

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-144
June 1, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator <u>NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY</u> Telephone <u>505-284-3871</u> e-mail address: _____	
Address <u>C/O DELENE COX, MS 0778, PO BOX 5800, ALBUQUERQUE, NEW MEXICO 87185-0778</u>	
Facility or well name. <u>SULIMAR QUEENS</u>	API # <u>30-005-60068</u> U/L or Qtr/Qtr <u>TIW2</u> Sec <u>24</u> T <u>T15S</u> R <u>29E</u>
County <u>CHAVES</u>	Latitude <u>N33° 00.20</u> Longitude <u>W 103° 59.004</u> NAD 1927 ☐ 1983 ☐
Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐ <u>SOUTH PIT (PIT A - sample report)</u>	
Pit Type Drilling ☐ Production ☒ Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☒ Liner type. Synthetic ☐ Thickness _____ mil Clay ☐ Pit Volume _____ bbl	Below-grade tank Volume _____ bbl Type of fluid. _____ Construction material _____ Double-walled, with leak detection? Yes ☐ If not, explain why not _____
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) 100 feet or more (0 points)
Wellhead protection area (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources)	Yes (20 points) No (0 points)
Distance to surface water (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) 1000 feet or more (0 points)
Ranking Score (Total Points) -0-	

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks (2) Indicate disposal location (check the onsite box if you are burying in place) onsite ☐ offsite ☒ If offsite, name of facility LOCO HILLS DISPOSAL (3) Attach a general description of remedial action taken including remediation start date and end date (4) Groundwater encountered No ☒ Yes ☐ If yes, show depth below ground surface _____ ft and attach sample results (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

Closed pit is located 255 feet east of well designated as Tract 1 Well No. 2 (Sulimar Queens Unit) Approximately 10 feet of material was removed and disposed of at Loco Hills Disposal Facility This pit is designated as Pit A in the soil sample report and samples were taken at the north and south edge of the pit. The pit was closed April 23, 2007, after review of laboratory analysis on April 13, 2007, and verbal approval from Mike Bratcher, OCD

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date 3/3/08

Printed Name/Title Jack B. Tillman, SNL Field Representative

Signature Jack B. Tillman

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations

Approval

Printed Name/Title _____

Signature Mike Bratcher

Signed By

Date MAR 04 2008

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June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator <u>NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY</u>		Telephone <u>505-284-3871</u>		e-mail address. _____	
Address <u>C/O DELENE COX, MS 0778, PO BOX 5800, ALBUQUERQUE, NEW MEXICO 87185-0778</u>					
Facility or well name <u>SULIMAR QUEENS</u>		API # <u>30-005-60068</u>	U/L or Qtr/Qtr <u>Tract 1 Well #2</u>	Sec <u>24</u>	T <u>T15S</u> R <u>29E</u>
County <u>CHAVES</u>		Latitude <u>N33° 00.317</u>	Longitude <u>W 103° 59 085</u>	NAD 1927 ☐ 1983 ☐	
Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐		<u>NORTH PIT (PIT B - SAMPLE REPORT)</u>			
Pit Type: Drilling ☐ Production ☒ Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☒ Liner type Synthetic ☐ Thickness _____ mil Clay ☐ Pit Volume _____ bbl		Below-grade tank Volume _____ bbl Type of fluid _____ Construction material _____ Double-walled, with leak detection? Yes ☐ If not, explain why not _____			
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water)		Less than 50 feet		(20 points)	
		50 feet or more, but less than 100 feet		(10 points)	
		100 feet or more		(0 points)	
Wellhead protection area (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources)		Yes		(20 points)	
		No		(0 points)	
Distance to surface water (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses)		Less than 200 feet		(20 points)	
		200 feet or more, but less than 1000 feet		(10 points)	
		1000 feet or more		(0 points)	
		Ranking Score (Total Points)		-0-	

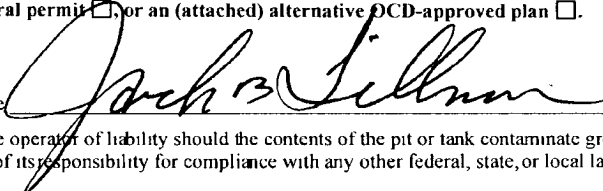
If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☒ If offsite, name of facility LOCO HILLS DISPOSAL (3) Attach a general description of remedial action taken including remediation start date and end date (4) Groundwater encountered No ☒ Yes ☐ If yes, show depth below ground surface _____ ft and attach sample results (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments
The closed pit is located 725 feet north of well designated as Tract 1 Well No. 2 (Sulimar Queens Unit) Approximately 6 feet of material was removed and disposed of at the Loco Hills Disposal Facility This pit is designated as Pit B in the soil sample report and samples were taken at the north and south edge of the pit The pit was closed on April 23, 2007, after review of the April 13, 2007 laboratory analysis and verbal approval from Mike Bratcher, OCD.

I hereby certify that the information above is true and complete to the best of my knowledge and belief I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date 3/3/08
Printed Name/Title Jack B. Tillman, SNL Field Representative

Signature



Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations

Approval

Printed Name/Title _____

Signature

Signed By Mike Bratcher

Date

MAR 04 2008



COVER LETTER

Friday, April 13, 2007

Jack Tillman
Sandia National Lab Las Cruces
5065 Hunters Chase
Las Cruces, NM 88011

TEL: (505) 640-5351

FAX (505) 521-9400

RE: Sulimar Queens

Dear Jack Tillman:

Order No.: 0703453

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 3/29/2007 for the analyses presented in the following report.

This report is an addendum to the report dated April 2, 2007. DRO and CI has been added to this report.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", written over a horizontal line.

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory, Inc.

Date: 13-Apr-07

CLIENT: Sandia National Lab Las Cruces**Client Sample ID:** Pit A North**Lab Order:** 0703453**Collection Date:** 3/26/2007 12:30:00 PM**Project:** Sulimar Queens**Date Received:** 3/29/2007**Lab ID:** 0703453-01**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	850	100		mg/Kg	10	4/10/2007 7:10:47 AM
Motor Oil Range Organics (MRO)	990	500		mg/Kg	10	4/10/2007 7:10:47 AM
Surr. DNOP	114	61.7-135		%REC	10	4/10/2007 7:10:47 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	3/31/2007 10:11:37 AM
Benzene	ND	0.050		mg/Kg	1	3/31/2007 10:11:37 AM
Toluene	ND	0.050		mg/Kg	1	3/31/2007 10:11:37 AM
Ethylbenzene	ND	0.050		mg/Kg	1	3/31/2007 10:11:37 AM
Xylenes, Total	ND	0.10		mg/Kg	1	3/31/2007 10:11:37 AM
Surr. 4-Bromofluorobenzene	90.9	68.2-109		%REC	1	3/31/2007 10:11:37 AM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	41	3.0		mg/Kg	10	4/11/2007 6:43:44 PM

Qualifiers:

* Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 13-Apr-07

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: Pit A South

Lab Order: 0703453

Collection Date: 3/26/2007 12:35:00 PM

Project: Sulimar Queens

Date Received: 3/29/2007

Lab ID: 0703453-02

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	1000	100		mg/Kg	10	4/10/2007 7:44:37 AM
Motor Oil Range Organics (MRO)	1200	500		mg/Kg	10	4/10/2007 7:44:37 AM
Surr. DNOP	120	61	7-135	%REC	10	4/10/2007 7:44:37 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0	10	mg/Kg	1	3/31/2007 10:41:30 AM
Benzene	ND	0	050	mg/Kg	1	3/31/2007 10:41:30 AM
Toluene	ND	0	050	mg/Kg	1	3/31/2007 10:41:30 AM
Ethylbenzene	ND	0	050	mg/Kg	1	3/31/2007 10:41:30 AM
Xylenes, Total	ND	0	10	mg/Kg	1	3/31/2007 10:41:30 AM
Surr. 4-Bromofluorobenzene	91.5	68	2-109	%REC	1	3/31/2007 10:41:30 AM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	20	1	5	mg/Kg	5	4/11/2007 7:35:57 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 13-Apr-07

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: Pit B North

Lab Order: 0703453

Collection Date: 3/26/2007 12:45:00 PM

Project: Sulimar Quens

Date Received: 3/29/2007

Lab ID: 0703453-03

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	280	100		mg/Kg	10	4/10/2007 8:18:46 AM
Motor Oil Range Organics (MRO)	820	500		mg/Kg	10	4/10/2007 8:18:46 AM
Surr: DNOP	113	61.7-135		%REC	10	4/10/2007 8:18:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	3/31/2007 12:11:48 PM
Benzene	ND	0.050		mg/Kg	1	3/31/2007 12:11:48 PM
Toluene	ND	0.050		mg/Kg	1	3/31/2007 12:11:48 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/31/2007 12:11:48 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/31/2007 12:11:48 PM
Surr: 4-Bromofluorobenzene	91.8	68.2-109		%REC	1	3/31/2007 12:11:48 PM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	76	1.5		mg/Kg	5	4/11/2007 7:53:21 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 13-Apr-07

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: Pit B South

Lab Order: 0703453

Collection Date: 3/26/2007 12:50:00 PM

Project: Sulimar Queens

Date Received: 3/29/2007

Lab ID: 0703453-04

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	90	10		mg/Kg	1	4/10/2007 9:27:02 AM
Motor Oil Range Organics (MRO)	160	50		mg/Kg	1	4/10/2007 9:27:02 AM
Surr. DNOP	109	61.7-135		%REC	1	4/10/2007 9:27:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	3/31/2007 12:41:58 PM
Benzene	ND	0.050		mg/Kg	1	3/31/2007 12:41:58 PM
Toluene	ND	0.050		mg/Kg	1	3/31/2007 12:41:58 PM
Ethylbenzene	ND	0.050		mg/Kg	1	3/31/2007 12:41:58 PM
Xylenes, Total	ND	0.10		mg/Kg	1	3/31/2007 12:41:58 PM
Surr. 4-Bromofluorobenzene	91.4	68.2-109		%REC	1	3/31/2007 12:41:58 PM
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	320	3.0		mg/Kg	10	4/11/2007 8:10:45 PM

Qualifiers:

* Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

QA/QC SUMMARY REPORT

Client: Sandia National Lab Las Cruces
Project: Sulimar Queens

Work Order: 0703453

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW9056A									
Sample ID: MB-12713		MBLK			Batch ID: 12713		Analysis Date: 4/11/2007 6:06 50 PM		
Chloride	ND	mg/Kg	0.30						
Sample ID: LCS-12713		LCS			Batch ID: 12713		Analysis Date: 4/11/2007 6:24 14 PM		
Chloride	15.95	mg/Kg	0.30	106	90	110			
Method: SW8015									
Sample ID: MB-12677		MBLK			Batch ID: 12677		Analysis Date: 4/9/2007 11:09 08 AM		
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-12677		LCS			Batch ID: 12677		Analysis Date: 4/9/2007 11:43 13 AM		
Diesel Range Organics (DRO)	44.82	mg/Kg	10	89.6	64.6	116			
Sample ID: LCSD-12677		LCSD			Batch ID: 12677		Analysis Date: 4/9/2007 12:17 17 PM		
Diesel Range Organics (DRO)	48.33	mg/Kg	10	96.7	64.6	116	7.53	17.4	
Method: SW8021									
Sample ID: 0703453-02A MSD		MSD			Batch ID: 12613		Analysis Date: 3/31/2007 11:41 31 AM		
Methyl tert-butyl ether (MTBE)	0.3826	mg/Kg	0.10	93.3	67.9	135	4.27	28	
Benzene	0.2827	mg/Kg	0.050	101	62.7	114	2.13	27	
Toluene	1.970	mg/Kg	0.050	98.5	68.2	121	1.40	19	
Ethylbenzene	0.3841	mg/Kg	0.050	96.0	71.4	115	1.34	10	
Xylenes, Total	2.233	mg/Kg	0.10	97.1	65	135	0.736	13	
Sample ID: MB-12613		MBLK			Batch ID: 12613		Analysis Date: 3/31/2007 9:09 12 AM		
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: LCS-12613		LCS			Batch ID: 12613		Analysis Date: 3/31/2007 9:39 14 AM		
Methyl tert-butyl ether (MTBE)	0.4011	mg/Kg	0.10	97.8	67.9	135			
Benzene	0.2966	mg/Kg	0.050	106	62.7	114			
Toluene	2.040	mg/Kg	0.050	102	68.2	121			
Ethylbenzene	0.3979	mg/Kg	0.050	99.5	71.4	115			
Xylenes, Total	2.299	mg/Kg	0.10	100	65	135			
Sample ID: 0703453-02A MS		MS			Batch ID: 12613		Analysis Date: 3/31/2007 11:11 23 AM		
Methyl tert-butyl ether (MTBE)	0.3993	mg/Kg	0.10	97.4	67.9	135			
Benzene	0.2888	mg/Kg	0.050	103	62.7	114			
Toluene	1.997	mg/Kg	0.050	99.9	68.2	121			
Ethylbenzene	0.3893	mg/Kg	0.050	97.3	71.4	115			
Xylenes, Total	2.249	mg/Kg	0.10	97.8	65	135			

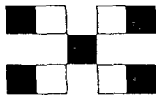
Qualifiers:

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

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D
Allentown, PA 18106-1000

Albuquerque, New Mexico 87109
Tel 505.345 3975 Fax 505.345 4107
www.hallenenvironmental.com



ANALYSIS REQUEST

87EX + MTBE + TMB's (8021)	87EX + MTBE + TMB's (8021)
BTEX + MTBE + TPH (Gasoline Only)	BTEX + MTBE + TPH (Gasoline Only)
TPH Method 801.5B (Gas/Diesel)	TPH Method 801.5B (Gas/Diesel)
TPH (Method 418.1)	TPH (Method 418.1)
EDB (Method 504.1)	EDB (Method 504.1)
EDC (Method 802.1)	EDC (Method 802.1)
8310 (PNA or PAH)	8310 (PNA or PAH)
PCRA 8 Metals	PCRA 8 Metals
Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)
8081 Pesticides / PCB's (8082)	8081 Pesticides / PCB's (8082)
8260B (VOA)	8260B (VOA)
8270 (Semi-VOA)	8270 (Semi-VOA)
Air Bubbles or Headspace (Y or N)	Air Bubbles or Headspace (Y or N)

Remarks.

Mr. Jack add'l \$20.00 4/5 2.00

[illegible]



COVER LETTER

Tuesday, November 14, 2006

Jack Tillman
Sandia National Lab Las Cruces
5065 Hunters Chase
Las Cruces, NM 88011

TEL: (505) 640-5354
FAX

RE: Suliman Qucens

Order No.: 0611009

Dear Jack Tillman:

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 11/1/2006 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

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

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

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

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



Hall Environmental Analysis Laboratory, Inc.

Date: 14-Nov-06

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: #2A Surface

Lab Order: 0611009

Collection Date: 10/30/2006 11:18:00 AM

Project: Suliman Queens

Date Received: 11/1/2006

Lab ID: 0611009-04

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						
Chloride	110	30		mg/Kg	10	Analyst TES 11/9/2006 2:07:16 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	Analyst LMM 11/4/2006
Benzene	ND	0.050		mg/Kg	1	11/4/2006
Toluene	0.059	0.050		mg/Kg	1	11/4/2006
Ethylbenzene	ND	0.050		mg/Kg	1	11/4/2006
Xylenes, Total	ND	0.10		mg/Kg	1	11/4/2006
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/4/2006
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/4/2006
Surr. 1,2-Dichloroethane-d4	75.7	68-146		%REC	1	11/4/2006
Surr. 4-Bromofluorobenzene	79.3	83.7-122	S	%REC	1	11/4/2006
Surr. Dibromofluoromethane	73.5	66.6-145		%REC	1	11/4/2006
Surr. Toluene-d8	94.2	81.8-121		%REC	1	11/4/2006
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	1300	200		mg/Kg	10	Analyst JAT 11/4/2006

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 4 of 6

Hall Environmental Analysis Laboratory, Inc.

Date: 14-Nov-06

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: #2B 2.0 ft deep

Lab Order: 0611009

Collection Date: 10/30/2006 11:24:00 AM

Project: Sulman Queens

Date Received: 11/1/2006

Lab ID: 0611009-05

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	4400	15		mg/Kg	50	11/10/2006 12:22:47 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: LMM
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	10	11/6/2006
Benzene	10	0.50		mg/Kg	10	11/6/2006
Toluene	7.1	0.50		mg/Kg	10	11/6/2006
Ethylbenzene	7.7	0.50		mg/Kg	10	11/6/2006
Xylenes, Total	14	1.0		mg/Kg	10	11/6/2006
1,2,4-Trimethylbenzene	6.6	0.50		mg/Kg	10	11/6/2006
1,3,5-Trimethylbenzene	1.6	0.50		mg/Kg	10	11/6/2006
Surr: 1,2-Dichloroethane-d4	92.9	68-146		%REC	10	11/6/2006
Surr: 4-Bromofluorobenzene	103	83.7-122		%REC	10	11/6/2006
Surr: Dibromofluoromethane	90.4	66.6-145		%REC	10	11/6/2006
Surr: Toluene-d8	93.7	81.8-121		%REC	10	11/6/2006
EPA METHOD 418.1: TPH						Analyst: JAT
Petroleum Hydrocarbons, TR	120000	10000		mg/Kg	50	11/4/2006

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Date: 14-Nov-06

CLIENT: Sandia National Lab Las Cruces
Lab Order: 0611009
Project: Suliman Queens
Lab ID: 0611009-06

Client Sample ID: #2C 2 7 ft deep
Collection Date: 10/30/2006 11:34:00 AM
Date Received: 11/1/2006
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						
Chloride	5400	30		mg/Kg	100	Analyst: TES 11/10/2006 5:21:48 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	10	Analyst: LMM 11/6/2006
Benzene	3.2	0.50		mg/Kg	10	11/6/2006
Toluene	5.0	0.50		mg/Kg	10	11/6/2006
Ethylbenzene	4.9	0.50		mg/Kg	10	11/6/2006
Xylenes, Total	9.3	1.0		mg/Kg	10	11/6/2006
1,2,4-Trimethylbenzene	5.2	0.50		mg/Kg	10	11/6/2006
1,3,5-Trimethylbenzene	1.3	0.50		mg/Kg	10	11/6/2006
Surr. 1,2-Dichloroethane-d4	86.7	68-146		%REC	10	11/6/2006
Surr. 4-Bromofluorobenzene	99.6	83.7-122		%REC	10	11/6/2006
Surr. Dibromofluoromethane	86.3	66.6-145		%REC	10	11/6/2006
Surr. Toluene-d8	89.4	81.8-121		%REC	10	11/6/2006
EPA METHOD 418.1: TPH						
Petroleum Hydrocarbons, TR	37000	5000		mg/Kg	25	Analyst: JAT 11/4/2006

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Date: 14-Nov-06

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: #1A Surface

Lab Order: 0611009

Collection Date: 10/30/2006 10:26:00 AM

Project: Sulman Queens

Date Received: 11/1/2006

Lab ID: 0611009-01

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	400	1.5		mg/Kg	5	11/9/2006 1 15.03 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: LMM
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	10	11/6/2006
Benzene	ND	0.50		mg/Kg	10	11/6/2006
Toluene	ND	0.50		mg/Kg	10	11/6/2006
Ethylbenzene	ND	0.50		mg/Kg	10	11/6/2006
Xylenes, Total	ND	1.0		mg/Kg	10	11/6/2006
1,2,4-Trimethylbenzene	0.99	0.50		mg/Kg	10	11/6/2006
1,3,5-Trimethylbenzene	1.0	0.50		mg/Kg	10	11/6/2006
Surr. 1,2-Dichloroethane-d4	88.0	68-146		%REC	10	11/6/2006
Surr. 4-Bromofluorobenzene	98.2	83.7-122		%REC	10	11/6/2006
Surr. Dibromofluoromethane	86.4	66.6-145		%REC	10	11/6/2006
Surr. Toluene-d8	92.0	81.8-121		%REC	10	11/6/2006
EPA METHOD 418.1: TPH						Analyst: JAT
Petroleum Hydrocarbons, TR	28000	2000		mg/Kg	20	11/4/2006

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 14-Nov-06

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: #1B 2.0 ft deep

Lab Order: 0611009

Collection Date: 10/30/2006 10:38:00 AM

Project: Suliman Queens

Date Received: 11/1/2006

Lab ID: 0611009-02

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	140	1.5		mg/Kg	5	11/9/2006 1:32 27 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: LMM
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	10	11/6/2006
Benzene	2.7	0.50		mg/Kg	10	11/6/2006
Toluene	ND	0.50		mg/Kg	10	11/6/2006
Ethylbenzene	4.8	0.50		mg/Kg	10	11/6/2006
Xylenes, Total	ND	1.0		mg/Kg	10	11/6/2006
1,2,4-Trimethylbenzene	ND	0.50		mg/Kg	10	11/6/2006
1,3,5-Trimethylbenzene	ND	0.50		mg/Kg	10	11/6/2006
Surr: 1,2-Dichloroethane-d4	84.7	68-146		%REC	10	11/6/2006
Surr: 4-Bromofluorobenzene	98.9	83.7-122		%REC	10	11/6/2006
Surr: Dibromofluoromethane	84.6	66.6-145		%REC	10	11/6/2006
Surr: Toluene-d8	92.2	81.8-121		%REC	10	11/6/2006
EPA METHOD 418.1: TPH						Analyst: JAT
Petroleum Hydrocarbons, TR	17000	500		mg/Kg	5	11/4/2006

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Date: 14-Nov-06

CLIENT: Sandia National Lab Las Cruces

Client Sample ID: #1C 2.3 ft deep

Lab Order: 0611009

Collection Date: 10/30/2006 10:55:00 AM

Project: Sulman Queens

Date Received: 11/1/2006

Lab ID: 0611009-03

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 9056A: ANIONS						Analyst: TES
Chloride	71	3.0		mg/Kg	10	11/9/2006 1:49:52 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: LMM
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	10	11/6/2006
Benzene	ND	0.50		mg/Kg	10	11/6/2006
Toluene	ND	0.50		mg/Kg	10	11/6/2006
Ethylbenzene	2.0	0.50		mg/Kg	10	11/6/2006
Xylenes, Total	ND	1.0		mg/Kg	10	11/6/2006
1,2,4-Trimethylbenzene	0.87	0.50		mg/Kg	10	11/6/2006
1,3,5-Trimethylbenzene	ND	0.50		mg/Kg	10	11/6/2006
Surr: 1,2-Dichloroethane-d4	85.9	68-146		%REC	10	11/6/2006
Surr: 4-Bromofluorobenzene	97.5	83.7-122		%REC	10	11/6/2006
Surr: Dibromofluoromethane	82.8	66.6-145		%REC	10	11/6/2006
Surr: Toluene-d8	97.9	81.8-121		%REC	10	11/6/2006
EPA METHOD 418.1: TPH						Analyst: JAT
Petroleum Hydrocarbons, TR	21000	1000		mg/Kg	10	11/4/2006

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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QA/QC SUMMARY REPORT

Client: Sandia National Lab Las Cruces

Project: Suliman Queens

Work Order: 0611009

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW9056A									
Sample ID: MB-11684		MBLK				Batch ID: 11684	Analysis Date: 11/8/2006 8:01:40 PM		
Chloride	ND	mg/Kg	0.30						
Sample ID: LCS-11684		LCS				Batch ID: 11684	Analysis Date: 11/8/2006 8:19:05 PM		
Chloride	14.80	mg/Kg	0.30	98.6	90	110			
Method: E418.1									
Sample ID: MB-11657		MBLK				Batch ID: 11657	Analysis Date: 11/4/2006		
Petroleum Hydrocarbons, TR	ND	mg/Kg	20						
Sample ID: LCS-11657		LCS				Batch ID: 11657	Analysis Date: 11/4/2006		
Petroleum Hydrocarbons, TR	92.80	mg/Kg	20	92.8	82	114			
Sample ID: LCSD-11657		LCSD				Batch ID: 11657	Analysis Date: 11/4/2006		
Petroleum Hydrocarbons, TR	102.1	mg/Kg	20	102	82	114	9.56	20	
Method: SW8260B									
Sample ID: MB-11635		MBLK				Batch ID: 11635	Analysis Date: 11/4/2006		
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050						
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050						
Sample ID: MB-11658		MBLK				Batch ID: 11658	Analysis Date: 11/4/2006		
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050						
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050						
Sample ID: LCS-11635		LCS				Batch ID: 11635	Analysis Date: 11/4/2006		
Benzene	1.074	mg/Kg	0.050	107	78	126			
Toluene	0.8104	mg/Kg	0.050	81.0	79.4	117			
Sample ID: LCS-11658		LCS				Batch ID: 11658	Analysis Date: 11/4/2006		
Benzene	0.9380	mg/Kg	0.050	93.8	78	126			
Toluene	0.8625	mg/Kg	0.050	86.2	79.4	117			
Sample ID: LCSD-11635		LCSD				Batch ID: 11635	Analysis Date: 11/4/2006		
Benzene	1.025	mg/Kg	0.050	103	78	126	8.88	19	
Toluene	0.8683	mg/Kg	0.050	86.8	79.4	117	0.670	0	
Sample ID: LCSD-11658		LCSD				Batch ID: 11658	Analysis Date: 11/4/2006		
Benzene	0.9518	mg/Kg	0.050	95.2	78	126	1.46	19	
Toluene	0.8347	mg/Kg	0.050	83.5	79.4	117	3.28	0	

Qualifiers:

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

11 06 11:50 AM Jellison

11 06 11:50 AM Jellison

Remarks:

5

Date: 11 06 11 50
Time: 11:50
Name: Henry Johnson