1

Method Blank (1) QC Batch: 50899

QC Batch: 50899 Date Analyzed: 2008-07-29 Analyzed By: DC
Prep Batch: 43655 QC Preparation: 2008-07-29 Prepared By: DC

Parameter	Flag	MDL		Units	RL
		Result			
Benzene		<0.00580		mg/Kg	0.01
Toluene		<0.00470		mg/Kg	0.01
Ethylbenzene		<0.00530		mg/Kg	0.01
Xylene		<0.0136		mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.876	mg/Kg	1	1.00	88	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.883	mg/Kg	1	1.00	88	37.7 - 128.9

Method Blank (1) QC Batch: 50956

QC Batch: 50956 Date Analyzed: 2008-07-31 Analyzed By: AR
Prep Batch: 43719 QC Preparation: 2008-07-29 Prepared By: AR

Parameter	Flag	MDL		Units	RL
		Result			
Chloride		<0.500		mg/Kg	2

Laboratory Control Spike (LCS-1)

QC Batch: 50791 Date Analyzed: 2008-07-25 Analyzed By: LD
Prep Batch: 43548 QC Preparation: 2008-07-25 Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	145	mg/Kg	1	250	<15.8	58	27.8 - 152.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 9 of 14
20 miles SE Carlsbad, NM

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	147	mg/Kg	1	250	<15.8	59	27.8 - 152.1	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	125	123	mg/Kg	1	100	125	123	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 50869
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.57	mg/Kg	1	10.0	0.915	86	57.5 - 106.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	9.02	mg/Kg	1	10.0	0.915	81	57.5 - 106.4	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.16	1.11	mg/Kg	1	1.00	116	111	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	1.16	1.13	mg/Kg	1	1.00	116	113	53.3 - 123.6

Laboratory Control Spike (LCS-1)

QC Batch: 50899
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.955	mg/Kg	1	1.00	<0.00580	96	73.3 - 116.6
Toluene	0.981	mg/Kg	1	1.00	<0.00470	98	78.6 - 115.1
Ethylbenzene	0.980	mg/Kg	1	1.00	<0.00530	98	77.4 - 114.9
Xylene	2.93	mg/Kg	1	3.00	<0.0136	98	78.2 - 114.7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 10 of 14
20 miles SE Carlsbad, NM

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.00	mg/Kg	1	1.00	<0.00580	100	73.3 - 116.6	5	20
Toluene	1.03	mg/Kg	1	1.00	<0.00470	103	78.6 - 115.1	5	20
Ethylbenzene	1.03	mg/Kg	1	1.00	<0.00530	103	77.4 - 114.9	5	20
Xylene	3.08	mg/Kg	1	3.00	<0.0136	103	78.2 - 114.7	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.847	0.886	mg/Kg	1	1.00	85	89	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.869	0.902	mg/Kg	1	1.00	87	90	47.2 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<0.500	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<0.500	101	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 168275

QC Batch: 50791
Prep Batch: 43548

Date Analyzed: 2008-07-25
QC Preparation: 2008-07-25

Analyzed By: LD
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	187	mg/Kg	1	250	<15.8	75	18 - 179.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 11 of 14
20 miles SE Carlsbad, NM

matrix spikes continued ...

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	193	mg/Kg	1	250	<15.8	77	18 - 179.5	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane ^{1 2}	174	174	mg/Kg	1	100	174	174	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 168289

QC Batch: 50869
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	19.6	mg/Kg	2	20.0	<1.48	98	10 - 139.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.8	mg/Kg	2	20.0	<1.48	84	10 - 139.3	15	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.10	2.08	mg/Kg	2	2	105	104	21.3 - 119
4-Bromofluorobenzene (4-BFB)	2.15	2.17	mg/Kg	2	2	108	108	52.5 - 154

Matrix Spike (MS-1) Spiked Sample: 168158

QC Batch: 50899
Prep Batch: 43655

Date Analyzed: 2008-07-29
QC Preparation: 2008-07-29

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	4.53	mg/Kg	5	5.00	<0.0290	91	62.2 - 134.3
Toluene	4.70	mg/Kg	5	5.00	0.0451	93	62.6 - 145.4

continued ...

¹High surrogate recovery due to peak interference.

²High surrogate recovery due to peak interference.

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 12 of 14
20 miles SE Carlsbad, NM

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Ethylbenzene	4.78	mg/Kg	5	5.00	0.0593	94	64.6 - 146.4
Xylene	14.4	mg/Kg	5	15.0	0.2089	95	64.3 - 148.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	4.31	mg/Kg	5	5.00	<0.0290	86	62.2 - 134.3	5	20
Toluene	4.49	mg/Kg	5	5.00	0.0451	89	62.6 - 145.4	5	20
Ethylbenzene	4.58	mg/Kg	5	5.00	0.0593	90	64.6 - 146.4	4	20
Xylene	13.9	mg/Kg	5	15.0	0.2089	91	64.3 - 148.8	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.46	4.48	mg/Kg	5	5	89	90	38.8 - 127.5
4-Bromofluorobenzene (4-BFB)	4.57	4.59	mg/Kg	5	5	91	92	49.3 - 142.4

Matrix Spike (MS-1) Spiked Sample: 168284

QC Batch: 50956
Prep Batch: 43719

Date Analyzed: 2008-07-31
QC Preparation: 2008-07-29

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	8120	mg/Kg	50	5000	3160	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	8180	mg/Kg	50	5000	3160	100	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	228	91	85 - 115	2008-07-25

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 13 of 14
20 miles SE Carlsbad, NM

Standard (CCV-1)

QC Batch: 50791

Date Analyzed: 2008-07-25

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	231	92	85 - 115	2008-07-25

Standard (ICV-1)

QC Batch: 50869

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.03	103	85 - 115	2008-07-29

Standard (CCV-1)

QC Batch: 50869

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.13	113	85 - 115	2008-07-29

Standard (ICV-1)

QC Batch: 50899

Date Analyzed: 2008-07-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0995	100	85 - 115	2008-07-29
Toluene		mg/Kg	0.100	0.102	102	85 - 115	2008-07-29
Ethylbenzene		mg/Kg	0.100	0.102	102	85 - 115	2008-07-29
Xylene		mg/Kg	0.300	0.303	101	85 - 115	2008-07-29

Standard (CCV-1)

QC Batch: 50899

Date Analyzed: 2008-07-29

Analyzed By: DC

Report Date: August 1, 2008
ENV 2008-025

Work Order: 8072446
Pardue SWD Facility

Page Number: 14 of 14
20 miles SE Carlsbad, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	³	mg/Kg	0.100	0.0832	83	85 - 115	2008-07-29
Toluene		mg/Kg	0.100	0.0899	90	85 - 115	2008-07-29
Ethylbenzene		mg/Kg	0.100	0.0914	91	85 - 115	2008-07-29
Xylene		mg/Kg	0.300	0.277	92	85 - 115	2008-07-29

Standard (ICV-1)

QC Batch: 50956

Date Analyzed: 2008-07-31

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2008-07-31

Standard (CCV-1)

QC Batch: 50956

Date Analyzed: 2008-07-31

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2008-07-31

³Benzene outside of control limits on CCV. CCV component average is .09025 which is within acceptable range. This is acceptable by Method 8000.

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-12965002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-34438808 Camp Bowie Blvd. West, Suite 180
Ft. Worth, Texas 76116
Tel (817) 201-5260
Fax (817) 560-4336

Company Name: **BTA Oil Producers, LLC** Phone #: **(432) 553-5352**
 Address: (Street, City, Zip) **104 S. Pecos St.** Fax #: **(432) 683-0325**
 Contact Person: **Scip Brea** E-mail: **sbrea@btaoil.com**

Invoice to:
 (If different from above)
 Project #: **ENV. 2008-025** Project Name: **Indue SWD Facility**

Project Location (including state): **20 miles SE of Carlsbad, NM** Sampler Signature: **Scip Brea**

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021B / 602	BTEX 8021B / 602	TPH 418.1 / TX1005 / DPH	TPH 8015 GRO / DPH	PAH 8270C / 625	Total Metals Ag As Ba C	TCLP Metals Ag As	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B /	GC/MS Semi. Vol. 8	PCB's 8082 / 608	Pesticides 8081A / 6	BOD, TSS, pH	Moisture Content	Chloride S		Turn Around Time if	Hold		
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME																							
168275	Back @ 3'	1	4oz	X							X		7/24	10:33				X																				
276	Back @ 6'	1	4oz	X							X		7/24	10:50				X																				
277	Back @ 8'	1	4oz	X							X		7/24	11:05				X																				

Relinquished by: **Scip Brea** Company: **BTA** Date: **7/24** Time: **6:30** Temp: **39.0**
 Received by: **Trace** Company: **Trace** Date: **7/24/08** Time: **10:30** Temp: **39.0**

LAB USE ONLY
 Inoc. ☒ N
 Resuspense ☐ Y ☒ N ☐ NA
 3.9
 Log in Boxes

REMARKS:
BTEX on highest TPH
A1 + 515 Midland
☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # **Comp in**

ORIGINAL COPY

Appendix B

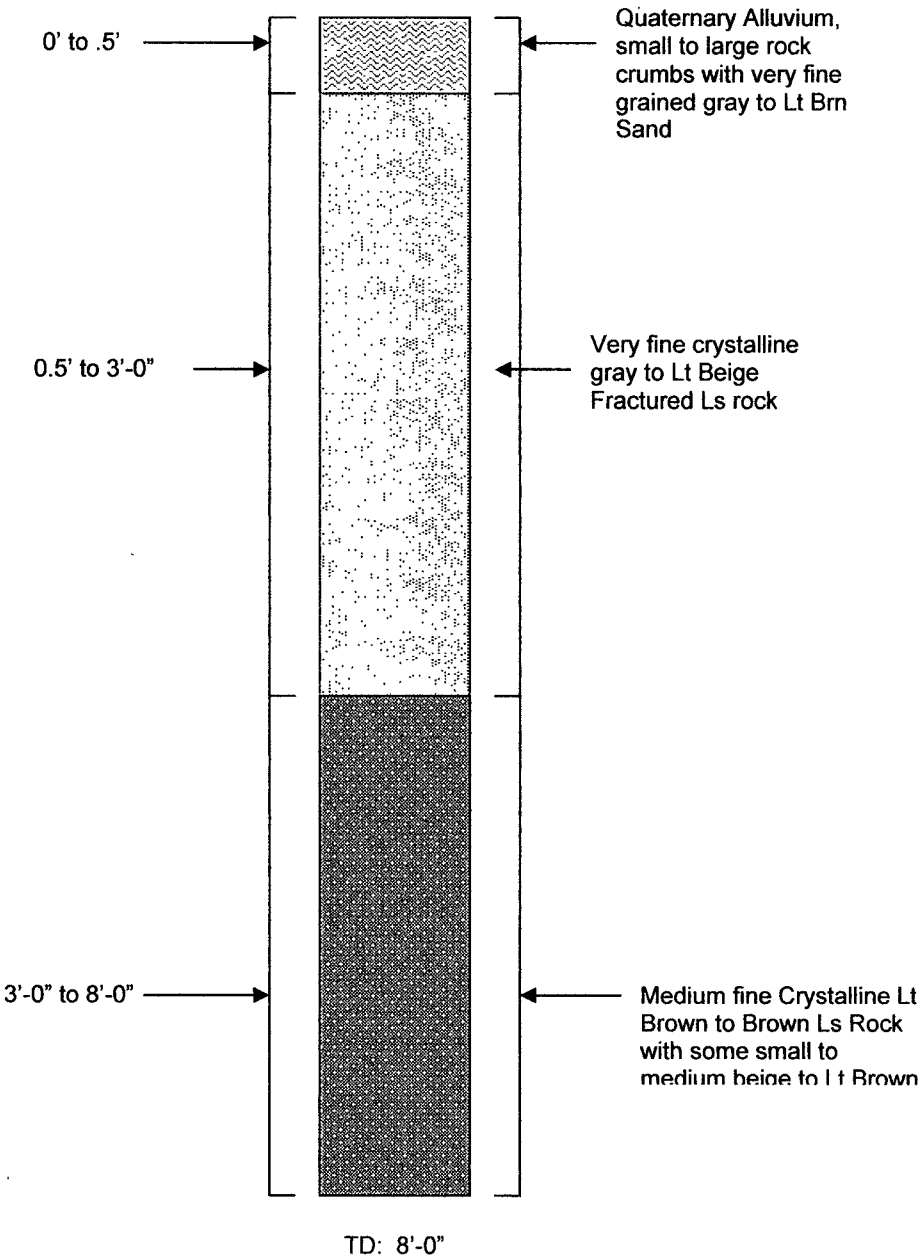
BTA Oil Producer, LLC

Midland, Texas

East side of Pardue SWD Injection Facility site Auger Boring Log (Plate 1)

Drawing by jab
Date 7/24/2008

Soil Description by jab
Scale None



NOT DRAWN TO SCALE

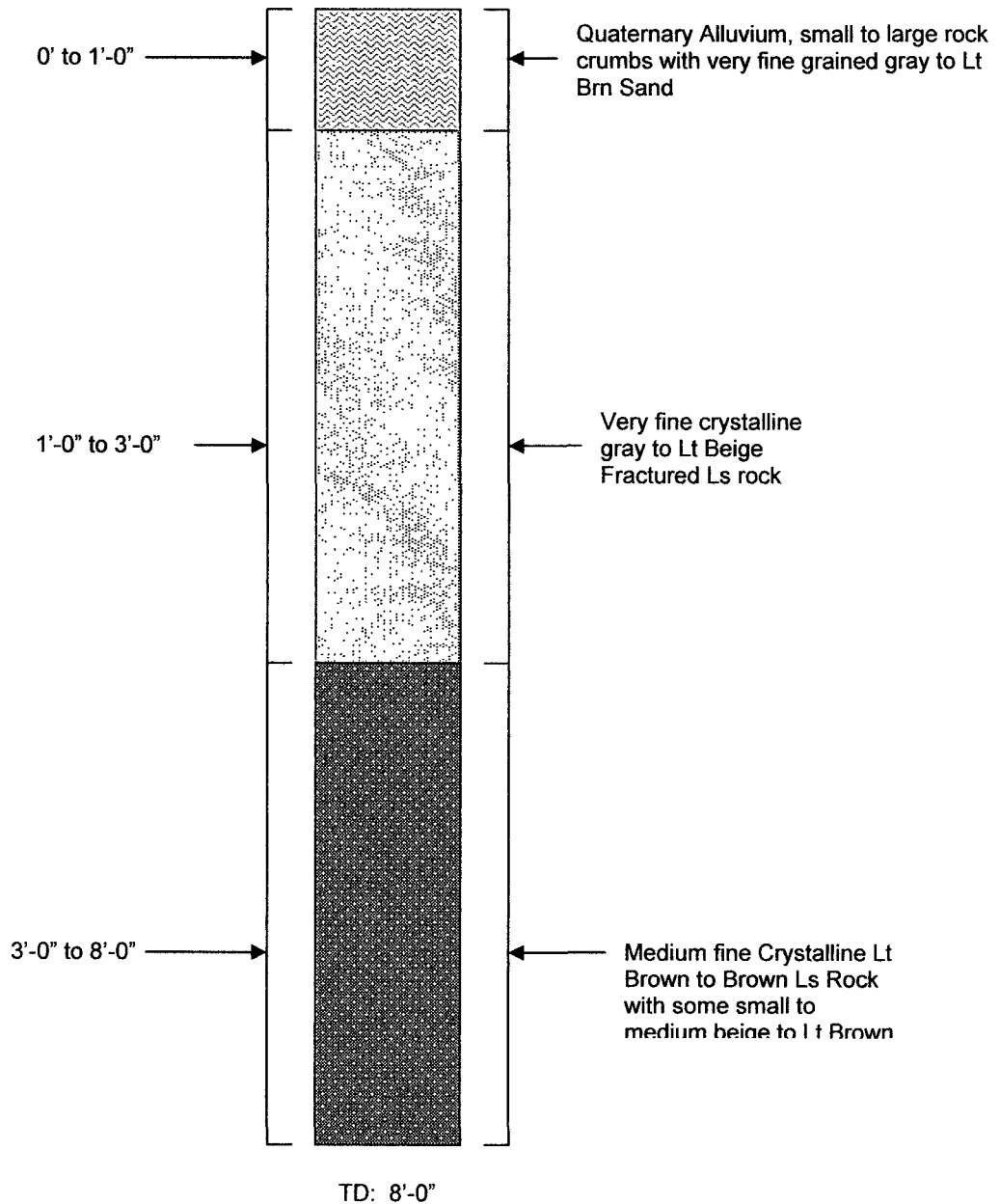
BTA Oil Producer, LLC

Midland, Texas

South side of Pardue SWD Injection Facility site Auger Boring Log (Plate 2)

Drawing by jab
Date 7/24/2008

Soil Description by jab
Scale None



NOT DRAWN TO SCALE

BTA Oil Producer, LLC

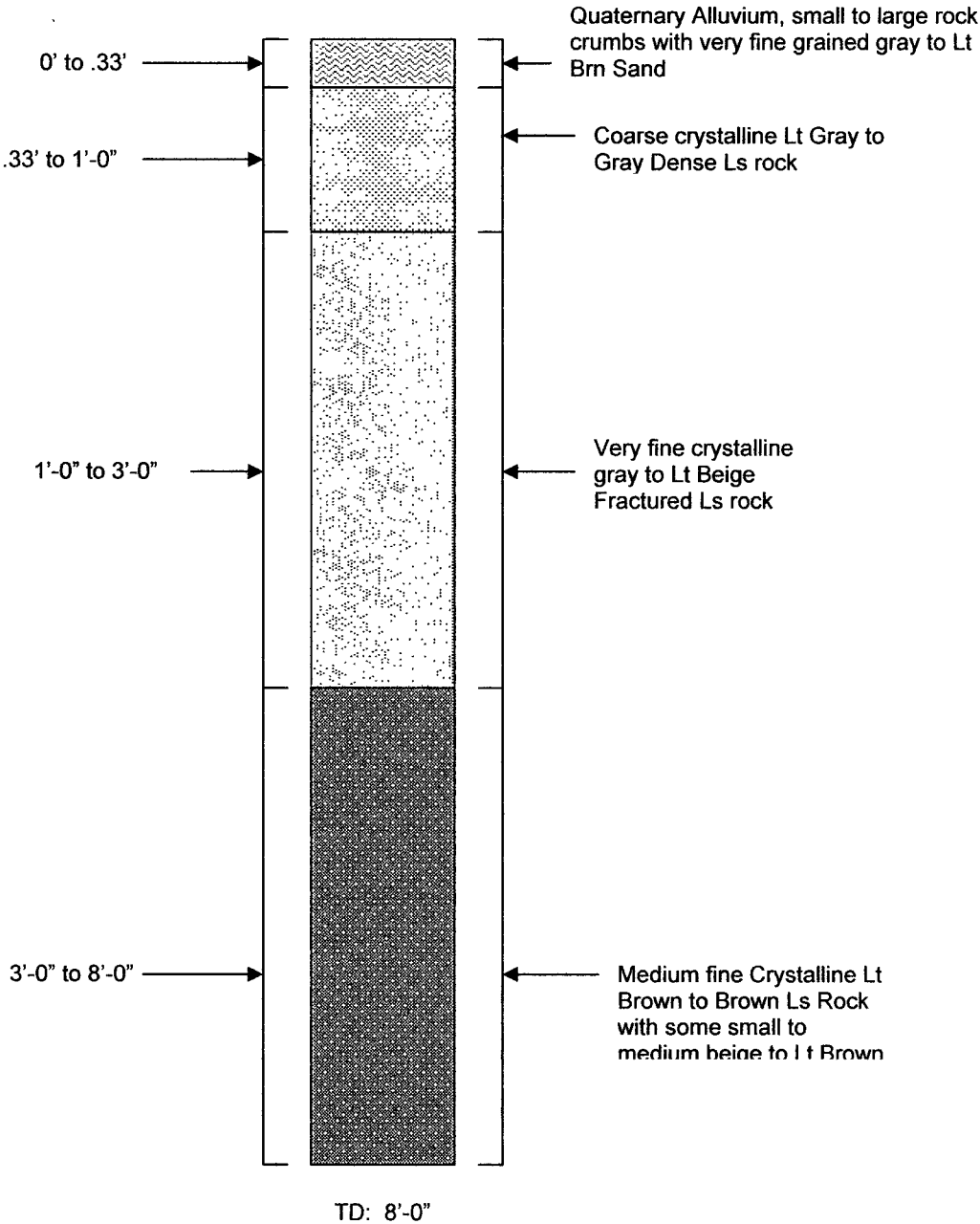
Midland, Texas

North side of Pardue SWD Injection Facility site Auger Boring Log

(Plate 3)

Drawing by jab
Date 7/24/2008

Soil Description by jab
Scale None



NOT DRAWN TO SCALE

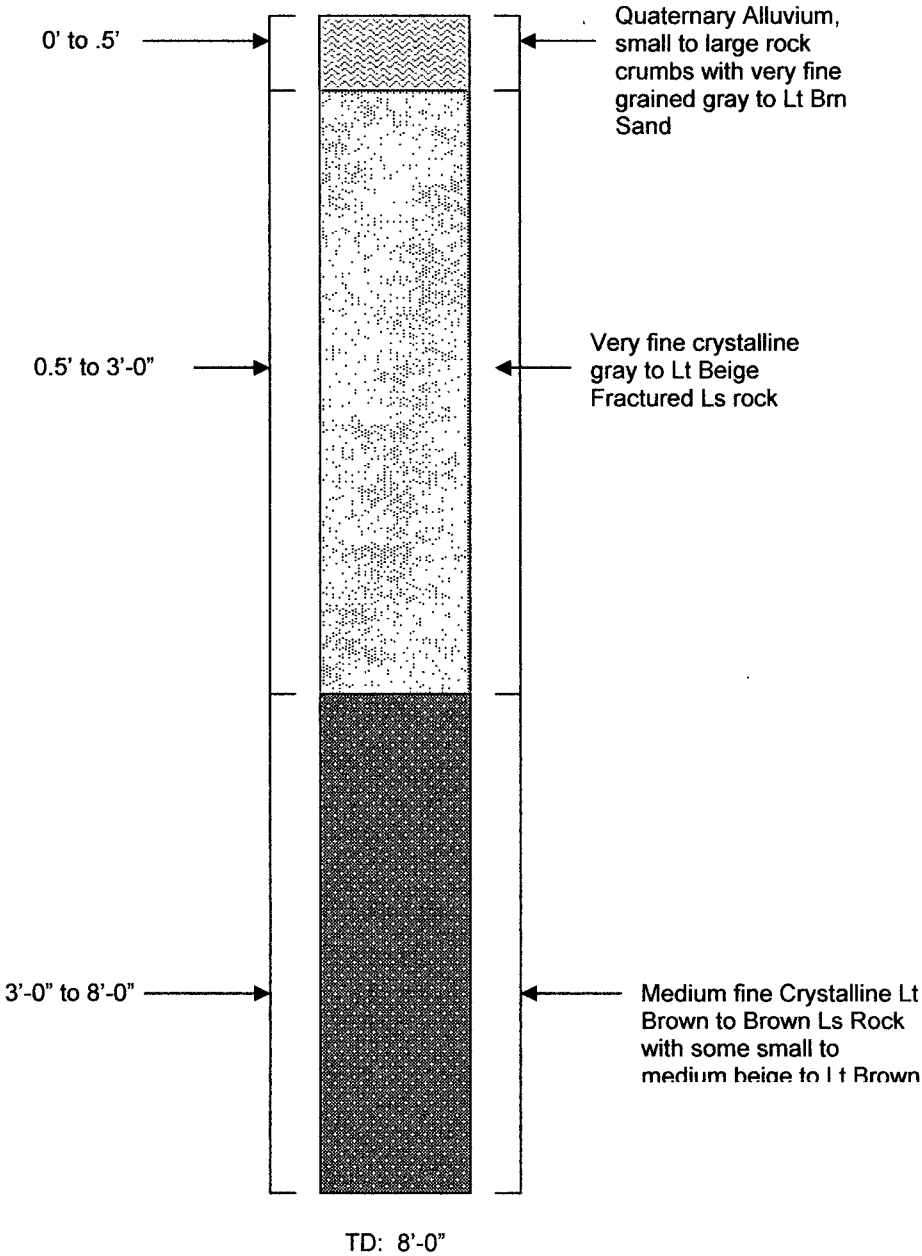
BTA Oil Producer, LLC

Midland, Texas

West side of Pardue SWD Injection Facility site Auger Boring Log (Plate 4)

Drawing by jab
Date 7/24/2008

Soil Description by jab
Scale None



NOT DRAWN TO SCALE

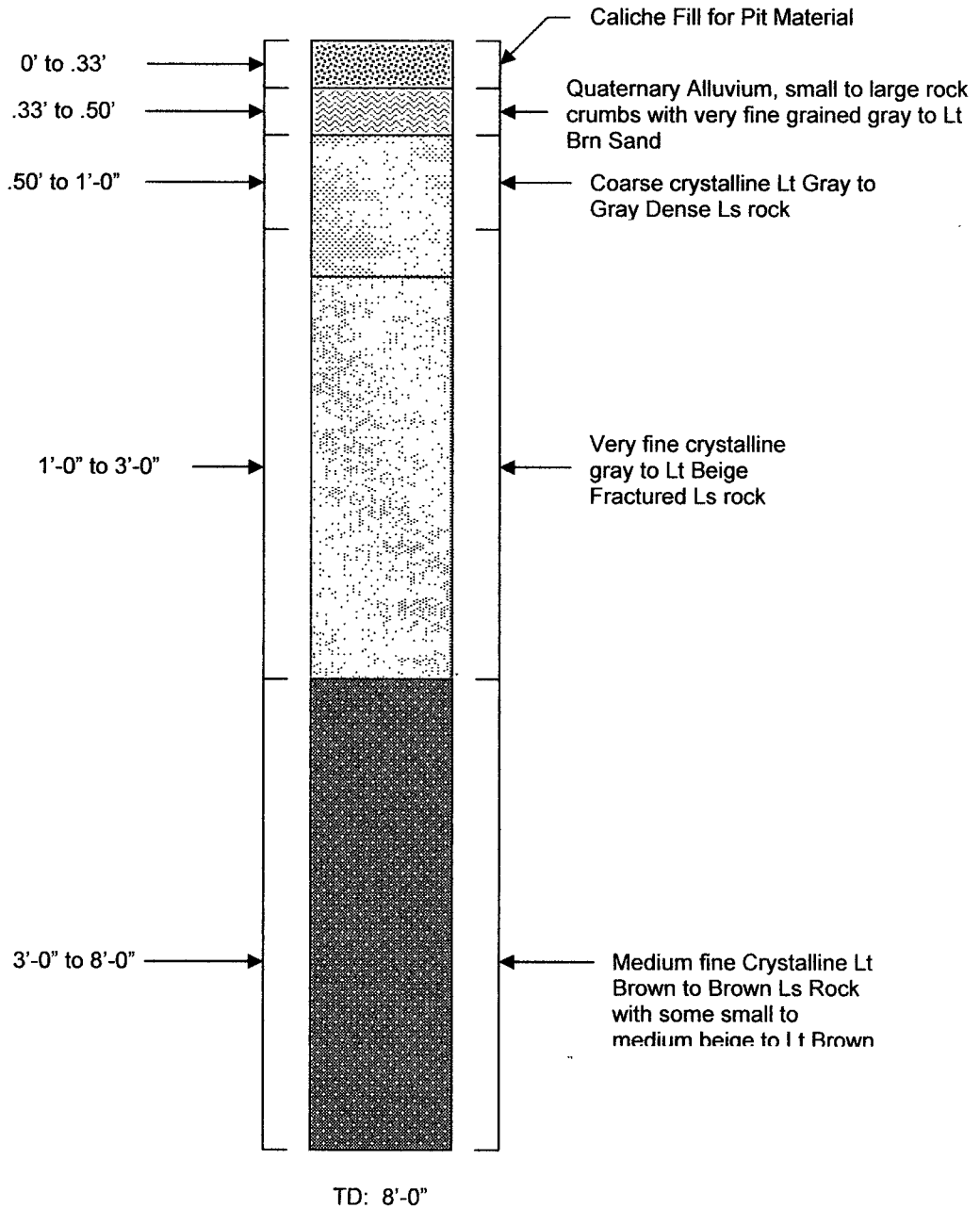
BTA Oil Producer, LLC

Midland, Texas

Center of Pardue SWD Injection Facility Pit Auger Boring Log (Plate 5)

Drawing by jab
Date 7/24/2008

Soil Description by jab
Scale None



NOT DRAWN TO SCALE

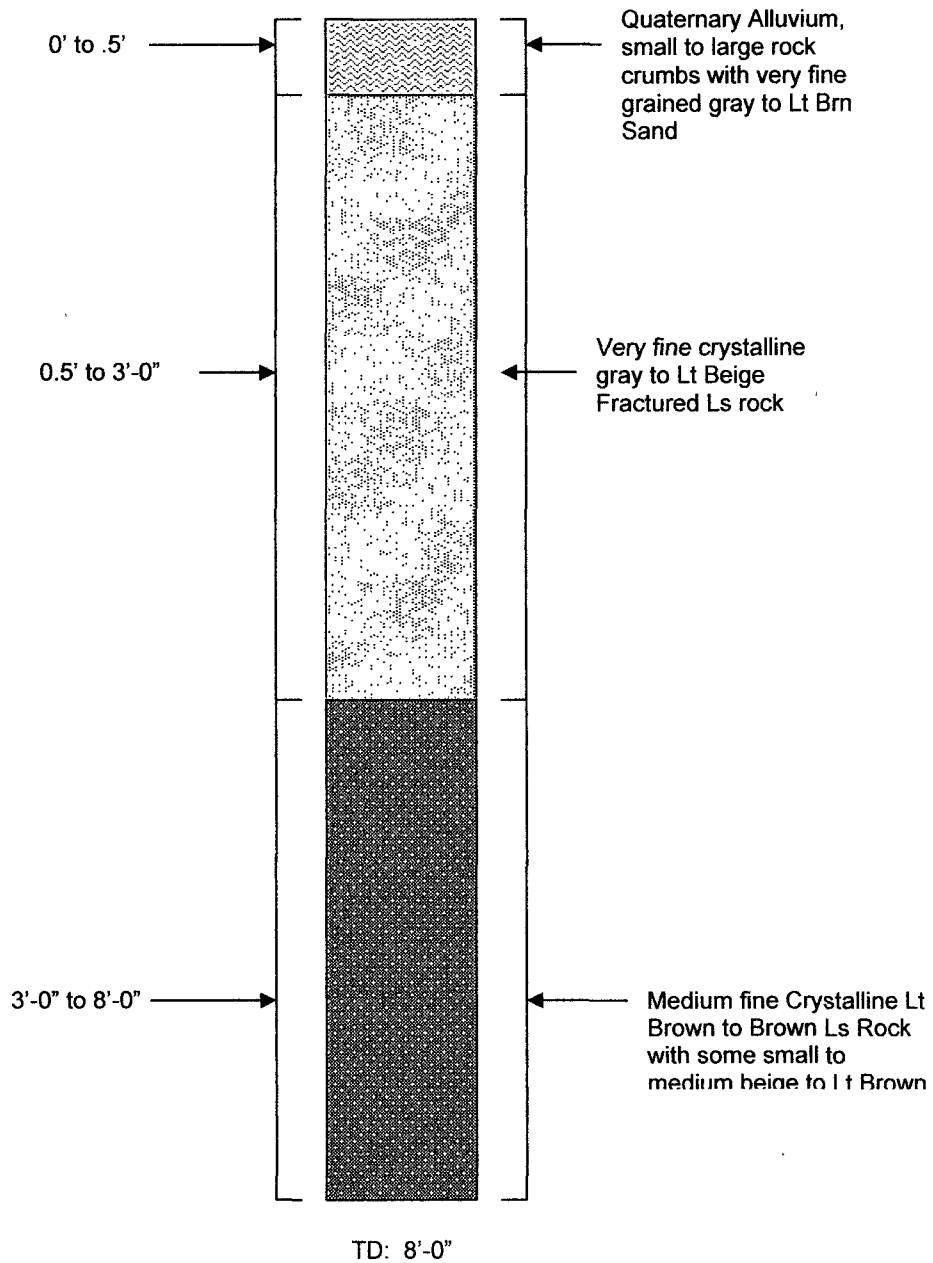
BTA Oil Producer, LLC

Midland, Texas

Back side of Pardue SWD Injection Facility site Auger Boring Log (Plate 6)

Drawing by jab
Date 7/24/2008

Soil Description by jab
Scale None



NOT DRAWN TO SCALE