

GW - 014

REPORTS

2009 - Present

Hydrocarbon Release Investigation

***Navajo Refining Company, Lea Refinery
Lovington, New Mexico***

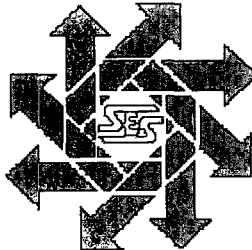
April 29, 2009-May 1, 2009

Prepared for:



***Navajo Refining Company
501 East Main Street
Artesia, New Mexico 88210***

Prepared By:



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I. Company Contacts

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II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged by Lea Refining Company to perform delineation services at the Lea Refinery at five (5) historical spill sites within the boundary of the refinery. These spill sites are addressed in Section 17 of the Discharge Permit (GW-014) for Navajo Refining Company – Lovington Refinery.

Site # 1-C-141 Dated 12/17/03

- ◆ A diesel fuel release located at the south end of the plant occurred the morning of December 7, 2003 and reported to New Mexico Oil Conservation Division (NMOCD) later that day.
- ◆ The cause of the release was a relief valve left open which discharged fluid when an associated pump was turned on.
- ◆ An estimated 70 barrels of fuel was released and 30 barrels was recovered.
- ◆ Approximately 100 cubic yards of contaminated soil was removed and transported to Controlled Recovery Inc., a state permitted disposal facility.

Site # 2 C-141 Dated 10/14/05

- ◆ A release located at the north end of the plant southwest of control room, occurred on October 12, 2005 and reported to NMOCD next day.
- ◆ The cause of the release was a line leak.
- ◆ An unknown amount of Naptha-Kerosene and 30 barrels were recovered.

Site # 3 C-141 Dated 10/18/07

- ◆ A crude oil release located at the north end of the plant southeast of tank 1201B, occurred the morning of October 10, 2007 and reported to NMOCD later that day.
- ◆ The cause was the relief valve releasing and overrunning sump.
- ◆ An estimated 20 barrels of crude oil was released and 5 barrels were recovered.
- ◆ Approximately 60 cubic yards of contaminated soil was removed and transported to Controlled Recovery Inc., a state permitted disposal facility.

Site # 4 C-141 Dated 10/25/07

- ◆ A crude oil release was discovered in the morning of October 25, 2007 along a pipe run, southeast of crude tanks 1201-A and 1201-B, was reported to NMOCD later that day.
- ◆ The release was caused by a pipeline developing a hole.
- ◆ An unknown amount of crude oil was released and 2 barrels were recovered.
- ◆ Approximately 20 cubic yards of contaminated soil was removed and transported to Controlled Recovery Inc., a state permitted disposal facility.

Site # 5 C-141 Dated 7/10/08

- ◆ A caustic release during a heavy rainstorm near control room, ran southeast, and pooled north of the fire station was discovered on July 10, 2008 and was reported to NMOCD.
- ◆ The release was caused by a relief valve hanging in the open position and filling and overflowing the sump.
- ◆ An estimated 150 barrels of caustic was released and 120 barrels were recovered.
- ◆ Approximately 15 cubic yards of contaminated soil was removed and transported to Controlled Recovery Inc., a state permitted disposal facility.

III. Surface and Ground Water

The closest groundwater of record listed with the New Mexico office of the state engineer is located in the same section, range and township. The depth of water in this well was 95 ft. The refinery has numerous monitor well installed within ¼ mile of all the sites. The average depth to groundwater in those wells is 97'.

IV Soils

The surface soils in the area are predominantly sand and sandy loam.

V. Work Performed

During the period April 29-May 1, 2009, SESI was onsite with Eco-Drilling to install boreholes at three (3) separate areas within the refinery, where spills or leaks of refinery related fluids were released, dating back since 2005. The boreholes were advanced to a minimum depth of 15 feet with the deepest borehole drilled to 45 feet. Samples were collected at each location for TPH, BTEX and chloride analysis. At the location having a spent caustic release soil pH was also measured.

The locations of the boreholes are shown on the report aerial photo (see Figure 2). Borehole logs are included in the report (see Figure 3) and reference the appropriate NMOCD C-141 spill report form (see Appendix B). All TPH and BTEX analyses showed levels below action limits. All soil chloride and pH results were non-elevated and were typical for uncontaminated area soils.

Site # 1-C-141 Dated 12/17/03

Immediately after the leak, the affected area was excavated by Navajo Refining Company to a depth of approximately 18 inches.

On December 16, 2003, SESI was onsite with Eco Drilling to delineate the area. A total of three (3) soil borings were installed to determine the vertical extent of contamination.

Borehole #1 and #2 were drilled to a depth of 4' and Boreholes #3 was drilled to a depth of 4-5'. Auger refusal was encountered due to a hard rock layer.

Samples were retrieved at depths ranging from 0'-5' from all boreholes. All samples were properly preserved and transported under Chain of Custody to Cardinal

Laboratories of Hobbs, New Mexico for analysis. The samples were analyzed for Total Petroleum Hydrocarbons (EPA Method 8015) and BTEX (EPA Method SW-846-8260). (See Appendix A)

The results of the analysis are as follows:

Date	Sample ID	TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)
Site # 1 C-141 Dated 12/17/03 (Boreholes 1-3)							
12/16/03	BH#1 4'	<10.0	<10.0	<0.005	0.009	0.006	<0.015
12/16/03	BH#2 4'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
12/16/03	BH#3 4-5'	<10.0	55.7	0.011	0.041	0.030	0.050

All borings were backfilled from total depth to surface with bentonite and hydrated.

The results for all boreholes indicate there was minimal vertical migration and BTEX readings are below regulatory limits.

On January 9, 2004, SESI was onsite to perform some additional delineation around valves at the spill site. Due to hard rock layer, three (3) samples were retrieved only from depths ranging from 18"-24".

All samples were properly preserved and transported under Chain of Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. The samples were analyzed for Total Petroleum Hydrocarbons (EPA Method 8015) and BTEX (EPA Method SW-846-8260). (See Appendix A)

The results of the sample analysis mentioned above are as follows:

Date	Sample ID	TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)
1/9/04	S-1	35800	1410	<0.005	0.013	0.095	0.308
1/9/04	S-2	8630	11.5	<0.005	<0.005	<0.005	<0.015
1/9/04	S-3	24200	243	<0.005	0.052	0.234	0.463

The results indicated that heavy hydrocarbon contamination was present at the bottom of the excavation, but did not migrate past the depth of 4' as evidenced by the sample results from the boreholes presented above.

On February 5, 2004, SESI was onsite with Eco Drilling to install monitor well 14.

It is recommended that no further action be required for this spill site.

Site # 2 C-141 Dated 10/14/05

On May 1, 2009, SESI was onsite with Eco-Enviro Drilling to continue delineating.

Samples were retrieved in 5' intervals from borehole #7. All samples were properly preserved and transported under Chain of Custody to ALS Laboratory Group of Houston Texas for analysis. The samples were analyzed for Chlorides (EPA Method 300), Total Petroleum Hydrocarbons (EPA Method 8015) and BTEX (EPA Method SW-846-8260). (See Appendix A)

The results of the analysis are as follows:

Date	Sample ID	Cl ⁻ (mg/Kg)	TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	TPH MOR (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl- benzene (mg/Kg)	Xylenes (mg/Kg)
Site # 2 C-141 Dated 10/14/05 (Borehole 7)									
4/30/09	BH#7 5'	5.76	<49	<0.050	<98	<0.0010	0.0015	0.0021	<0.0030
4/30/09	BH#7 10'	21.7	<50	<0.050	<100	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#7 15'	15.3	<49	<0.050	<98	<0.0010	<0.0010	<0.0010	<0.0030

All borings were backfilled from total depth to surface with bentonite and hydrated.

The results for all boreholes indicate there was minimal vertical migration and BTEX readings are below regulatory limits. In addition, the chloride levels were not an issue in the borehole.

It is recommended that no further action be required for this spill site.

Site # 3 C-141 Dated 10/18/07

On April 29-30, 2009, SESI was onsite with Eco-Enviro Drilling to continue delineating.

Samples were retrieved in 5' intervals from all boreholes. All samples were properly preserved and transported under Chain of Custody to ALS Laboratory Group of Houston Texas for analysis. The samples were analyzed for Chlorides (EPA Method 300), Total Petroleum Hydrocarbons (EPA Method 8015) and BTEX (EPA Method SW-846-8260). (See Appendix A)

The results of the analysis are as follows:

Date	Sample ID	Cl ⁻ (mg/Kg)	TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	TPH MOR (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl- benzene (mg/Kg)	Xylenes (mg/Kg)
Site # 3 C-141 Dated 10/18/07 (Boreholes 1 and 2)									
4/30/09	BH#1 5'	9.75	<49	<0.050	<97	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#1 10'	7.63	<50	<0.050	<100	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#1 15'	17.3	<49	<0.050	<98	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#2 5'	5.41	<49	<0.050	<99	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#2 10'	5.33	<49	<0.050	<97	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#2 15'	5.31	<49	<0.050	<99	<0.0010	<0.0010	<0.0010	<0.0030

All borings were backfilled from total depth to surface with bentonite and hydrated.

The results for all boreholes indicate there was minimal vertical migration and BTEX readings are below regulatory limits. All soil chloride results were non-elevated.

It is recommended that no further action be required at this spill site.

Site # 4 C-141 Dated 10/25/07

This site is scheduled for excavation and reconstruction. When the site has been cleared of all material and equipment, sufficient boreholes will be installed to delineate the area. Upon completion of the delineation, a report will be filed with the NMOCD along with an appropriate remediation work plan.

Site # 5 C-141 Dated 7/10/08

On April 29-30, 2009, SESI was onsite with Eco-Enviro Drilling to continue delineating.

Samples were retrieved in 5' intervals from all boreholes. All samples were properly preserved and transported under Chain of Custody to ALS Laboratory Group of Houston Texas for analysis. The samples were analyzed for Chlorides (EPA Method 300), Total Petroleum Hydrocarbons (EPA Method 8015) and BTEX (EPA Method SW-846-8260). (See Appendix A)

The results of the analysis are as follows:

Date	Sample ID	Cl ⁻ (mg/Kg)	TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	TPH MOR (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl-benzene (mg/Kg)	Xylenes (mg/Kg)
Site # 5 C-141 Dated 7/10/08 (Boreholes 5 and 6)									
4/30/09	BH#5 5'	7.79	<49	<0.050	<99	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#5 10'	11.6	<49	<0.050	<99	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#5 15'	6.51	<49	<0.050	<99	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#6 5'	12.3	<49	<0.050	<99	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#6 10'	12.1	<50	<0.050	<100	<0.0010	<0.0010	<0.0010	<0.0030
4/30/09	BH#6 15'	6.8	<49	<0.050	<97	<0.0010	<0.0010	<0.0010	<0.0030

All borings were backfilled from total depth to surface with bentonite and hydrated.

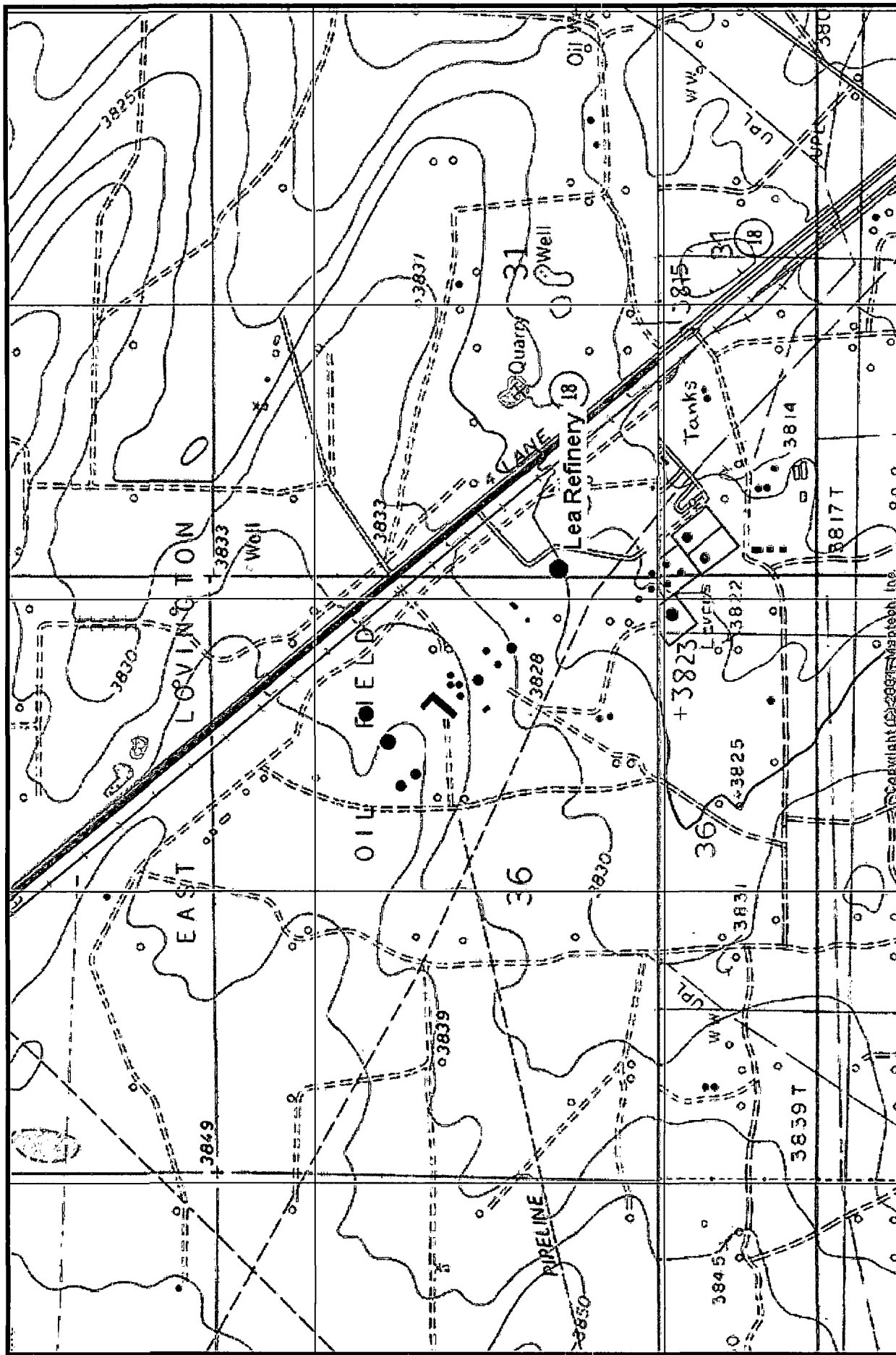
The results for all boreholes indicate there was minimal vertical migration and BTEX readings are below regulatory limits. All soil chloride results were non-elevated.

It is recommended that no further action be required at this spill site.

VI. Figures & Appendices

Figure 1 – Vicinity Map
Figure 2 – Site Plan
Figure 3 – Logs of Boring
Appendix A – Analytical Results
Appendix B – C-141

Figure 1
Vicinity Map



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Figure 2
Site Plan





Figure 3
Logs of Boring



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LOG OF BORING Site #1, BH-1

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Pipeline Booster Station Release Invest.
Navajo Refining Company
Lea Refinery, Lovington, NM
C-141, Dated 12/17/03
32° 52' 28.38" N, 103 17' 58.89" W

Date, Time Started : 12/16/03, 1000
Date, Time Complete : 12/16/03, 1100
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : CME-75

Drilled By : Eco Drilling, Midland, TX
Sampling Method : 5 ft. core barrel
Logged By : David Boyer, P.G.
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (ft.)	USCS	GRAPHIC	Sample Type: SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	TPH (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0	CB	2.8	SM		0-0.5 ft. SILTY SAND, light brown, clean								
1			CL		0.5-1.5 ft. SANDY CLAY, black, no H/C odor								
2			CA		1.5-2.8 ft. CALICHE, very light brown, hard, well cemented with nodules, no H/C odor								
4					Sample from base of core (~ 4 feet)								
5													
6													
7													
8													
9													
10													

Notes:

H/C - Petroleum hydrocarbon
BH-1 located south of leak location on pad between additive tank and dug out soil

Upon completion, plugged back to surface with PBSCO bentonite 3/8" chips, well hydrated



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LOG OF BORING Site #1, BH-2

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Pipeline Booster Station Release Invest.
Navajo Refining Company
Lea Refinery, Lovington, NM
C-141, Dated 12/17/03
32° 52' 28.00" N, 103 17' 58.79" W

Date, Time Started : 12/16/03, 1100
Date, Time Complete : 12/16/03, 1200
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : CME-75

Drilled By : Eco Drilling, Midland, TX
Sampling Method : 5 ft. core barrel
Logged By : David Boyer, P.G.
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (ft.)	USCS	GRAPHIC	Sample Type: SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	TPH (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0					0-1 Excavated area								
1													
				CA	1-1.3 ft. CALICHE, rock fragments								
2	CB	2.0			1.3-2.0 ft. CALICHE and SILTY SAND, light brown, slight diesel odor								
				CA/SM	2.0-3.0 ft. CALICHE and SILTY SAND, light brown, no diesel odor								
3													
4						H-8254-6	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<0.015
5													
6													
7													
8													
9													
10													

Notes:

H/C - Petroleum hydrocarbon

BH-2 located off pad south of BH-1

Upon completion, plugged back to surface with PBSCO bentonite 3/8" chips, well hydrated



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LOG OF BORING Site #1, BH-3

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Pipeline Booster Station Release Invest.
Navajo Refining Company
Lea Refinery, Lovington, NM
C-141, Dated 12/17/03
32° 52' 27.68" N, 103 17' 58.49" W

Date, Time Started : 12/16/03, 1200
Date, Time Complete : 12/16/03, 1300
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : CME-75

Drilled By : Eco Drilling, Midland, TX
Sampling Method : 5 ft. core barrel
Logged By : David Boyer, P.G.
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (ft.)	USCS	GRAPHIC	Sample Type: SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	TPH (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0			SO		0-1 ft. Surface SOIL, dark brown, H/C odor								
1													
2	CB	1.0	CA		1-4 ft. CALICHE, light brown/chalk white, hard, well cemented, no H/C odor, bottom depth this sample approximately 4 feet.								
3													
4			CA/ML		4-5 ft. CALICHE and SANDY SILT, light brown, no H/C odor	H-8254-7	55.7	<10.0	55.7	0.0 11	0.041	0.030	0.050
5													
6													
7													
8													
9													
10													

Notes:

H/C - Petroleum hydrocarbon

BH-3 located south of BH-2 at south end spill area

Upon completion, plugged back to surface with PBSCO bentonite 3/8" chips, well hydrated



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LOG OF BORING Site #2, BH-7

(Page 1 of 1)

Hydrocarbon Release Investigation
Navajo Lea Refinery
Lovington, New Mexico
C-141, Dated 10/14/05
N32° 52' 47.40", W103° 18' 10.60"

Date, Time Started : 05/01/09, 0820
Date, Time Complete : 05/01/09, 1000
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Foremost-Mobile B-57

Drilled By : Eco/Enviro Drilling
Sampling Method : 5 ft. core barrel
Logged By : Isaac Kincaid
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (in.)	USCS	GRAPHIC	Sample Type SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	GRO-TPH (mg/Kg)	DRO-TPH (mg/Kg)	MOR-TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0	CB	8	CA		0-0.25 ft. Fill material, CALICHE, GRAVEL, H/C staining and odor	0905050-21	<0.050	<49	<98	<0.0010	0.0015	0.0021	<0.0030
1					0.25-2 ft. CALICHE, black, staining and heavy H/C odor								
2					2-5 ft. CALICHE, light tan-brown, coarse, no staining, slight H/C odor								
3	CB	16	SP/CA		5-5.5 ft. CALICHE, light tan, slight H/C odor	0905050-22	<0.050	<50	<100	<0.0010	<0.0010	<0.0010	<0.0030
4					5.5-7 ft. CALICHE, light tan-brown, coarse, no H/C staining or odor								
5					7-10 ft. CALICHE SAND, light tan-brown, fine grained, no H/C staining or odor								
6	CB	15	SP		10-15 ft. SAND, tan-brown, fine grained, no H/C staining or odor	0905050-23	<0.050	<49	<98	<0.0010	<0.0010	<0.0010	<0.0030
7													
8													
9													
10													
11													
12													
13													
14													
15													

Notes: Boring backfilled with 6 bags bentonite, hydrated.
Maximum chloride concentration, all samples 21.7 mg/kg, 10 ft.



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LOG OF BORING Site #3, BH-1

(Page 1 of 1)

Hydrocarbon Release Investigation
Navajo Lea Refinery
Lovington, New Mexico
C-141, Dated 10/18/07
N32° 52' 49.00", W103° 18' 15.20"

Date, Time Started : 04/29/09, 0845
Date, Time Complete : 04/29/09, 0945
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Foremost-Mobile B-57

Drilled By : Eco/Enviro Drilling
Sampling Method : 5 ft. core barrel
Logged By : Isaac Kincaid
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (in.)	USCS	GRAPHIC	Sample Type SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	GRO-TPH (mg/Kg)	DRO-TPH (mg/Kg)	MOR-TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0				AR	0-0.25 ft. Fill material, brown sand and rock.								
1													
2	CB	0											
3					0.25-5 ft. CALICHE, light tan-brown, coarse with rock fragments, no H/C staining or odor								
4				CA		0905050-01	<0.050	<49	<97	<0.0010	<0.0010	<0.0010	<0.0030
5													
6					5-8.5 ft. CALICHE, light tan-brown, caliche coarse with rock fragments								
7	CB	8											
8													
9					8.5-10 ft. CALICHE and SAND, tan-brown, with rock fragments, no H/C staining or odor	0905050-02	<0.050	<50	<100	<0.0010	<0.0010	<0.0010	<0.0030
10													
11				CA/SP	10-13.5 ft. CALICHE and SAND, tan-brown, with rock fragments, no H/C staining or odor								
12													
13	CB	13.5											
14					13.5-15 ft. SAND, light tan-brown, fine grained, with rock fragments, no H/C staining or odor	0905050-03	<0.050	<50	<100	<0.0010	<0.0010	<0.0010	<0.0030
15				SP									

Notes: Boring backfilled with 6 bags bentonite, hydrated.



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Solutions, Inc.**

LOG OF BORING Site #3, BH-2

(Page 1 of 1)

Hydrocarbon Release Investigation
Navajo Lea Refinery
Lovington, New Mexico
C-141, Dated 10/18/07
N32° 52' 48.40", W103° 18' 15.30"

Date, Time Started : 04/29/09, 0950
Date, Time Complete : 04/30/09, 0845
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Foremost-Mobile B-57

Drilled By : Eco/Enviro Drilling
Sampling Method : 5 ft. core barrel
Logged By : Isaac Kincaid
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (in.)	USCS	GRAPHIC	Sample Type SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	GRO-TPH (mg/Kg)	DRO-TPH (mg/Kg)	MOR-TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0				AR	0-0.25 ft. Fill material, brown sand and rock, no H/C staining or odor								
1													
2	CB	0											
3			CA		0.25-5 ft. CALICHE, light tan-brown, hard coarse with rock fragments, no H/C staining or odor								
4													
5						0905050-04	<0.050	<49	<99	<0.0010	<0.0010	<0.0010	<0.0030
6					5-6 ft. CALICHE, light tan-brown								
7	CB	20											
8			CA/SP		6-10 ft. CALICHE and SAND, tan-brown, fine grained, with rock fragments, no H/C staining or odor								
9													
10					10-11 ft. Sandy CALICHE, tan-brown, fine grained, no H/C staining or odor	0905050-05	<0.050	<49	<99	<0.0010	<0.0010	<0.0010	<0.0030
11													
12	CB	12											
13			SP		11-15 ft. SAND, light tan-brown, fine grained, with rock fragments, no H/C staining or odor								
14													
15						0905050-06	<0.050	<49	<99	<0.0010	<0.0010	<0.0010	<0.0030

Notes: Hydraulic line broke @0950 4/29; resumed drilling at 0750 4/30.

Boring backfilled with 7 bags bentonite, hydrated.

Maximum chloride concentration, all samples 5.4 mg/kg, 5 ft.



**Safety & Environmental
Solutions, Inc.**

LOG OF BORING Site #5, BH-5

(Page 1 of 1)

Hydrocarbon Release Investigation
Navajo Lea Refinery
Lovington, New Mexico
C-141, Dated 07/10/08
N32° 52' 47.30", W103° 18' 2.09"

Date, Time Started : 04/30/09, 1345
Date, Time Complete : 04/30/09, 1440
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Foremost-Mobile B-57

Drilled By : Eco/Enviro Drilling
Sampling Method : 5 ft. core barrel
Logged By : Isaac Kincaid
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (in.)	USCS	GRAPHIC	Sample Type SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	GRO-TPH (mg/Kg)	DRO-TPH (mg/Kg)	MOR-TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0				AR	0-0.25 ft. Fill material, dark brown sand with rock								
1													
2	CB	0			0.25-5 ft. CALICHE, light tan-brown, hard, no H/C staining or odor								
3													
4			CA			0905050-19	<0.050	<49	<99	<0.0010	<0.0010	<0.0010	<0.0030
5													
6					5-8.5 ft. CALICHE, light tan-brown								
7	CB	14.5											
8													
9					8.5-10 ft. CALICHE SAND, light tan-brown, medium to coarse grained, with rock fragments, no H/C staining or odor	0905050-20	<0.050	<49	<99	<0.0010	<0.0010	<0.0010	<0.0030
10			SP/CA										
11					10-12 ft. CALICHE SAND, light tan-brown, fine grained, no H/C staining or odor								
12													
13	CB	21											
14			CA/SP		12-15 ft. SANDY CALICHE, light tan-brown, sand fine grained, with rock fragments, no H/C staining or odor	0905050-28	<0.050	<50	<99	<0.0010	<0.0010	<0.0010	<0.0030
15													

Notes: Boring backfilled with 6 bags bentonite, hydrated.
Maximum chloride concentration, all samples 11.6 mg/kg, 10 ft.
Maximum pH concentration, all samples 8.94, 10 ft.



**Safety & Environmental
Solutions, Inc.**

LOG OF BORING Site #5, BH-6

(Page 1 of 1)

Hydrocarbon Release Investigation
Navajo Lea Refinery
Lovington, New Mexico
C-141, Dated 07/10/08
N32° 52' 48.31", W103° 18' 0.22"

Date, Time Started : 04/30/09, 1450
Date, Time Complete : 04/30/09, 1600
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Foremost-Mobile B-57

Drilled By : Eco/Enviro Drilling
Sampling Method : 5 ft. core barrel
Logged By : Isaac Kincaid
Company Rep. : Steve Terry, Navajo

Depth in Feet	Sample Type	Recovery (in.)	USCS	GRAPHIC	Sample Type SS Split Spoon (18" or 24") CB Core Barrel (2.5' or 5') CT Auger Cuttings NR No recovery	Lab No.	GRO-TPH (mg/Kg)	DRO-TPH (mg/Kg)	MOR-TPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)
					DESCRIPTION								
0				AR	0-0.25 ft. Fill material, dark brown sand								
1													
2													
3	CB	0		CA	0.25-5 ft. CALICHE, brown to light tan, hard, coarse, no H/C staining or odor								
4													
5						0905050-21	<0.050	<49	<99	<0.0010	<0.0010	<0.0010	<0.0030
6				SP/CA	5-7 ft. CALICHE SAND, light tan-brown, medium grained, no H/C staining or odor								
7													
8	CB	48		CA/SP	7-10 ft. SANDY CALICHE, light tan-brown, medium grained, no H/C staining or odor								
9													
10						0905050-22	<0.050	<50	<100	<0.0010	<0.0010	<0.0010	<0.0030
11													
12													
13	CB	27		SP	10-15 ft. SAND, tan-brown, fine grained, no H/C staining or odor								
14													
15						0905050-23	<0.050	<49	<97	<0.0010	<0.0010	<0.0010	<0.0030

Notes: Boring backfilled with 8 bags bentonite, hydrated.
Maximum chloride concentration, all samples 12.3 mg/kg, 5 ft.
Maximum pH concentration, all samples 9.79, 15 ft.

Appendix A

Analytical Results



ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

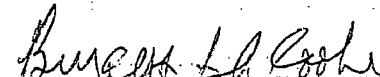
ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 12/16/03
Reporting Date: 12/19/03
Project Number: NAV-03-010
Project Name: LEA REFINERY SPILLS
Project Location: LOVINGTON, NM

Sampling Date: 12/16/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

LAB NO.	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		12/17/03	12/17/03	12/17/03	12/17/03	12/17/03	12/17/03
H8254-1	TANK 1215, BH-1, 2-2.5'	<10.0	<10.0	0.008	0.021	0.026	0.048
H8254-2	TANK 1215, BH-1, 5.5'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H8254-3	TANK 1215, BH-2, 2-2.4'	7610	10000	66.1	330	195	243
H8254-4	TANK 1215, BH-2, 10'	<10.0	68.2	<0.005	0.010	0.005	<0.015
H8254-5	PPLN. BSTR, BH-1, 4'	<10.0	<10.0	<0.005	0.009	0.006	<0.015
H8254-6	PPLN. BSTR, BH-2, 4'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H8254-7	PPLN. BSTR, BH-3, 4-5'	<10.0	55.7	0.011	0.041	0.030	0.050
Quality Control		744	810	0.096	0.104	0.102	0.310
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		93.0	101	96.0	104	102	103
Relative Percent Difference		6.7	1.2	4.1	3.7	1.7	3.2

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.


Burgess J. A. Cooke, Ph. D.

12/19/03
Date

H8254.XLS
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ARDINAL LABORATORIES, INC.

22111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page 7 of 7

Company Name: SPST		ANALYSIS REQUEST	
Project Manager: Bob Allen		POLITO	PO #:
Address: 703 E. CLINTON, #103		Company: SAME	
City: HOBBS	State: NM Zip: 88240	Attn: KRISTE	
Phone #: (505) 397-0510		Address:	
Fax #: (505) 393-4388		City:	
Project #: NAV-03-010 Project Owner: NADADO		State:	Zip:
Project Name: Leukemia Spills		Phone #:	
Project Location: LOOINGTON		Fax #:	
FOR LAB USE ONLY			
LAB I.D.	Sample I.D.	MATRIX	PRES.
(C) RAB OR (C)OMP. <td># CONTAINERS <td>GROUNDWATER SLUDGE SOIL ICE / COOL OTHER: DATE <td>SAMPLING TIME </td></td></td>	# CONTAINERS <td>GROUNDWATER SLUDGE SOIL ICE / COOL OTHER: DATE <td>SAMPLING TIME </td></td>	GROUNDWATER SLUDGE SOIL ICE / COOL OTHER: DATE <td>SAMPLING TIME </td>	SAMPLING TIME
68254 Tank	1215 BH-1, 2-2.5'	X	12/16 0840
-2 "	" , BH-1, 5.5'	X	0845
-3 "	" , BH-2, 2-2.4'	X	0910
-4 "	" , BH-2, 10'	X	0920
-5 Pipeline Booster, BH-4, 4'		X	1045
-6 Pipeline Booster, BH-2, 4'		X	1125
-7 Pipeline Booster, BH-3, 4-5'		X	1150

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Sampler Relinquished: [Signature]		Date: 12/16/03	Time: 1715
Relinquished By:		Date: 12/16/2003	Time: 5:12 PM
Delivered By: (Circle One) [Signature] • UPS • Bus • Other:		Received By: (Lab Staff) [Signature] CHECKED BY: (Initials)	

REMARKS:
 Phone Result: ☒ Yes ☐ No Additional Fax #: ☐
 Fax Result: ☒ Yes ☐ No

+ Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.



ARDINAL LABORATORIES

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR SAFETY & ENVIRONMENTAL SOLUTIONS, INC.

ATTN: BOB ALLEN

703 E. CLINTON, #103

HOBBS, NM 88240

FAX TO: (505) 393-4388

Receiving Date: 01/12/03

Reporting Date: 01/13/04

Project Number: NAV-03-010

Project Name: PIPE LINE BOOSTER STATE 003

Project Location: LOVINGTON, NM, LEA REFINERY

Sampling Date: 01/09/04

Sample Type: SOIL

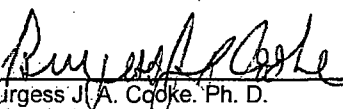
Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		01/12/04	01/12/04	01/12/04	01/12/04	01/12/04	01/12/04
H8346-1	S-1	1410	35800	<0.005	0.013	0.095	0.308
H8346-2	S-2	11.5	8630	<0.005	<0.005	<0.005	<0.015
H8346-3	S-3	243	24200	<0.005	0.052	0.234	0.463
Quality Control		751	738	0.092	0.092	0.093	0.286
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		93.8	92.3	91.7	92.3	93.2	95.3
Relative Percent Difference		6.0	3.1	1.8	0.4	1.1	0.3

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.


Burgess J. A. Cooke, Ph. D.

1/13/04
Date

H8346.XLS

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(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Company Name: SEST		Project Manager: Bob Allen		Address: 703 E. CLINTON, #103		City: HOBBS		State: NM Zip: 88240		Phone #: (505) 397-0510		Fax #: (505) 393-4388	
Project #: NAV-03-010		Project Owner: NAHAF		Project Name: Pipeline Boertgen		Project Location: Boertgen, Lea Reservoir		Company: SAME		Attn: Krista		Address:	
Project Location: Boertgen, Lea Reservoir		Phone #: 11/9		Fax #: 11/9		City:		State:		Zip:		Company: SAME	
Project Name: Pipeline Boertgen		Project #: 11/9		Fax #: 11/9		City:		State:		Zip:		Company: SAME	
Project Location: Boertgen, Lea Reservoir		Phone #: 11/9		Fax #: 11/9		City:		State:		Zip:		Company: SAME	

FOR LAB USE ONLY		LAB I.D.		Sample I.D.		MATRX		PRES.		SAMPLING		
LAB I.D.	Sample I.D.	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME
rk346-1	S-1	1	1	1	1	1	1	1	1	1	11/9	1140
-2	S-2	1	1	1	1	1	1	1	1	1	11/9	1145
-3	S-3	1	1	1	1	1	1	1	1	1	11/9	1155

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Sampler Relinquished: 11/9/04 Relinquished By: Bob Allen Delivered By: (Circle One) Sampler - UPS - Bus - Other:	
Received By: 11/9/04 Date: 11/9/04 Time: 10:50 Received By: (Lab Staff) Checked By: Bob Allen Sample Condition: Cool, Intact ☒ Yes ☐ No Yes ☒ No ☐	

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and at cost of collection, including attorney's fees.	
Phone Result ☐ Yes ☒ No Fax Result ☒ Yes ☐ No Additional Fax #:	
REMARKS:	

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

18-May-09

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: NAV-09-004-Lea Refining

Work Order : 0905050

Dear Darrell,

ALS Laboratory Group received 28 samples on 5/2/2009 08:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 51.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-08-TX

ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

Phone: (281) 530-5656 Fax: (281) 530-5887

www.alsglobal.com www.eiabi.com

A Campbell Brothers Limited Company

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Work Order: 0905050

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0905050-01	BH#1 5'	Soil		4/29/2009 09:05	5/2/2009 08:30	☐
0905050-02	BH#1 10'	Soil		4/29/2009 09:25	5/2/2009 08:30	☐
0905050-03	BH#1 15'	Soil		4/29/2009 09:35	5/2/2009 08:30	☐
0905050-04	BH#2 5'	Soil		4/30/2009 08:00	5/2/2009 08:30	☐
0905050-05	BH#2 10'	Soil		4/30/2009 08:10	5/2/2009 08:30	☐
0905050-06	BH#2 15'	Soil		4/30/2009 08:30	5/2/2009 08:30	☐
0905050-07	BH#3 5'	Soil		4/30/2009 09:20	5/2/2009 08:30	☐
0905050-08	BH#3 10'	Soil		4/30/2009 09:35	5/2/2009 08:30	☐
0905050-09	BH#3 15'	Soil		4/30/2009 09:40	5/2/2009 08:30	☐
0905050-10	BH#3 20'	Soil		4/30/2009 09:50	5/2/2009 08:30	☐
0905050-11	BH#3 25'	Soil		4/30/2009 10:05	5/2/2009 08:30	☐
0905050-12	BH#3 30'	Soil		4/30/2009 10:30	5/2/2009 08:30	☐
0905050-13	BH#3 35'	Soil		4/30/2009 10:55	5/2/2009 08:30	☐
0905050-14	BH#3 40'	Soil		4/30/2009 11:15	5/2/2009 08:30	☐
0905050-15	BH#3 45'	Soil		4/30/2009 11:30	5/2/2009 08:30	☐
0905050-16	BH#4 5'	Soil		4/30/2009 12:50	5/2/2009 08:30	☐
0905050-17	BH#4 10'	Soil		4/30/2009 13:10	5/2/2009 08:30	☐
0905050-18	BH#4 15'	Soil		4/30/2009 13:20	5/2/2009 08:30	☐
0905050-19	BH#5 5'	Soil		4/30/2009 14:00	5/2/2009 08:30	☐
0905050-20	BH#5 10'	Soil		4/30/2009 14:25	5/2/2009 08:30	☐
0905050-21	BH#6 5'	Soil		4/30/2009 15:15	5/2/2009 08:30	☐
0905050-22	BH#6 10'	Soil		4/30/2009 15:25	5/2/2009 08:30	☐
0905050-23	BH#6 15'	Soil		4/30/2009 15:40	5/2/2009 08:30	☐
0905050-24	BH#7 5'	Soil		5/1/2009 08:45	5/2/2009 08:30	☐
0905050-25	BH#7 10'	Soil		5/1/2009 09:00	5/2/2009 08:30	☐
0905050-26	BH#7 15'	Soil		5/1/2009 09:25	5/2/2009 08:30	☐
0905050-27	Trip Blank	Water		5/1/2009 09:25	5/2/2009 08:30	☐
0905050-28	BH#5 15'	Soil		4/30/2009 14:27	5/2/2009 08:30	☐

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Work Order: 0905050

Case Narrative

BTEX (Samples 0905050-08, 09, 10, 11, 12 and 13) recovery out of control limits for surrogates. confirmed by reanalysis.

Gasoline Range Organics (Sample 0905050-08, 09, 10, 11,) recovery out of control limits for surrogates. Confirmed by reanalysis.

Batch R76430 BTEX (sample 0905020-02) MS unrelated sample.

Batch R76752 GRO (sample 0905050-10) MS/MSD recovery out of control limits due to matrix.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#1 5'
Collection Date: 4/29/2009 09:05 AM

Work Order: 0905050
Lab ID: 0905050-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 04:46 PM
TPH (Motor Oil Range)	ND		97	mg/Kg	1	5/11/2009 04:46 PM
Surr: 2-Fluorobiphenyl	126		70-130	%REC	1	5/11/2009 04:46 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/6/2009 11:07 AM
Surr: 4-Bromofluorobenzene	120		70-130	%REC	1	5/6/2009 11:07 AM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 02:53 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 02:53 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/4/2009 02:53 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/4/2009 02:53 PM
Surr: 4-Bromofluorobenzene	98.8		75-131	%REC	1	5/4/2009 02:53 PM
Surr: Trifluorotoluene	101		73-130	%REC	1	5/4/2009 02:53 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	9.75		4.99	mg/Kg	1	5/7/2009 07:01 PM
Surr: Selenate (surr)	106		85-115	%REC	1	5/7/2009 07:01 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#1 10'
 Collection Date: 4/29/2009 09:25 AM

Work Order: 0905050
 Lab ID: 0905050-02
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		50	mg/Kg	1	5/11/2009 06:24 PM
TPH (Motor Oil Range)	ND		100	mg/Kg	1	5/11/2009 06:24 PM
Surr: 2-Fluorobiphenyl	128		70-130	%REC	1	5/11/2009 06:24 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/6/2009 04:29 PM
Surr: 4-Bromofluorobenzene	119		70-130	%REC	1	5/6/2009 04:29 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 03:26 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 03:26 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/4/2009 03:26 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/4/2009 03:26 PM
Surr: 4-Bromofluorobenzene	101		75-131	%REC	1	5/4/2009 03:26 PM
Surr: Trifluorotoluene	101		73-130	%REC	1	5/4/2009 03:26 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	7.63		4.90	mg/Kg	1	5/7/2009 07:24 PM
Surr: Selenate (surr)	105		85-115	%REC	1	5/7/2009 07:24 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#1 15'

Collection Date: 4/29/2009 09:35 AM

Work Order: 0905050

Lab ID: 0905050-03

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 06:56 PM
TPH (Motor Oil Range)	ND		98	mg/Kg	1	5/11/2009 06:56 PM
Surr: 2-Fluorobiphenyl	98.5		70-130	%REC	1	5/11/2009 06:56 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/6/2009 04:05 PM
Surr: 4-Bromofluorobenzene	121		70-130	%REC	1	5/6/2009 04:05 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 03:59 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 03:59 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/4/2009 03:59 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/4/2009 03:59 PM
Surr: 4-Bromofluorobenzene	101		75-131	%REC	1	5/4/2009 03:59 PM
Surr: Trifluorotoluene	100		73-130	%REC	1	5/4/2009 03:59 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	17.3		4.97	mg/Kg	1	5/7/2009 07:47 PM
Surr: Selenate (surr)	106		85-115	%REC	1	5/7/2009 07:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#2 5'
 Collection Date: 4/30/2009 08:00 AM

Work Order: 0905050
 Lab ID: 0905050-04
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 07:29 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/11/2009 07:29 PM
Surr: 2-Fluorobiphenyl	117		70-130	%REC	1	5/11/2009 07:29 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/6/2009 06:08 PM
Surr: 4-Bromofluorobenzene	119		70-130	%REC	1	5/6/2009 06:08 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 04:32 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 04:32 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/4/2009 04:32 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/4/2009 04:32 PM
Surr: 4-Bromofluorobenzene	101		75-131	%REC	1	5/4/2009 04:32 PM
Surr: Trifluorotoluene	101		73-130	%REC	1	5/4/2009 04:32 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.41		4.96	mg/Kg	1	5/7/2009 08:10 PM
Surr: Selenate (surr)	105		85-115	%REC	1	5/7/2009 08:10 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#2 10'
 Collection Date: 4/30/2009 08:10 AM

Work Order: 0905050
 Lab ID: 0905050-05
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 08:01 PM
TPH (Motor Oil Range)	ND		97	mg/Kg	1	5/11/2009 08:01 PM
Surr: 2-Fluorobiphenyl	130		70-130	%REC	1	5/11/2009 08:01 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/6/2009 06:33 PM
Surr: 4-Bromofluorobenzene	120		70-130	%REC	1	5/6/2009 06:33 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 05:04 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 05:04 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/4/2009 05:04 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/4/2009 05:04 PM
Surr: 4-Bromofluorobenzene	99.5		75-131	%REC	1	5/4/2009 05:04 PM
Surr: Trifluorotoluene	100		73-130	%REC	1	5/4/2009 05:04 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.33		4.99	mg/Kg	1	5/7/2009 08:33 PM
Surr: Selenate (surr)	99.4		85-115	%REC	1	5/7/2009 08:33 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#2 15'
Collection Date: 4/30/2009 08:30 AM

Work Order: 0905050
Lab ID: 0905050-06
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 08:34 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/11/2009 08:34 PM
Surr: 2-Fluorobiphenyl	127		70-130	%REC	1	5/11/2009 08:34 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/6/2009 06:58 PM
Surr: 4-Bromofluorobenzene	123		70-130	%REC	1	5/6/2009 06:58 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 10:08 AM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 10:08 AM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 10:08 AM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 10:08 AM
Surr: 4-Bromofluorobenzene	97.3		75-131	%REC	1	5/5/2009 10:08 AM
Surr: Trifluorotoluene	100		73-130	%REC	1	5/5/2009 10:08 AM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.31		4.99	mg/Kg	1	5/7/2009 08:56 PM
Surr: Selenate (surr)	106		85-115	%REC	1	5/7/2009 08:56 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#3 5'
Collection Date: 4/30/2009 09:20 AM

Work Order: 0905050
Lab ID: 0905050-07
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	370		49	mg/Kg	1	5/11/2009 09:07 PM
TPH (Motor Oil Range)	ND		97	mg/Kg	1	5/11/2009 09:07 PM
Surr: 2-Fluorobiphenyl	128		70-130	%REC	1	5/11/2009 09:07 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	0.58		0.050	mg/Kg	1	5/6/2009 08:37 PM
Surr: 4-Bromofluorobenzene	124		70-130	%REC	1	5/6/2009 08:37 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 11:37 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 11:37 PM
Ethylbenzene	0.055		0.0010	mg/Kg	1	5/4/2009 11:37 PM
Xylenes, Total	0.022		0.0030	mg/Kg	1	5/4/2009 11:37 PM
Surr: 4-Bromofluorobenzene	127		75-131	%REC	1	5/4/2009 11:37 PM
Surr: Trifluorotoluene	96.4		73-130	%REC	1	5/4/2009 11:37 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.26		4.94	mg/Kg	1	5/7/2009 09:18 PM
Surr: Selenate (surr)	107		85-115	%REC	1	5/7/2009 09:18 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#3 10'
 Collection Date: 4/30/2009 09:35 AM

Work Order: 0905050
 Lab ID: 0905050-08
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	2,500		99	mg/Kg	2	5/12/2009 06:39 PM
TPH (Motor Oil Range)	ND		200	mg/Kg	2	5/12/2009 06:39 PM
Surr: 2-Fluorobiphenyl	74.1		70-130	%REC	2	5/12/2009 06:39 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	28		0.050	mg/Kg	1	5/6/2009 07:23 PM
Surr: 4-Bromofluorobenzene	546	S	70-130	%REC	1	5/6/2009 07:23 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	0.0048		0.0010	mg/Kg	1	5/5/2009 12:10 AM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 12:10 AM
Ethylbenzene	3.4		0.12	mg/Kg	125	5/4/2009 03:14 PM
Xylenes, Total	4.1		0.38	mg/Kg	125	5/4/2009 03:14 PM
Surr: 4-Bromofluorobenzene	194	S	75-131	%REC	1	5/5/2009 12:10 AM
Surr: 4-Bromofluorobenzene	122		75-131	%REC	125	5/4/2009 03:14 PM
Surr: Trifluorotoluene	100		73-130	%REC	1	5/5/2009 12:10 AM
Surr: Trifluorotoluene	97.0		73-130	%REC	125	5/4/2009 03:14 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.96		4.96	mg/Kg	1	5/7/2009 09:41 PM
Surr: Selenate (surr)	106		85-115	%REC	1	5/7/2009 09:41 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#3 15'
 Collection Date: 4/30/2009 09:40 AM

Work Order: 0905050
 Lab ID: 0905050-09
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	2,200		99	mg/Kg	2	5/12/2009 07:12 PM
TPH (Motor Oil Range)	ND		200	mg/Kg	2	5/12/2009 07:12 PM
Surr: 2-Fluorobiphenyl	73.5		70-130	%REC	2	5/12/2009 07:12 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	20		0.050	mg/Kg	1	5/6/2009 07:47 PM
Surr: 4-Bromofluorobenzene	427	S	70-130	%REC	1	5/6/2009 07:47 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	0.0015		0.0010	mg/Kg	1	5/4/2009 06:10 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 06:10 PM
Ethylbenzene	1.1		0.12	mg/Kg	125	5/6/2009 02:56 PM
Xylenes, Total	0.60		0.015	mg/Kg	5	5/5/2009 12:52 PM
Surr: 4-Bromofluorobenzene	112		75-131	%REC	125	5/6/2009 02:56 PM
Surr: 4-Bromofluorobenzene	180	S	75-131	%REC	1	5/4/2009 06:10 PM
Surr: 4-Bromofluorobenzene	128		75-131	%REC	5	5/5/2009 12:52 PM
Surr: Trifluorotoluene	97.4		73-130	%REC	5	5/5/2009 12:52 PM
Surr: Trifluorotoluene	94.5		73-130	%REC	125	5/6/2009 02:56 PM
Surr: Trifluorotoluene	101		73-130	%REC	1	5/4/2009 06:10 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.55		4.90	mg/Kg	1	5/7/2009 11:13 PM
Surr: Selenate (surr)	109		85-115	%REC	1	5/7/2009 11:13 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#3 20'
Collection Date: 4/30/2009 09:50 AM

Work Order: 0905050
Lab ID: 0905050-10
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	4,600		250	mg/Kg	5	5/12/2009 07:44 PM
TPH (Motor Oil Range)	ND		490	mg/Kg	5	5/12/2009 07:44 PM
Surr: 2-Fluorobiphenyl	123		70-130	%REC	5	5/12/2009 07:44 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	26		0.050	mg/Kg	1	5/6/2009 08:12 PM
Surr: 4-Bromofluorobenzene	568	S	70-130	%REC	1	5/6/2009 08:12 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	0.0029		0.0010	mg/Kg	1	5/4/2009 06:43 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 06:43 PM
Ethylbenzene	3.3		0.12	mg/Kg	125	5/6/2009 03:23 PM
Xylenes, Total	0.81		0.015	mg/Kg	5	5/5/2009 01:25 PM
Surr: 4-Bromofluorobenzene	112		75-131	%REC	125	5/6/2009 03:23 PM
Surr: 4-Bromofluorobenzene	75.3		75-131	%REC	1	5/4/2009 06:43 PM
Surr: 4-Bromofluorobenzene	198	S	75-131	%REC	5	5/5/2009 01:25 PM
Surr: Trifluorotoluene	98.5		73-130	%REC	5	5/5/2009 01:25 PM
Surr: Trifluorotoluene	98.5		73-130	%REC	125	5/6/2009 03:23 PM
Surr: Trifluorotoluene	104		73-130	%REC	1	5/4/2009 06:43 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	ND		4.89	mg/Kg	1	5/7/2009 11:36 PM
Surr: Selenate (surr)	107		85-115	%REC	1	5/7/2009 11:36 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#3 25'
 Collection Date: 4/30/2009 10:05 AM

Work Order: 0905050
 Lab ID: 0905050-11
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	6,100		500	mg/Kg	10	5/14/2009 02:12 PM
TPH (Motor Oil Range)	ND		990	mg/Kg	10	5/14/2009 02:12 PM
Surr: 2-Fluorobiphenyl	89.8		70-130	%REC	10	5/14/2009 02:12 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	19		0.050	mg/Kg	1	5/8/2009 02:52 PM
Surr: 4-Bromofluorobenzene	468	S	70-130	%REC	1	5/8/2009 02:52 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	0.0023		0.0010	mg/Kg	1	5/4/2009 07:16 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 07:16 PM
Ethylbenzene	3.0		0.12	mg/Kg	125	5/6/2009 03:50 PM
Xylenes, Total	0.20		0.0030	mg/Kg	1	5/4/2009 07:16 PM
Surr: 4-Bromofluorobenzene	116		75-131	%REC	1	5/4/2009 07:16 PM
Surr: 4-Bromofluorobenzene	99.4		75-131	%REC	125	5/6/2009 03:50 PM
Surr: Trifluorotoluene	102		73-130	%REC	1	5/4/2009 07:16 PM
Surr: Trifluorotoluene	93.4		73-130	%REC	125	5/6/2009 03:50 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGf
Chloride	5.30		4.88	mg/Kg	1	5/7/2009 11:59 PM
Surr: Selenate (surr)	110		85-115	%REC	1	5/7/2009 11:59 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#3 30'
Collection Date: 4/30/2009 10:30 AM

Work Order: 0905050
Lab ID: 0905050-12
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	820		50	mg/Kg	1	5/11/2009 03:40 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/11/2009 03:40 PM
Surr: 2-Fluorobiphenyl	106		70-130	%REC	1	5/11/2009 03:40 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	21		0.050	mg/Kg	1	5/8/2009 04:32 PM
Surr: 4-Bromofluorobenzene	504	S	70-130	%REC	1	5/8/2009 04:32 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	0.0022		0.0010	mg/Kg	1	5/4/2009 07:48 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 07:48 PM
Ethylbenzene	2.0		0.12	mg/Kg	125	5/6/2009 04:17 PM
Xylenes, Total	0.20		0.0030	mg/Kg	1	5/4/2009 07:48 PM
Surr: 4-Bromofluorobenzene	228	S	75-131	%REC	1	5/4/2009 07:48 PM
Surr: 4-Bromofluorobenzene	91.9		75-131	%REC	125	5/6/2009 04:17 PM
Surr: Trifluorotoluene	97.1		73-130	%REC	1	5/4/2009 07:48 PM
Surr: Trifluorotoluene	96.6		73-130	%REC	125	5/6/2009 04:17 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	8.13		4.88	mg/Kg	1	5/8/2009 12:22 AM
Surr: Selenate (surr)	110		85-115	%REC	1	5/8/2009 12:22 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#3 35
Collection Date: 4/30/2009 10:55 AM

Work Order: 0905050
Lab ID: 0905050-13
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	1,900		49	mg/Kg	1	5/11/2009 04:46 PM
TPH (Motor Oil Range)	ND		98	mg/Kg	1	5/11/2009 04:46 PM
Surr: 2-Fluorobiphenyl	107		70-130	%REC	1	5/11/2009 04:46 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	20		0.050	mg/Kg	1	5/8/2009 05:46 PM
Surr: 4-Bromofluorobenzene	469	S	70-130	%REC	1	5/8/2009 05:46 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	0.0016		0.0010	mg/Kg	1	5/4/2009 09:26 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 09:26 PM
Ethylbenzene	0.40		0.0050	mg/Kg	5	5/5/2009 11:14 PM
Xylenes, Total	0.12		0.0030	mg/Kg	1	5/4/2009 09:26 PM
Surr: 4-Bromofluorobenzene	126		75-131	%REC	5	5/5/2009 11:14 PM
Surr: 4-Bromofluorobenzene	189	S	75-131	%REC	1	5/4/2009 09:26 PM
Surr: Trifluorotoluene	97.0		73-130	%REC	5	5/5/2009 11:14 PM
Surr: Trifluorotoluene	97.5		73-130	%REC	1	5/4/2009 09:26 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	6.05		4.96	mg/Kg	1	5/8/2009 12:45 AM
Surr: Selenate (surr)	108		85-115	%REC	1	5/8/2009 12:45 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#3 40'
 Collection Date: 4/30/2009 11:15 AM

Work Order: 0905050
 Lab ID: 0905050-14
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		50	mg/Kg	1	5/11/2009 05:18 PM
TPH (Motor Oil Range)	ND		100	mg/Kg	1	5/11/2009 05:18 PM
Surr: 2-Fluorobiphenyl	85.4		70-130	%REC	1	5/11/2009 05:18 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 06:11 PM
Surr: 4-Bromofluorobenzene	59.9	S	70-130	%REC	1	5/8/2009 06:11 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 09:59 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 09:59 PM
Ethylbenzene	0.0015		0.0010	mg/Kg	1	5/4/2009 09:59 PM
Xylenes, Total	0.0042		0.0030	mg/Kg	1	5/4/2009 09:59 PM
Surr: 4-Bromofluorobenzene	108		75-131	%REC	1	5/4/2009 09:59 PM
Surr: Trifluorotoluene	101		73-130	%REC	1	5/4/2009 09:59 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	6.71		4.93	mg/Kg	1	5/8/2009 01:07 AM
Surr: Selenate (surr)	106		85-115	%REC	1	5/8/2009 01:07 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#3 45'
Collection Date: 4/30/2009 11:30 AM

Work Order: 0905050
Lab ID: 0905050-15
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 05:51 PM
TPH (Motor Oil Range)	ND		98	mg/Kg	1	5/11/2009 05:51 PM
Surr: 2-Fluorobiphenyl	102		70-130	%REC	1	5/11/2009 05:51 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 06:35 PM
Surr: 4-Bromofluorobenzene	88.1		70-130	%REC	1	5/8/2009 06:35 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/4/2009 10:32 PM
Toluene	ND		0.0010	mg/Kg	1	5/4/2009 10:32 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/4/2009 10:32 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/4/2009 10:32 PM
Surr: 4-Bromofluorobenzene	102		75-131	%REC	1	5/4/2009 10:32 PM
Surr: Trifluorotoluene	99.4		73-130	%REC	1	5/4/2009 10:32 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	8.21		4.96	mg/Kg	1	5/8/2009 01:30 AM
Surr: Selenate (surr)	106		85-115	%REC	1	5/8/2009 01:30 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#4 5'

Collection Date: 4/30/2009 12:50 PM

Work Order: 0905050

Lab ID: 0905050-16

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 06:24 PM
TPH (Motor Oil Range)	ND		98	mg/Kg	1	5/11/2009 06:24 PM
Surr: 2-Fluorobiphenyl	93.1		70-130	%REC	1	5/11/2009 06:24 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 03:17 PM
Surr: 4-Bromofluorobenzene	84.2		70-130	%REC	1	5/8/2009 03:17 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 03:03 PM
Toluene	0.0011		0.0010	mg/Kg	1	5/5/2009 03:03 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 03:03 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 03:03 PM
Surr: 4-Bromofluorobenzene	101		75-131	%REC	1	5/5/2009 03:03 PM
Surr: Trifluorotoluene	99.8		73-130	%REC	1	5/5/2009 03:03 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	6.18		4.93	mg/Kg	1	5/8/2009 04:16 PM
Surr: Selenate (surr)	105		85-115	%REC	1	5/8/2009 04:16 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#4 10'

Collection Date: 4/30/2009 01:10 PM

Work Order: 0905050

Lab ID: 0905050-17

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		50	mg/Kg	1	5/11/2009 06:56 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/11/2009 06:56 PM
Surr: 2-Fluorobiphenyl	100		70-130	%REC	1	5/11/2009 06:56 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 07:00 PM
Surr: 4-Bromofluorobenzene	85.5		70-130	%REC	1	5/8/2009 07:00 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 03:36 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 03:36 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 03:36 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 03:36 PM
Surr: 4-Bromofluorobenzene	98.6		75-131	%REC	1	5/5/2009 03:36 PM
Surr: Trifluorotoluene	99.4		73-130	%REC	1	5/5/2009 03:36 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.01		4.94	mg/Kg	1	5/8/2009 05:24 PM
Surr: Selenate (surr)	103		85-115	%REC	1	5/8/2009 05:24 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#4 15'

Collection Date: 4/30/2009 01:20 PM

Work Order: 0905050

Lab ID: 0905050-18

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 07:29 PM
TPH (Motor Oil Range)	ND		97	mg/Kg	1	5/11/2009 07:29 PM
Surr: 2-Fluorobiphenyl	91.7		70-130	%REC	1	5/11/2009 07:29 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 07:25 PM
Surr: 4-Bromofluorobenzene	90.2		70-130	%REC	1	5/8/2009 07:25 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 04:08 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 04:08 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 04:08 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 04:08 PM
Surr: 4-Bromofluorobenzene	97.7		75-131	%REC	1	5/5/2009 04:08 PM
Surr: Trifluorotoluene	99.2		73-130	%REC	1	5/5/2009 04:08 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.18		4.96	mg/Kg	1	5/8/2009 05:47 PM
Surr: Selenate (surr)	104		85-115	%REC	1	5/8/2009 05:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#5 5'

Collection Date: 4/30/2009 02:00 PM

Work Order: 0905050

Lab ID: 0905050-19

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 08:01 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/11/2009 08:01 PM
Surr: 2-Fluorobiphenyl	82.7		70-130	%REC	1	5/11/2009 08:01 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 07:50 PM
Surr: 4-Bromofluorobenzene	86.3		70-130	%REC	1	5/8/2009 07:50 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 04:41 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 04:41 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 04:41 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 04:41 PM
Surr: 4-Bromofluorobenzene	100		75-131	%REC	1	5/5/2009 04:41 PM
Surr: Trifluorotoluene	98.9		73-130	%REC	1	5/5/2009 04:41 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	7.79		4.99	mg/Kg	1	5/8/2009 06:10 PM
Surr: Selenate (surr)	108		85-115	%REC	1	5/8/2009 06:10 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#5 10'
 Collection Date: 4/30/2009 02:25 PM

Work Order: 0905050
 Lab ID: 0905050-20
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 08:34 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/11/2009 08:34 PM
Surr: 2-Fluorobiphenyl	97.6		70-130	%REC	1	5/11/2009 08:34 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 08:14 PM
Surr: 4-Bromofluorobenzene	86.7		70-130	%REC	1	5/8/2009 08:14 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 05:14 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 05:14 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 05:14 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 05:14 PM
Surr: 4-Bromofluorobenzene	99.2		75-131	%REC	1	5/5/2009 05:14 PM
Surr: Trifluorotoluene	99.9		73-130	%REC	1	5/5/2009 05:14 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	11.6		4.98	mg/Kg	1	5/8/2009 06:33 PM
Surr: Selenate (surr)	108		85-115	%REC	1	5/8/2009 06:33 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#6 5'

Collection Date: 4/30/2009 03:15 PM

Work Order: 0905050

Lab ID: 0905050-21

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/7/2009 02:33 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/7/2009 02:33 PM
Surr: 2-Fluorobiphenyl	88.4		70-130	%REC	1	5/7/2009 02:33 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 08:39 PM
Surr: 4-Bromofluorobenzene	87.0		70-130	%REC	1	5/8/2009 08:39 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 05:47 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 05:47 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 05:47 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 05:47 PM
Surr: 4-Bromofluorobenzene	97.1		75-131	%REC	1	5/5/2009 05:47 PM
Surr: Trifluorotoluene	97.8		73-130	%REC	1	5/5/2009 05:47 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	12.3		4.90	mg/Kg	1	5/8/2009 06:56 PM
Surr: Selenate (surr)	105		85-115	%REC	1	5/8/2009 06:56 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#6 10'

Collection Date: 4/30/2009 03:25 PM

Work Order: 0905050

Lab ID: 0905050-22

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		50	mg/Kg	1	5/11/2009 09:40 PM
TPH (Motor Oil Range)	ND		100	mg/Kg	1	5/11/2009 09:40 PM
Surr: 2-Fluorobiphenyl	99.0		70-130	%REC	1	5/11/2009 09:40 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 09:04 PM
Surr: 4-Bromofluorobenzene	87.3		70-130	%REC	1	5/8/2009 09:04 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 06:20 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 06:20 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 06:20 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg	1	5/5/2009 06:20 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 06:20 PM
Surr: 4-Bromofluorobenzene	99.8		75-131	%REC	1	5/5/2009 06:20 PM
Surr: Trifluorotoluene	99.8		73-130	%REC	1	5/5/2009 06:20 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	12.1		4.97	mg/Kg	1	5/8/2009 08:27 PM
Surr: Selenate (surr)	107		85-115	%REC	1	5/8/2009 08:27 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#6 15'

Collection Date: 4/30/2009 03:40 PM

Work Order: 0905050

Lab ID: 0905050-23

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 09:07 PM
TPH (Motor Oil Range)	ND		97	mg/Kg	1	5/11/2009 09:07 PM
Surr: 2-Fluorobiphenyl	70.5		70-130	%REC	1	5/11/2009 09:07 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 10:18 PM
Surr: 4-Bromofluorobenzene	85.0		70-130	%REC	1	5/8/2009 10:18 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 06:53 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 06:53 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 06:53 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg	1	5/5/2009 06:53 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 06:53 PM
Surr: 4-Bromofluorobenzene	97.3		75-131	%REC	1	5/5/2009 06:53 PM
Surr: Trifluorotoluene	98.5		73-130	%REC	1	5/5/2009 06:53 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	6.80		4.92	mg/Kg	1	5/8/2009 08:50 PM
Surr: Selenate (surr)	106		85-115	%REC	1	5/8/2009 08:50 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#7 5'
 Collection Date: 5/1/2009 08:45 AM

Work Order: 0905050
 Lab ID: 0905050-24
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/14/2009 01:40 PM
TPH (Motor Oil Range)	ND		98	mg/Kg	1	5/14/2009 01:40 PM
Surr: 2-Fluorobiphenyl	73.0		70-130	%REC	1	5/14/2009 01:40 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 10:43 PM
Surr: 4-Bromofluorobenzene	83.9		70-130	%REC	1	5/8/2009 10:43 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 07:25 PM
Toluene	0.0015		0.0010	mg/Kg	1	5/5/2009 07:25 PM
Ethylbenzene	0.0021		0.0010	mg/Kg	1	5/5/2009 07:25 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg	1	5/5/2009 07:25 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 07:25 PM
Surr: 4-Bromofluorobenzene	92.4		75-131	%REC	1	5/5/2009 07:25 PM
Surr: Trifluorotoluene	97.8		73-130	%REC	1	5/5/2009 07:25 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	5.76		4.90	mg/Kg	1	5/8/2009 09:13 PM
Surr: Selenate (surr)	106		85-115	%REC	1	5/8/2009 09:13 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company

Project: NAV-09-004-Lea Refining

Sample ID: BH#7 10'

Collection Date: 5/1/2009 09:00 AM

Work Order: 0905050

Lab ID: 0905050-25

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		50	mg/Kg	1	5/11/2009 11:18 PM
TPH (Motor Oil Range)	ND		100	mg/Kg	1	5/11/2009 11:18 PM
Surr: 2-Fluorobiphenyl	80.4		70-130	%REC	1	5/11/2009 11:18 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/14/2009 11:42 AM
Surr: 4-Bromofluorobenzene	89.7		70-130	%REC	1	5/14/2009 11:42 AM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 07:58 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 07:58 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 07:58 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg	1	5/5/2009 07:58 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 07:58 PM
Surr: 4-Bromofluorobenzene	99.0		75-131	%REC	1	5/5/2009 07:58 PM
Surr: Trifluorotoluene	99.0		73-130	%REC	1	5/5/2009 07:58 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	21.7		4.89	mg/Kg	1	5/12/2009 02:39 AM
Surr: Selenate (surr)	97.9		85-115	%REC	1	5/12/2009 02:39 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
Sample ID: BH#7 15'
Collection Date: 5/1/2009 09:25 AM

Work Order: 0905050
Lab ID: 0905050-26
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		49	mg/Kg	1	5/11/2009 10:45 PM
TPH (Motor Oil Range)	ND		98	mg/Kg	1	5/11/2009 10:45 PM
Surr: 2-Fluorobiphenyl	70.6		70-130	%REC	1	5/11/2009 10:45 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/8/2009 11:32 PM
Surr: 4-Bromofluorobenzene	86.6		70-130	%REC	1	5/8/2009 11:32 PM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 09:36 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 09:36 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 09:36 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg	1	5/5/2009 09:36 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 09:36 PM
Surr: 4-Bromofluorobenzene	96.8		75-131	%REC	1	5/5/2009 09:36 PM
Surr: Trifluorotoluene	98.7		73-130	%REC	1	5/5/2009 09:36 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	15.3		4.97	mg/Kg	1	5/12/2009 03:02 AM
Surr: Selenate (surr)	98.4		85-115	%REC	1	5/12/2009 03:02 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
 Project: NAV-09-004-Lea Refining
 Sample ID: BH#5 15
 Collection Date: 4/30/2009 02:27 PM

Work Order: 0905050
 Lab ID: 0905050-28
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID						
			SW8015M		Prep Date: 5/5/2009	Analyst: KMB
TPH (Diesel Range)	ND		50	mg/Kg	1	5/11/2009 10:12 PM
TPH (Motor Oil Range)	ND		99	mg/Kg	1	5/11/2009 10:12 PM
Surr: 2-Fluorobiphenyl	79.6		70-130	%REC	1	5/11/2009 10:12 PM
GASOLINE RANGE ORGANICS						
			SW8015			Analyst: DKG
Gasoline Range Organics	ND		0.050	mg/Kg	1	5/14/2009 11:17 AM
Surr: 4-Bromofluorobenzene	89.9		70-130	%REC	1	5/14/2009 11:17 AM
BTEX						
			SW8021B			Analyst: WLR
Benzene	ND		0.0010	mg/Kg	1	5/5/2009 10:09 PM
Toluene	ND		0.0010	mg/Kg	1	5/5/2009 10:09 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	5/5/2009 10:09 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	5/5/2009 10:09 PM
Surr: 4-Bromofluorobenzene	98.3		75-131	%REC	1	5/5/2009 10:09 PM
Surr: Trifluorotoluene	99.3		73-130	%REC	1	5/5/2009 10:09 PM
ANIONS						
			E300		Prep Date: 5/6/2009	Analyst: IGF
Chloride	6.51		4.92	mg/Kg	1	5/12/2009 03:25 AM
Surr: Selenate (surr)	99.2		85-115	%REC	1	5/12/2009 03:25 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Work Order: 0905050
Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: 35866 Instrument ID FID-8 Method: SW8015M

MBLK Sample ID: FBLKS1-090505-35866 Units: mg/Kg Analysis Date: 5/11/2009 03:07 PM

Client ID: Run ID: FID-8_090505A SeqNo: 1669789 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	ND	50								
TPH (Motor Oil Range)	ND	50								
Surr: 2-Fluorobiphenyl	29.94	0	25	0	120	70-130	0			

LCS Sample ID: FLCSS1-090505-35866 Units: mg/Kg Analysis Date: 5/11/2009 03:40 PM

Client ID: Run ID: FID-8_090505A SeqNo: 1669790 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	310	50	250	0	124	70-130	0			
TPH (Motor Oil Range)	191.6	50	250	0	76.6	70-130	0			
Surr: 2-Fluorobiphenyl	30.59	0	25	0	122	70-130	0			

LCSD Sample ID: FLCSDS1-090505-35866 Units: mg/Kg Analysis Date: 5/11/2009 04:13 PM

Client ID: Run ID: FID-8_090505A SeqNo: 1669791 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	287.8	50	250	0	115	70-130	310	7.42	30	
TPH (Motor Oil Range)	200.2	50	250	0	80.1	70-130	191.6	4.4	30	
Surr: 2-Fluorobiphenyl	31.87	0	25	0	127	70-130	30.59	4.12	30	

MS Sample ID: 0905050-01BMS Units: mg/Kg Analysis Date: 5/11/2009 05:18 PM

Client ID: BH#1 5' Run ID: FID-8_090505A SeqNo: 1669793 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	292.5	49	242.7	1.038	120	70-130	0			
TPH (Motor Oil Range)	246.5	49	242.7	0	102	70-130	0			
Surr: 2-Fluorobiphenyl	31.48	0	24.27	0	130	70-130	0			

MSD Sample ID: 0905050-01BMSD Units: mg/Kg Analysis Date: 5/11/2009 05:51 PM

Client ID: BH#1 5' Run ID: FID-8_090505A SeqNo: 1669794 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	293	49	243.7	1.038	120	70-130	292.5	0.167	30	
TPH (Motor Oil Range)	254.3	49	243.7	0	104	70-130	246.5	3.12	30	
Surr: 2-Fluorobiphenyl	31.48	0	24.37	0	129	70-130	31.48	0.00509	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0905050
Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: **35866**

Instrument ID **FID-8**

Method: **SW8015M**

The following samples were analyzed in this batch:

0905050-01B	0905050-02B	0905050-03B
0905050-04B	0905050-05B	0905050-06B
0905050-07B	0905050-08B	0905050-09B
0905050-10B	0905050-11B	0905050-12B
0905050-13B	0905050-14B	0905050-15B
0905050-16B	0905050-17B	0905050-18B
0905050-19B	0905050-20B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: 35867 Instrument ID FID-7 Method: SW8015M

MBLK Sample ID: FBLKS2-090505-35867 Units: mg/Kg Analysis Date: 5/7/2009 11:15 AM

Client ID: Run ID: FID-7_090505A SeqNo: 1664705 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	ND	50								
TPH (Motor Oil Range)	ND	50								
Surr: 2-Fluorobiphenyl	28.12	0	25	0	112	70-130	0			

LCS Sample ID: FLCSS2-090505-35867 Units: mg/Kg Analysis Date: 5/7/2009 01:27 PM

Client ID: Run ID: FID-7_090505A SeqNo: 1664944 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	237.5	50	250	0	95	70-130	0			
TPH (Motor Oil Range)	304.9	50	250	0	122	70-130	0			
Surr: 2-Fluorobiphenyl	28.33	0	25	0	113	70-130	0			

LCSD Sample ID: FLCSDS2-090505-35867 Units: mg/Kg Analysis Date: 5/7/2009 01:59 PM

Client ID: Run ID: FID-7_090505A SeqNo: 1664945 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	230	50	250	0	92	70-130	237.5	3.21	30	
TPH (Motor Oil Range)	298.7	50	250	0	119	70-130	304.9	2.05	30	
Surr: 2-Fluorobiphenyl	29.44	0	25	0	118	70-130	28.33	3.86	30	

MS Sample ID: 0905050-21BMS Units: mg/Kg Analysis Date: 5/7/2009 03:05 PM

Client ID: BH#6 5' Run ID: FID-7_090505A SeqNo: 1664949 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	200.8	49	246.1	0.05187	81.6	70-130	0			
TPH (Motor Oil Range)	284	49	246.1	1.956	115	70-130	0			
Surr: 2-Fluorobiphenyl	19.49	0	24.61	0	79.2	70-130	0			

MSD Sample ID: 0905050-21BMSD Units: mg/Kg Analysis Date: 5/7/2009 03:38 PM

Client ID: BH#6 5' Run ID: FID-7_090505A SeqNo: 1664951 Prep Date: 5/5/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	206.9	49	246.3	0.05187	84	70-130	200.8	3.03	30	
TPH (Motor Oil Range)	266.5	49	246.3	1.956	107	70-130	284	6.35	30	
Surr: 2-Fluorobiphenyl	25.1	0	24.63	0	102	70-130	19.49	25.2	30	

The following samples were analyzed in this batch:

0905050-21B	0905050-22B	0905050-23B
0905050-24B	0905050-25B	0905050-26B
0905050-28B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: **R76430** Instrument ID **BTEX3** Method: **SW8021B**

MBLK Sample ID: **BBLKS1-050409-R76430** Units: **µg/Kg** Analysis Date: **5/4/2009 10:17 AM**

Client ID: Run ID: **BTEX3_090504A** SeqNo: **1661826** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	30.37	1.0	30	0	101	75-131	0			
Surr: Trifluorotoluene	30.78	1.0	30	0	103	73-130	0			

LCS Sample ID: **BLCSS1-050409-R76430** Units: **µg/Kg** Analysis Date: **5/4/2009 09:12 AM**

Client ID: Run ID: **BTEX3_090504A** SeqNo: **1661825** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.84	1.0	20	0	109	74-129	0			
Toluene	20.96	1.0	20	0	105	75-128	0			
Ethylbenzene	20.62	1.0	20	0	103	73-127	0			
Xylenes, Total	62.57	3.0	60	0	104	74-127	0			
Surr: 4-Bromofluorobenzene	32.88	1.0	30	0	110	75-131	0			
Surr: Trifluorotoluene	31.56	1.0	30	0	105	73-130	0			

MS Sample ID: **0905020-02AMS** Units: **µg/Kg** Analysis Date: **5/4/2009 01:48 PM**

Client ID: Run ID: **BTEX3_090504A** SeqNo: **1661832** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	15.61	1.0	20	0	78.1	74-129	0			
Toluene	14.94	1.0	20	0	74.7	75-128	0			S
Ethylbenzene	15.03	1.0	20	0.9792	70.2	73-127	0			S
Xylenes, Total	44.66	3.0	60	3.175	69.1	74-127	0			S
Surr: 4-Bromofluorobenzene	27.45	1.0	30	0	91.5	75-131	0			
Surr: Trifluorotoluene	27.62	1.0	30	0	92.1	73-130	0			

MSD Sample ID: **0905020-02AMSD** Units: **µg/Kg** Analysis Date: **5/4/2009 12:43 PM**

Client ID: Run ID: **BTEX3_090504A** SeqNo: **1661830** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.41	1.0	20	0	92.1	74-129	15.61	16.5	30	
Toluene	17.59	1.0	20	0	88	75-128	14.94	16.3	30	
Ethylbenzene	17.82	1.0	20	0.9792	84.2	73-127	15.03	17	30	
Xylenes, Total	52.89	3.0	60	3.175	82.9	74-127	44.66	16.9	30	
Surr: 4-Bromofluorobenzene	28.2	1.0	30	0	94	75-131	27.45	2.73	30	
Surr: Trifluorotoluene	28.87	1.0	30	0	96.2	73-130	27.62	4.42	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0905050
Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: **R76430** Instrument ID **BTEX3** Method: **SW8021B**

The following samples were analyzed in this batch:

0905050-01A	0905050-02A	0905050-03A
0905050-04A	0905050-05A	0905050-07A
0905050-08A	0905050-09A	0905050-10A
0905050-11A	0905050-12A	0905050-13A
0905050-14A	0905050-15A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: **R76451** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **MEOHW1-050409-R76451** Units: **µg/L** Analysis Date: **5/4/2009 08:20 AM**

Client ID: Run ID: **BTEX1_090504A** SeqNo: **1662154** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	30.65	1.0	30	0	102	77-129	0			
Surr: Trifluorotoluene	32.33	1.0	30	0	108	75-130	0			

MBLK Sample ID: **BBLKW1-050409-R76451** Units: **µg/L** Analysis Date: **5/4/2009 08:50 AM**

Client ID: Run ID: **BTEX1_090504A** SeqNo: **1662155** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	28.94	1.0	30	0	96.5	77-129	0			
Surr: Trifluorotoluene	32.65	1.0	30	0	109	75-130	0			

LCS Sample ID: **BLCSW1-050409-R76451** Units: **µg/L** Analysis Date: **5/4/2009 07:53 AM**

Client ID: Run ID: **BTEX1_090504A** SeqNo: **1662153** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	17.8	1.0	20	0	89	76-125	0			
Xylenes, Total	51.58	3.0	60	0	86	79-124	0			
Surr: 4-Bromofluorobenzene	29.62	1.0	30	0	98.7	77-129	0			
Surr: Trifluorotoluene	32.41	1.0	30	0	108	75-130	0			

MS Sample ID: **0904680-07AMS** Units: **µg/L** Analysis Date: **5/4/2009 10:10 AM**

Client ID: Run ID: **BTEX1_090504A** SeqNo: **1662158** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	20.44	1.0	20	0	102	76-125	0			
Xylenes, Total	60.08	3.0	60	0	100	79-124	0			
Surr: 4-Bromofluorobenzene	29.57	1.0	30	0	98.6	77-129	0			
Surr: Trifluorotoluene	33.66	1.0	30	0	112	75-130	0			

MSD Sample ID: **0904680-07AMSD** Units: **µg/L** Analysis Date: **5/4/2009 10:37 AM**

Client ID: Run ID: **BTEX1_090504A** SeqNo: **1662159** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	20.33	1.0	20	0	102	76-125	20.44	0.562	20	
Xylenes, Total	58.84	3.0	60	0	98.1	79-124	60.08	2.09	20	
Surr: 4-Bromofluorobenzene	30	1.0	30	0	100	77-129	29.57	1.46	20	
Surr: Trifluorotoluene	32.52	1.0	30	0	108	75-130	33.66	3.44	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0905050
Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: **R76451** Instrument ID **BTEX1** Method: **SW8021B**

The following samples were analyzed in this batch:

0905050-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: R76502 Instrument ID BTEX3 Method: SW8021B

MBLK	Sample ID: BBLKS1-050509-R76502				Units: µg/Kg		Analysis Date: 5/5/2009 09:35 AM			
Client ID:	Run ID: BTEX3_090505A				SeqNo: 1663129		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether	ND	5.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	29.06	1.0	30	0	96.9	75-131	0			
Surr: Trifluorotoluene	29.97	1.0	30	0	99.9	73-130	0			

LCS	Sample ID: BLCSS1-050509-R76502				Units: µg/Kg		Analysis Date: 5/5/2009 08:30 AM			
Client ID:	Run ID: BTEX3_090505A				SeqNo: 1663128		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.68	1.0	20	0	108	74-129	0			
Toluene	20.64	1.0	20	0	103	75-128	0			
Ethylbenzene	20.48	1.0	20	0	102	73-127	0			
Methyl tert-butyl ether	109	5.0	100	0	109	73-128	0			
Xylenes, Total	61.67	3.0	60	0	103	74-127	0			
Surr: 4-Bromofluorobenzene	30.25	1.0	30	0	101	75-131	0			
Surr: Trifluorotoluene	30.28	1.0	30	0	101	73-130	0			

MS	Sample ID: 0905050-06AMS				Units: µg/Kg		Analysis Date: 5/5/2009 10:41 AM				
Client ID: BH#2 15'			Run ID: BTEX3_090505A			SeqNo: 1663131		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	20.64	1.0	20	0	103	74-129	0				
Toluene	19.71	1.0	20	0	98.5	75-128	0				
Ethylbenzene	19.55	1.0	20	0	97.8	73-127	0				
Methyl tert-butyl ether	104.4	5.0	100	0	104	73-128	0				
Xylenes, Total	58.75	3.0	60	0	97.9	74-127	0				
Surr: 4-Bromofluorobenzene	30.06	1.0	30	0	100	75-131	0				
Surr: Trifluorotoluene	29.43	1.0	30	0	98.1	73-130	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0905050
Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: R76502 Instrument ID BTEX3 Method: SW8021B

MSD	Sample ID: 0905050-06AMSD				Units: µg/Kg		Analysis Date: 5/5/2009 11:13 AM			
Client ID: BH#2 15'			Run ID: BTEX3_090505A			SeqNo: 1663132		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.74	1.0	20	0	109	74-129	20.64	5.21	30	
Toluene	20.76	1.0	20	0	104	75-128	19.71	5.22	30	
Ethylbenzene	20.52	1.0	20	0	103	73-127	19.55	4.84	30	
Methyl tert-butyl ether	108.8	5.0	100	0	109	73-128	104.4	4.13	30	
Xylenes, Total	61.58	3.0	60	0	103	74-127	58.75	4.71	30	
Surr: 4-Bromofluorobenzene	29.18	1.0	30	0	97.3	75-131	30.06	2.97	30	
Surr: Trifluorotoluene	29.8	1.0	30	0	99.3	73-130	29.43	1.25	30	

The following samples were analyzed in this batch:

0905050-06A	0905050-09A	0905050-10A
0905050-13A	0905050-16A	0905050-17A
0905050-18A	0905050-19A	0905050-20A
0905050-21A	0905050-22A	0905050-23A
0905050-24A	0905050-25A	0905050-26A
0905050-28A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: R76536 Instrument ID FID-9 Method: SW8015

MBLK	Sample ID: GBLKS-050609-R76536				Units: mg/Kg		Analysis Date: 5/6/2009 10:43 AM			
Client ID:	Run ID: FID-9_090506A				SeqNo: 1664578		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	0.1154	0.0050	0.1	0	115	70-130	0			

LCS	Sample ID: GLCSS-050609-R76536				Units: mg/Kg		Analysis Date: 5/6/2009 09:53 AM			
Client ID:	Run ID: FID-9_090506A				SeqNo: 1664577		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.079	0.050	1	0	108	70-130	0			
Surr: 4-Bromofluorobenzene	0.1224	0.0050	0.1	0	122	70-130	0			

MS	Sample ID: 0905050-01AMS				Units: mg/Kg		Analysis Date: 5/6/2009 11:57 AM			
Client ID: BH#1 5'		Run ID: FID-9_090506A			SeqNo: 1664581		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7992	0.050	1	0	79.9	70-130	0			
Surr: 4-Bromofluorobenzene	0.1205	0.0050	0.1	0	120	70-130	0			

MSD	Sample ID: 0905050-01AMSD				Units: mg/Kg		Analysis Date: 5/6/2009 12:22 PM			
Client ID: BH#1 5'		Run ID: FID-9_090506A			SeqNo: 1664582		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8703	0.050	1	0	87	70-130	0.7992	8.51	30	
Surr: 4-Bromofluorobenzene	0.1199	0.0050	0.1	0	120	70-130	0.1205	0.523	30	

The following samples were analyzed in this batch:

0905050-01A	0905050-02A	0905050-03A
0905050-04A	0905050-05A	0905050-06A
0905050-07A	0905050-08A	0905050-09A
0905050-10A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: **R76563** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **MEOHW1-050609-R76563** Units: **µg/L** Analysis Date: **5/6/2009 08:14 AM**

Client ID: Run ID: **BTEX1_090506A** SeqNo: **1664189** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	28.84	1.0	30	0	96.1	77-129	0			
Surr: Trifluorotoluene	32.01	1.0	30	0	107	75-130	0			

MBLK Sample ID: **BBLKW1-050609-R76563** Units: **µg/L** Analysis Date: **5/6/2009 08:41 AM**

Client ID: Run ID: **BTEX1_090506A** SeqNo: **1664190** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	29.28	1.0	30	0	97.6	77-129	0			
Surr: Trifluorotoluene	32.63	1.0	30	0	109	75-130	0			

LCS Sample ID: **BLCSW1-050609-R76563** Units: **µg/L** Analysis Date: **5/6/2009 07:47 AM**

Client ID: Run ID: **BTEX1_090506A** SeqNo: **1664188** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	19.86	1.0	20	0	99.3	76-125	0			
Surr: 4-Bromofluorobenzene	30.47	1.0	30	0	102	77-129	0			
Surr: Trifluorotoluene	32.89	1.0	30	0	110	75-130	0			

MS Sample ID: **0905081-02AMS** Units: **µg/L** Analysis Date: **5/6/2009 09:34 AM**

Client ID: Run ID: **BTEX1_090506A** SeqNo: **1664192** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	19.56	1.0	20	0	97.8	76-125	0			
Surr: 4-Bromofluorobenzene	29.4	1.0	30	0	98	77-129	0			
Surr: Trifluorotoluene	32.84	1.0	30	0	109	75-130	0			

MSD Sample ID: **0905081-02AMSD** Units: **µg/L** Analysis Date: **5/6/2009 10:01 AM**

Client ID: Run ID: **BTEX1_090506A** SeqNo: **1664193** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	20.04	1.0	20	0	100	76-125	19.56	2.44	20	
Surr: 4-Bromofluorobenzene	30.26	1.0	30	0	101	77-129	29.4	2.87	20	
Surr: Trifluorotoluene	32.96	1.0	30	0	110	75-130	32.84	0.363	20	

The following samples were analyzed in this batch:

0905050-09A	0905050-10A	0905050-11A
0905050-12A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: R76752 Instrument ID FID-9 Method: SW8015

MBLK Sample ID: GBLKS-050809-R76752 Units: mg/Kg Analysis Date: 5/8/2009 02:28 PM

Client ID: Run ID: FID-9_090508A SeqNo: 1668463 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	0.08274	0.0050	0.1	0	82.7	70-130	0			

LCS Sample ID: GLCSS-050809-R76752 Units: mg/Kg Analysis Date: 5/8/2009 01:38 PM

Client ID: Run ID: FID-9_090508A SeqNo: 1668462 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.236	0.050	1	0	124	70-130	0			
Surr: 4-Bromofluorobenzene	0.08742	0.0050	0.1	0	87.4	70-130	0			

LCSD Sample ID: GLCSD-050809-R76752 Units: mg/Kg Analysis Date: 5/8/2009 05:21 PM

Client ID: Run ID: FID-9_090508A SeqNo: 1668524 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.194	0.050	1	0	119	70-130	1.236	3.48	30	
Surr: 4-Bromofluorobenzene	0.08727	0.0050	0.1	0	87.3	70-130	0.08742	0.165	30	

MS Sample ID: 0905050-16AMS Units: mg/Kg Analysis Date: 5/8/2009 03:42 PM

Client ID: BH#4 5' Run ID: FID-9_090508A SeqNo: 1668466 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7333	0.050	1	0.039	69.4	70-130	0			S
Surr: 4-Bromofluorobenzene	0.0888	0.0050	0.1	0	88.8	70-130	0			

MSD Sample ID: 0905050-16AMSD Units: mg/Kg Analysis Date: 5/8/2009 04:07 PM

Client ID: BH#4 5' Run ID: FID-9_090508A SeqNo: 1668467 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.6029	0.050	1	0.039	56.4	70-130	0.7333	19.5	30	S
Surr: 4-Bromofluorobenzene	0.08721	0.0050	0.1	0	87.2	70-130	0.0888	1.8	30	

The following samples were analyzed in this batch:

0905050-11A	0905050-12A	0905050-13A
0905050-14A	0905050-15A	0905050-16A
0905050-17A	0905050-18A	0905050-19A
0905050-20A	0905050-21A	0905050-22A
0905050-23A	0905050-24A	0905050-26A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: **R76861** Instrument ID **FID-9** Method: **SW8015**

MBLK	Sample ID: GBLKS-051409-R76861				Units: mg/Kg		Analysis Date: 5/14/2009 10:28 AM			
Client ID:	Run ID: FID-9_090514A				SeqNo: 1670496		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	0.08848	0.0050	0.1	0	88.5	70-130	0			

LCS	Sample ID: GLCSS-051409-R76861				Units: mg/Kg		Analysis Date: 5/14/2009 09:38 AM			
Client ID:	Run ID: FID-9_090514A				SeqNo: 1670495		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.238	0.050	1	0	124	70-130	0			
Surr: 4-Bromofluorobenzene	0.09367	0.0050	0.1	0	93.7	70-130	0			

LCSD	Sample ID: GLCSD-051409-R76861					Units: mg/Kg		Analysis Date: 5/14/2009 02:44 PM		
Client ID:	Run ID: FID-9_090514A				SeqNo: 1670502		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.247	0.050	1	0	125	70-130	1.238	0.739	30	
Surr: 4-Bromofluorobenzene	0.09014	0.0050	0.1	0	90.1	70-130	0.09367	3.84	30	

MS	Sample ID: 0905156-05AMS				Units: mg/Kg			Analysis Date: 5/14/2009 12:07 PM		
Client ID:	Run ID: FID-9_090514A				SeqNo: 1670500		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.6581	0.050	1	0	65.8	70-130	0			S
Surr: 4-Bromofluorobenzene	0.08626	0.0050	0.1	0	86.3	70-130	0			

MSD	Sample ID: 0905156-05AMSD					Units: mg/Kg		Analysis Date: 5/14/2009 01:55 PM		
Client ID:	Run ID: FID-9_090514A				SeqNo: 1670501		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.3537	0.050	1	0	35.4	70-130	0.6581	60.2	30	SR
Surr: 4-Bromofluorobenzene	0.08684	0.0050	0.1	0	86.8	70-130	0.08626	0.669	30	

The following samples were analyzed in this batch:

0905050-25A 0905050-28A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: 35912 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKS1-050609-35912 Units: mg/Kg Analysis Date: 5/7/2009 06:15 PM
 Client ID: Run ID: ICS3000_090507C SeqNo: 1666046 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2.82	5.0								J
Surr: Selenate (surr)	52.46	1.0	50	0	105	85-115	0			

LCS Sample ID: WLCSS1-050609-35912 Units: mg/Kg Analysis Date: 5/7/2009 06:38 PM
 Client ID: Run ID: ICS3000_090507C SeqNo: 1666048 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	202.9	5.0	200	0	101	90-110	0			
Surr: Selenate (surr)	51.72	1.0	50	0	103	85-115	0			

MS Sample ID: 0905050-15BMS Units: mg/Kg Analysis Date: 5/8/2009 02:16 AM
 Client ID: BH#3 45' Run ID: ICS3000_090507C SeqNo: 1666068 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	113.6	5.0	99.11	8.206	106	75-125	0			
Surr: Selenate (surr)	55.16	0.99	49.55	0	111	80-120	0			

DUP Sample ID: 0905050-15BDUP Units: mg/Kg Analysis Date: 5/8/2009 01:53 AM
 Client ID: BH#3 45' Run ID: ICS3000_090507C SeqNo: 1666067 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	8.186	5.0	0	0	0	0-0	8.206	0.242	20	
Surr: Selenate (surr)	53.68	0.99	49.55	0	108	85-115	52.76	1.73	20	

The following samples were analyzed in this batch:

0905050-01B	0905050-02B	0905050-03B
0905050-04B	0905050-05B	0905050-06B
0905050-07B	0905050-08B	0905050-09B
0905050-10B	0905050-11B	0905050-12B
0905050-13B	0905050-14B	0905050-15B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0905050
 Project: NAV-09-004-Lea Refining

QC BATCH REPORT

Batch ID: 35926 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKS2-050609-35926 Units: mg/Kg Analysis Date: 5/8/2009 03:30 PM

Client ID: Run ID: ICS3000_090508A SeqNo: 1666381 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	5.0								
Surr: Selenate (surr)	50.75	1.0	50	0	102	85-115	0			

LCS Sample ID: WLCSS2-050609-35926 Units: mg/Kg Analysis Date: 5/8/2009 03:53 PM

Client ID: Run ID: ICS3000_090508A SeqNo: 1666384 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	198.1	5.0	200	0	99.1	90-110	0			
Surr: Selenate (surr)	49.25	1.0	50	0	98.5	85-115	0			

MS Sample ID: 0905050-16BMS Units: mg/Kg Analysis Date: 5/8/2009 05:01 PM

Client ID: BH#4 5' Run ID: ICS3000_090508A SeqNo: 1666390 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	103.2	4.9	98.52	6.177	98.4	75-125	0			
Surr: Selenate (surr)	51.32	0.98	49.26	0	104	80-120	0			

DUP Sample ID: 0905050-16BDUP Units: mg/Kg Analysis Date: 5/8/2009 04:38 PM

Client ID: BH#4 5' Run ID: ICS3000_090508A SeqNo: 1666389 Prep Date: 5/6/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	6.177	4.9	0	0	0	0-0	6.177	0	20	
Surr: Selenate (surr)	51.52	0.98	49.26	0	105	85-115	51.8	0.553	20	

The following samples were analyzed in this batch:

0905050-16B	0905050-17B	0905050-18B
0905050-19B	0905050-20B	0905050-21B
0905050-22B	0905050-23B	0905050-24B
0905050-25B	0905050-26B	0905050-28B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 18-May-09

Client: Navajo Refining Company
Project: NAV-09-004-Lea Refining
WorkOrder: 0905050

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

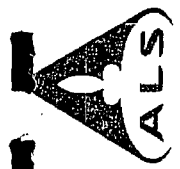
<u>Units Reported</u>	<u>Description</u>
mg/Kg	Milligrams per Kilogram

Customer Information				Project Information				ALS Project Manager: ALS Work Order # 00000 Parameter/Method Request for Analysis																																																			
Purchase Order				Project Name				Project Number				BTEX (8021)				GRO (8015M)				DRO (8015M)				ORO (8015M)				Arlons (300) CI																															
Work Order				Lea Refining				NAV-04-008				A				B				C				D				E				F																											
Company Name				Navajo Refining Company				Bill to Company				Navajo Refining Company				C				DRO (8015M)				D				ORO (8015M)				E				Arlons (300) CI																							
Send Report To				Darrell Moore				Invoice Attn				Darrell Moore				D				DRO (8015M)				D				ORO (8015M)				E				Arlons (300) CI																							
Address				P.O. Box 159				Address				P.O. Box 159				E				Arlons (300) CI				F																																			
City/State/Zip				Artesia, NM 88211				City/State/Zip				Artesia, NM 88211				G																																											
Phone				(505) 748-3311				Phone				(505) 748-3311				H																																											
Fax				(505) 748-5421				Fax				(505) 748-5421				I																																											
e-Mail Address				dgbayer@SESI-NM.com				e-Mail Address								J																																											
Sample Description				Date				Time				Matrix				Pres. # Bottles				A				B				C				D				E				F				G				H				I				J			
BH#3 25'				4/30/09				1005				Soil				2				✓				✓				✓				✓				✓				✓				✓				✓				✓							
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BH#4 5'								1250																																																			
BH#4 10'								1310																																																			
BH#4 15'								1320																																																			
BH#5 5'								1400																																																			
BH#5 10'								1425																																																			
Sampler(s) Please Print & Sign				Shipment Method				Required Turnaround Time: (Check Box)				Cooler Temp				Other				2 WK Days				5 WK Days				10 WK Days				24 Hour				Results Due Date:																							
T. Searles Kingbird				Fed Ex				Fed Ex				Fed Ex				Fed Ex				Fed Ex				Fed Ex				Fed Ex				Fed Ex				Fed Ex				Fed Ex																			
Relinquished by				Date				Time				Received by				Date				Time				Received by				Date				Time				Received by																							
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Relinquished by																																																											

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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Tel: +1 616 399 6070
Fax: +1 616 399 6185

Customer Information				Project Information				Parameter/Method Request for Analysis																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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ALS Laboratory Group

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Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 02-May-09 08:30

Work Order: 0905050

Received by: RDH

Checklist completed by Raymond N Gamba
eSignature

04-May-09
Date

Reviewed by: Jay Lynn F Thibault
eSignature

05-May-09
Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☒	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>3.4c</u> <u>002</u>		
Cooler(s)/Kiln(s):	<u>2497</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:	<u></u>		

Login Notes: Received sample "BH#5 15" not on COC; logged in with analysis.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

W.O.# 0905050

... this portion can be removed for recipient's records.

to	5/1/09	FedEx Tracking Number	869376483244
Sender's name	SEST	Phone	575 347-0517
Company	SEST		
Address	703 E Clinton		
City	Hobbs	State	NM
		ZIP	88240
Our Internal Billing Reference			

	ALS Laboratory Group	CU
	10450 Standcliff Rd., Suite 210	
	Houston, Texas 77099	
	Tel. +1 281 530 5656	
	Fax. +1 281 530 5887	
	Date: 5/1/09	
	Name: ISSAC	
	Company: 92	

TESTODY SEAL	Seal Broken By:
	Time: 1600
	Signature: Kincaid
	Date: 5/2/09

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

04-Jun-09

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: NAV-04-009-Lea Refining

Work Order : 0906079

Dear Darrell,

ALS Laboratory Group received 5 samples on 5/2/2009 08:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-08-TX

ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

Phone: (281) 530-5656 Fax: (281) 530-5887

www.alsglobal.com www.elabi.com

A Campbell Brothers Limited Company

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company**Project:** NAV-04-009-Lea Refining**Work Order:** 0906079**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0906079-01	BH#5 5'	Soil	0905050-19	4/30/2009 14:00	5/2/2009 08:30	☐
0906079-02	BH#5 10'	Soil	0905050-20	4/30/2009 14:25	5/2/2009 08:30	☐
0906079-03	BH#6 5'	Soil	0905050-21	4/30/2009 15:15	5/2/2009 08:30	☐
0906079-04	BH#6 10'	Soil	0905050-22	4/30/2009 15:25	5/2/2009 08:30	☐
0906079-05	BH#6 15'	Soil	0905050-23	4/30/2009 15:40	5/2/2009 08:30	☐

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company

Project: NAV-04-009-Lea Refining

Sample ID: BH#5 5'

Collection Date: 4/30/2009 02:00 PM

Work Order: 0906079

Lab ID: 0906079-01

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH			SW9045B			Analyst: TDW
pH	8.82		0.100	pH Units	1	6/4/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company

Project: NAV-04-009-Lea Refining

Sample ID: BH#5 10'

Collection Date: 4/30/2009 02:25 PM

Work Order: 0906079

Lab ID: 0906079-02

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH			SW9045B			Analyst: TDW
pH	8.94		0.100	pH Units	1	6/4/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company

Project: NAV-04-009-Lea Refining

Work Order: 0906079

Sample ID: BH#6 5'

Lab ID: 0906079-03

Collection Date: 4/30/2009 03:15 PM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH			SW9045B			Analyst: TDW
pH	8.81		0.100	pH Units	1	6/4/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company

Project: NAV-04-009-Lea Refining

Sample ID: BH#6 10'

Collection Date: 4/30/2009 03:25 PM

Work Order: 0906079

Lab ID: 0906079-04

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH			SW9045B			Analyst: TDW
pH	9.66		0.100	pH Units	1	6/4/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company

Project: NAV-04-009-Lea Refining

Sample ID: BH#6 15'

Collection Date: 4/30/2009 03:40 PM

Work Order: 0906079

Lab ID: 0906079-05

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH			SW9045B			Analyst: TDW
pH	9.79		0.100	pH Units	1	6/4/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company
Work Order: 0906079
Project: NAV-04-009-Lea Refining

QC BATCH REPORT

Batch ID: **R77613** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSW1-060409-R77613** Units: **pH Units** Analysis Date: **6/4/2009 03:00 PM**

Client ID: Run ID: **WETCHEM_090604A** SeqNo: **1686501** Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6	0.10	6	0	100	90-110	0			

DUP Sample ID: **0906079-01adup** Units: **pH Units** Analysis Date: **6/4/2009 03:00 PM**

Client ID: **BH#5 5'** Run ID: **WETCHEM_090604A** SeqNo: **1686515** Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.81	0.10	0	0	0	0-0	8.82	0.113	20	

The following samples were analyzed in this batch:

0906079-01A	0906079-02A	0906079-03A
0906079-04A	0906079-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Laboratory Group

Date: 04-Jun-09

Client: Navajo Refining Company
Project: NAV-04-009-Lea Refining
WorkOrder: 0906079

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
pH Units	

W.O. # 0905050

0905050-19B

Stored: 10F

Bottle: 1 of 1

SxID: BH#5 5'

Client: NAVAJO REFINING

Collected: 4/30/2009 2:00:00 PM Received: 5/2/2009 8:30:00 AM

300_S, 300_S_PR, 8015M_S, 8015SPR

0905050-20B

Stored: 10F

Bottle: 1 of 1

SxID: BH#5 10'

Client: NAVAJO REFINING

Collected: 4/30/2009 2:25:00 PM Received: 5/2/2009 8:30:00 AM

300_S, 300_S_PR, 8015M_S, 8015SPR

0905050-21B

Stored: 10F

Bottle: 1 of 1

SxID: BH#6 5'

Client: NAVAJO REFINING

Collected: 4/30/2009 3:15:00 PM Received: 5/2/2009 8:30:00 AM

300_S, 300_S_PR, 8015M_S, 8015SPR

0905050-22B

Stored: 10F

Bottle: 1 of 1

SxID: BH#6 10'

Client: NAVAJO REFINING

Collected: 4/30/2009 3:25:00 PM Received: 5/2/2009 8:30:00 AM

300_S, 300_S_PR, 8015M_S, 8015SPR

0905050-23B

Stored: 10F

Bottle: 1 of 1

SxID: BH#6 15'

Client: NAVAJO REFINING

Collected: 4/30/2009 3:40:00 PM Received: 5/2/2009 8:30:00 AM

300_S, 300_S_PR, 8015M_S, 8015SPR

Relog 0905050

PH

30day

samples 19-23

Jay



10450 Standliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

ALS Laboratory Group

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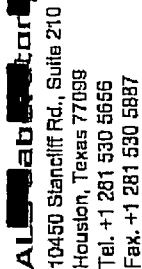
Customer Information				Project Information				Parameter/Method Request for Analysis			
Purchase Order	Project Name	Lea Refining									
Work Order	Project Number	NAV-04-008									
Company Name	Navajo Refining Company										
Send Report to	Darrell Moore										
Address	P.O. Box 159										
City/State/Zip	Artesia, NM 88211										
Phone	(505) 748-3311										
FAX	(505) 748-5421										
E-Mail Address	dgboyer@SESI-NM.com										
Sample Description	Date	Time	Method	Pressure	Batches	Check Box	GC	GC	GC	GC	GC
BH#3 25'	4/30/09	1005	Soil								
BH#3 30'		1030									
BH#3 35'		1055									
BH#3 40'		1115									
BH#3 45'		1130									
BH#4 5'		1250									
BH#4 10'		1310									
BH#4 15'		1320									
BH#5 5'		1400									
BH#5 10'		1425									

Shipment Method		Required Turnaround Time (Check Box)		Notes	
Signature	Date	Signature	Date	Signature	Date
	5/1/09		5/1/09		5/1/09
Relinquished by	Time	Relinquished by	Time	Relinquished by	Time
	1600		1630		1630

Laboratory Information		Check Box		Level III Std QC		Level IV SW646/CLP	
Level III Std QC	Level IV SW646/CLP	Level III Std QC	Level IV SW646/CLP	Level III Std QC	Level IV SW646/CLP	Level III Std QC	Level IV SW646/CLP
☒	☒	☒	☒	☒	☒	☒	☒

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Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.



CONFIDENTIAL

3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

[illegible]

... have been submitted to ALS Laboratory Group.

1. Any changes must be made in writing once samples and COC form have been submitted to AALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by AALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

ALS Laboratory Group

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 02-May-09 08:30

Work Order: 0905050

Received by: RDH

Checklist completed by: Raymond M. Gamba
Signature

04-May-09
Date

Reviewed by: Jay Lynn F. Thibault
Signature

05-May-09
Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☒	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>3.4c</u> <u>002</u>		
Cooler(s)/Kiln(s):	<u>2497</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:	<u></u>		
Login Notes: <u>Received sample "BH#5 15" not on COC; logged in with analysis.</u>			

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:

W.O.# 1905050

Index portion can be removed for recipient's records.

Date	5/11/09	Index Tracking Number	869376483244
Order's Time	SEST	Phone	575 397-0517
Company	SEST		
Address	703 E Clinton		
	Hobbs	State/Terr	ZIP 585217
Our Internal Billing Reference			



ALS Laboratory Group

10450 Stancilff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5856
Fax. +1 281 530 5887

Date: 5/11/09
Name: TSAGG
Company: 98

STUDY SEAL

Time: 1600
Kindard

Signatures of:

5/21/09

Appendix B

C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report

☐ Final Report

Name of Company Navajo Refining - Lea	Contact Darrell Moore
Address P.O. Drawer 159 Artesia, NM	Telephone No. 505-748-3311
Facility Name	Facility Type

Surface Owner	Mineral Owner	Lease No.
---------------	---------------	-----------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
-------------	---------	----------	-------	---------------	------------------	---------------	----------------	--------

NATURE OF RELEASE

Type of Release Diesel	Volume of Release 70 bbls.	Volume Recovered 30 bbls.
Source of Release Relief valve	Date and Hour of Occurrence 12/7/03 4:00 am	Date and Hour of Discovery 12/7/03 4:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? E.L. Gonzalez	
By Whom? Darrell Moore	Date and Hour 12/7/03 1:00 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Relief valve was left open. When pump was kicked on, the release occurred.

Describe Area Affected and Cleanup Action Taken.* Area is near TK103B. Vacuum truck picked up 30bbls. Liquid. 100yds. of contaminated soil was removed and shipped to CRI. Bottom hole samples have been collected. Awaiting results.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Darrell Moore</i>		OIL CONSERVATION DIVISION	
Printed Name: Darrell Moore		Approved by: District Supervisor:	
Title: Env. Mgr. for Water & Waste	Approval Date:	Expiration Date:	
Date: 12/17/03	Phone: 505-748-3311	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary

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

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

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Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
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Release Notification and Corrective Action

OPERATOR		☒ Initial Report	☐ Final Report
Name of Company	Lea Refining Co.	Contact	Darrell Moore
Address		Telephone No.	505-746-5281
Facility Name		Facility Type	Refinery
Surface Owner		Mineral Owner	
		Lease No.	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County

Latitude 32°52'38"N Longitude 103°18'00"W

NATURE OF RELEASE

Type of Release	Naphtha-Kerosene	Volume of Release	Unknown	Volume Recovered	30 bbls
Source of Release	Run Down Line	Date and Hour of Discovery		Date and Hour of Discovery	10/12/05
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	IF YES, To Whom?	Larry Johnson OCU		
By Whom?	Darrell Moore	Date and Hour	10/13/05 8:30am		
Was a Watercourse Reached?	☐ Yes ☒ No	IF YES, Volume Impacting the Watercourse			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Line developed leak. Leak was clamped off and free standing product was vacuumed up. Line is being inspected for potential replacement.

Describe Area Affected and Cleanup Action Taken.* Affected area is near the RO Unit and under pipe rack. Crew will remove contaminated dirt which will be profiled for disposal. Bottom samples will be analyzed.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <u>Darrell Moore</u>	OIL CONSERVATION DIVISION	
Printed Name: Darrell Moore	Approved by District Supervisor.	
Tulc Env. Mgr. for Water & Waste	Approval Date:	Expiration Date:
E-mail Address: darrell.moore@navajo-refining.com	Conditions of Approval:	Attached ☐
Date: 10/14/05	Phone: 505-746-5281	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1600 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

FILE COPY

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Navajo Lea Refining Co. LLC	Contact Darrell Moore	
Address 7406 S. Main Lovington, NM	Telephone No. 575-748-3311	
Facility Name Lovington Plant	Facility Type Petroleum Refinery	
Surface Owner	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
-------------	---------	----------	-------	---------------	------------------	---------------	----------------	--------

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 20 bbls	Volume Recovered 5 bbls
Source of Release Sump at pipeline	Date and Hour of Occurrence 10/10/07 8:00am	Date and Hour of Discovery 10/10/07 8:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Hobbs OCD voicemail-on call phone	
By Whom? Doug Price	Date and Hour 10/10/07 9:05am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* During switching from one crude tank to the other, relief valve released filling up sump and overrunning. Vacuum was used to suck up free oil.

Describe Area Affected and Cleanup Action Taken.* Area affected is in two areas of about 10' wide by 100' long each. Contaminated soil has been picked up and bottom hole TPH samples taken. Waiting on results

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations

Signature: <i>Darrell Moore</i>		OIL CONSERVATION DIVISION	
Printed Name: Darrell Moore		Approved by District Supervisor:	
Title: Env. Mgr. for Waste & Water		Approval Date	Expiration Date
Date: 10/18/07	Phone: 575-748-3311	Mo. Conditions of Approval	Attached ☐

Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

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Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

FILE COPY

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Revised March 17, 1999

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Release Notification and Corrective Action

OPERATOR

☒ Initial Report

☐ Final Report

Name of Company Navajo Refining Co. LLC	Contact Darrell Moore	
Address 7406 S. Main Lovington, NM	Telephone No. 575-746-5281	
Facility Name Lovington Refinery	Facility Type Petroleum Refinery	
Surface Owner	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
-------------	---------	----------	-------	---------------	------------------	---------------	----------------	--------

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release Unknown	Volume Recovered 2 bbls
Source of Release Hole in pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 10/25/07 10:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson, Hobbs OGD, Wayne Price Santa Fe, OGD	
By Whom? Darrell Moore	Date and Hour 3:30 pm 10/25/07	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* A pool of oil was noticed along a pipe run. Upon investigation, a hole was discovered in a pipe. The pipe was excavated and clamped.		
Describe Area Affected and Cleanup Action Taken.* 20 yds of contaminated soil has been removed to uncover the pipe. The vertical limit has not been reached and the location within the pipe run makes it difficult to clean under it.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface, water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: <i>Darrell Moore</i>	OIL CONSERVATION DIVISION	
Printed Name: Darrell Moore	Approved by District Supervisor	
Title: Env. Mgr for Water & Waste	Approval Date:	Expiration Date:
Date: 10/25/07 Phone: 575-746-5281	Conditions of Approval:	Attached ☐

* Attach Additional Sheets if Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

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side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report

☐ Final Report

Name of Company Navajo Ref Refining Co. LLC	Contact Darrell Moore	
Address 7406 S1 Main Lovington, NM 88260	Telephone No. 505-703-5058	
Facility Name	Facility Type Petroleum Refinery	
Surface Owner	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
-------------	---------	----------	-------	---------------	------------------	---------------	----------------	--------

NATURE OF RELEASE

Type of Release Caustic	Volume of Release 150 Bbls	Volume Recovered 120 Bbls
Source of Release Caustic Scrubber	Date and Hour of Occurrence 7/10/08 5:30 am	Date and Hour of Discovery 7/10/08 6:00 am
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Relief valve hung in the open position and filled sump. Which then over flowed. Valve is being replaced.		
Describe Area Affected and Cleanup Action Taken.* Area affected is to the east and south of caustic scrubber. Happened during a rain event, so most of material was floating on water. Vacuum truck sucked up spill material. Contaminated soil will be removed.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature <i>Darrell Moore</i>	OIL CONSERVATION DIVISION	
Printed Name: Darrell Moore	Approved by: District Supervisor:	
Title: Env. Mgr. for Water & Waste	Approval Date:	Expiration Date:
Date: 7/10/08 Phone: 575-703-5058	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary

Environmental Status Report

**Navajo Refining Company, Lea Refinery
Lovington, New Mexico**

November 6, 2009

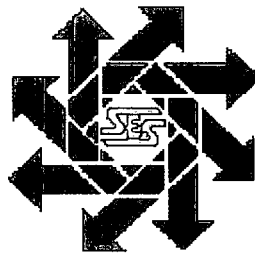
Prepared for:



**Navajo Refining Company
501 East Main Street
Artesia, New Mexico 88210**

RECEIVED OCD
2009 NOV - 9 A 11: 27

By:



***Safety & Environmental Solutions, Inc.
703 E. Clinton
Hobbs, New Mexico 88240
(575) 397-0510***

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Appendix D Injection Well Information and Likely Drilling Mud Pit Location
Appendix E Copies of June 2009 Water Quality Sampling Analytical Reports

I. Introduction

The Navajo Refining Company, Lea Refinery in Lovington, New Mexico operates under a Groundwater Discharge Plan (GW-014) issued by the New Mexico Oil Conservation Division (OCD). The location of the refinery is shown in Figure 1. The discharge plan addresses water and fluid discharges to the subsurface; spills and leaks to the ground surface; pits, ponds and below grade tanks and sumps; waste handling and other activities that have the potential to contaminate groundwater or adversely impact public health and the environment.

A condition of the discharge plan was that a separate monitoring and remediation Environmental Status Report (EST) be provided the agency within 9 months of permit issuance to provide an update on contaminate hydrogeology with emphasis on threats to the City of Lovington water supply from the facility. A 2009 monitoring report was presented to the agency and the City of Lovington in a meeting on October 8, 2009. The agency in an email dated October 22, 2009 evaluated the report as deficient in satisfying the permit condition. Further communication with the agency extended the date for resubmittal of required information to November 6, 2009. Accordingly, Navajo is resubmitting the ESR together with separate information required by the agency.

The ESR report documents site lithology, proximity to City of Lovington and other water wells, groundwater conditions and the results of sampling conducted at the site during June 2009. The report also includes information on the replacement of the original monitoring wells, lack of hydrocarbon product detected and possible reasons for such. A site plan for the facility is shown in Figure 2.

Also being submitted is a separate document entitled "Hydrocarbon Release Investigation, Navajo Refining Company, Lea Refinery, Lovington, New Mexico." This report details investigation of spills and releases that were the subject of C-141 reports to the agency and included as an attachment to the Discharge Plan document. The status of each investigation is detailed including removal of affected soil, borehole drilling and results of soil analyses. The report provides recommendations as to further action necessary at the locations, if any.

II. Background Information

In September 1995 and April 1996 monitor wells were installed at the refinery to determine groundwater conditions and to document impacts to groundwater from activities at the refinery. Originally ten (10) monitor wells were installed with all but one located in the vicinity of the refinery process area. Later four (4) additional wells were installed in areas where spills or overtopping of tanks were reported. Those incidents were reported to the OCD and follow up investigation conducted including soil sampling and auger borings. Where there was concern that groundwater may have been impacted, additional groundwater wells were drilled.

City of Lovington water wells surround the refinery to the southwest, west, northwest and to the east on the east side of NM Highway 18. The locations of the City's wells are shown on Plate 1 together with other wells with information on file with the NM Office of the State Engineer. The closest water well to the Refinery is LW-9 approximately 200 feet upgradient from the refinery's north east property boundary. Wells to the west of the refinery are located 2,400 feet (LW-12, 0.45 miles) or greater from the property fence. The distances to the west range from 2,400 feet to 4,600 feet (0.9 miles). To the east, the closest well (LW-3) is about 1,100 feet (0.2 miles) and the distance from the refinery ranges from 1,100 feet to 4,000 feet.

Water levels in the vicinity of the refinery are declining due to withdrawal of water for refinery use from wells on the property and from the City's water wells. The water levels declines for two of the original wells are shown on Figure 3. The average yearly water level decline through 2004-05 for monitor wells in the refinery process area was about 1.2 feet per year. That increased during the time period 2005-2008 to 1.3-1.4 feet per year. However, measurements of the replacement wells from April to September 2009 show a possible loss of up to 2.4 feet per year. Further, MW-1, MW-6, MW-7 and RW-1 experienced a 0.5 foot decline during the two month period July to September 2009 which would result in a 2.9 foot per year decline if it continues over the coming year.

Because of the accelerated decline in water levels, the monitor wells were generally completed with a saturated water thickness of 22 to 24 feet which would allow use for approximately 20 years at an average decline of 2 feet per year.

III. Area Hydrogeology

The late Tertiary age Ogallala Formation underlies the site. It is composed of calcareous sands, silts, clays and gravels. The near-surface Ogallala sediments are often cemented with calcium carbonate (caliche). The caliche generally decreases with depth and is negligible at depths greater than 35 to 50 feet below the surface.

The regional groundwater flow direction of the Ogallala aquifer is generally toward the southeast but locally may be impacted by pumping of large volume water wells used for municipal, industrial or agricultural purposes.

The lithology of the sediments directly beneath the site is generally surficial caliche underlain by silty sand and sand to depth of the monitor wells. Lower zones may include thin layers of sandstone of varying cementation.

A geologic cross section has been prepared using information from the first set of monitor wells installed in 1996* and from work performed by SESI. The lithologic and well completion logs are shown in Appendix A. The cross-section locations are shown on Figure 4 and the two lithologic profiles are shown on Figures 5 and 6.

* Soil and Groundwater Investigatino and Remediation Work Plan, Lea Refinery, Lea County, New Mexico, October 7, 1996, by Geoscience Consultants, LTD., Midland, Texas.

IV. Monitor Well Replacement

At the direction of the OCD as a condition of groundwater discharge plan renewal, all monitor wells that were dry or nearly so were to be replaced. Information on replacement of individual wells is provided below. Replacement well completion logs are shown in Appendix A.

Beginning on April 2, 2009 the existing wells were plugged and replacement drilling began. The existing dry monitor wells (MW-1 to MW-4, MW-7 to MW-10) were plugged along with MW-5 and MW-6 which had minimum water saturation. Monitor wells MW-11 through MW-14 were not replaced as they still have sufficient water for sampling (Table 1). Recovery well RW-1 had approximately 0.6 feet of hydrocarbon product and about 2-3 feet of water at the time of abandonment. Prior to becoming dry, MW-1 and MW-7 also contained product. Due to the original completion details, the wells were unable to be pulled. They were abandoned by emplacing bentonite downhole and well hydrating it. The concreted surface pad was removed and the casing cut off below the surface.

All replacement wells were drilled using a mud rotary system with mud and cuttings contained within a plastic lined roll-off bin. The water in the roll-off bin was vacuumed and sent to the refinery wastewater system for treatment and cuttings were transported to OCD-licensed CRI for disposal. Cuttings taken from area of the wastewater separator showed evidence of oil (dark grey to black, frothy, hydrocarbon sheen). Otherwise cuttings were clean at other locations. Site photographs taken during drilling are shown in Appendix B.

The four wells near the wastewater separator (MW-1, MW-6, MW-7 and RW-1) were drilled and completed with large diameter 5-inch casing to enable recovery pumps to be installed if necessary. Drilling of the replacement recovery well (RW-1) occurred on April 14. During the replacement drilling, black hydrocarbon sand and oil were seen beginning at 5 feet with thick oil at 20 feet. Oil was seen in various amounts while drilling. As these three wells were designed to recover hydrocarbon product they were completed with small diameter gravel so as to allow product to drain and be recovered rather than slowly seep into the groundwater over time as with the three original wells.

Because the water table had declined over 10 feet during the last eight years, the wells were completed with extra screen so that they would not become dry and need to be replaced again for at least 20 years. The other two replacement wells (MW-1 and MW-7) were drilled on April 15 and 16, respectively. MW-6 was replaced earlier on April 13.

The three wells replacing those which had previously contained product were developed on June 16 by pumping with a standard submersible pump until sand and mud were removed and the water was not brown with turbidity. Water and solids were again pumped into roll-off bin and handled as above. Approximately 250 gallons of water was pumped from each well. Other than some gray sand at the beginning of pumping, the

cuttings and water was clean with little evidence of oil or a hydrocarbon sheen. The replacement for MW-6, which had never contained hydrocarbon product, was developed with an air-driven bailer to remove fines.

Due to the use of mud, subsurface lithology was difficult to determine. But from earlier work done at the site the top 20 feet is well cemented very light brown caliche grading to fine to very fine grained sand with zones of sandstone of varying cementation. Zones of unconsolidated flowing sand in the vadose zone required the use of an agent (mud) to keep the hole open while drilling.

Replacement boreholes were completed with 2-inch casing except for replacement wells MW-1, MW-6, MW-7 and RW-1 which were completed with 5-inch casing as described above. The 2-inch wells were completed with pre-packed screen due to the difficulty of emplacing graded sand at depth. The 2-inch wells and MW-6 were developed with an air-driven bailer to remove sand and fines.

Surface completion consisted of hydrated bentonite from above the sand/gravel pack to within approximately 2 feet of the surface and then a cement pad. The replacement wells were completed at grade except for MW-5 near the south refinery entrance and MW-8 within the bermed area containing storage tanks. These were completed above grade with steel protection casing. The wells not replaced (MW-11 through MW-14) are all completed above grade with steel protection casing.

In August 2009 the new and existing monitor wells and the refinery water wells were surveyed by Asel Surveying of Hobbs. Elevations of the monitor wells were measured to one-hundredth of a foot.

V. Groundwater Measurement and Sampling

The following activities were conducted to measure groundwater levels and document the groundwater quality conditions in accordance with OCD Groundwater Discharge Plan. The locations of the referenced wells are shown on Figure 2.

- Measured depth to groundwater in monitoring wells MW-1 through MW-14.
- Measured free product thickness in monitoring wells RW-1, MW-1 and MW-7. No free product or even a hydrocarbon sheen was noted.
- Collected semi-annual groundwater samples from all monitor wells plus RW-1.
- Collected groundwater samples from the refinery's North, South and East water wells.

Groundwater measurement and sampling activities were conducted during the period June 16-19, 2009. Prior to sampling, the monitoring wells at the Lea Refinery were gauged for depth to groundwater and total depth using a Solinst Model 101 water level meter. Monitor wells where phase-separated hydrocarbons may have been present were measured using an oil/water interface probe (Solinst Model 122).

Immediately prior to collecting groundwater samples, the monitoring wells were purged of a minimum of three well casing volumes of water using a Proactive model SS-Monsoon stainless steel pump and new, dedicated vinyl tubing. The pump was decontaminated with Alconox detergent and clean water between samples. Groundwater parameters of conductivity, temperature and pH were measured during purging operations.

Samples taken for benzene, toluene, ethylbenzene, and total xylene (BTEX) analyses were transferred into air-tight, septum-sealed, 40-milliliter (ml) glass volatile organic analyte (VOA) sample vials with zero head space and preserved with HCl. Samples were placed in an ice-filled cooler immediately after collection and shipped to ALS Laboratory Group in Houston, Texas. The samples were analyzed for BTEX using EPA Method SW8260. Chain of custody (COC) forms documenting sample identification numbers, collection times, and delivery times to the laboratory were completed for each set of samples.

Samples collected for metals and anion/Total Dissolved Solids (TDS) analyses were collected in separate containers. With the exception of mercury, metals were field filtered with a 0.45 micron filter and placed in a 250-ml plastic bottle and preserved with HNO₃. Samples for anion/TDS analysis were collected in liter plastic bottles and placed on ice. The samples were analyzed using methods EPA methods SW6020 for metals, and methods E300, SM2320B, and M2540C, respectively, for anions, alkalinity and TDS.

VI. Groundwater Elevations, Flow Direction, and Hydraulic Gradient

Groundwater elevations for the current year are summarized in Table 1. Water table elevation maps (potentiometric surface) and direction of groundwater flow for June 2009 quarter are depicted in Figures 7 and 8. Figure 7 covers the entire refinery while Figure 8 shows water level contours in the refinery process area.

As discussed previously, based on past measurements, the water table elevation has been declining at the rate of approximately 1.2 to 1.4 feet per year with an accelerated decline shown for the current year. Measurements for 2009 show that the decline may be as much as 2.4 feet if it continues through the fall and winter months. However, pumping of City of Lovington wells typically is reduced over those months so the decline is unlikely to exceed 2 feet.

Depth to groundwater occurs at approximately 106 to 107 feet below ground surface in the refinery process area. To the southeast, depth to water is 90 to 93 feet. The regional direction of flow is southeast. However, as seen in Figure 7, groundwater flow direction is influenced by the refinery pumping wells and possibly by City of Lovington wells across the highway to the northeast of the refinery. In the vicinity of MW-12, the direction is northerly. It is more easterly in the area of the north and south water wells and east-southeasterly in the refinery process area.

In addition to a change in flow direction across the site, the hydraulic gradient also steepens in proximity to the pumping wells. In the vicinity of MW-12, the gradient is 0.0012 ft./ft. West-southwest of the north and south water wells, the gradient is 0.0036 ft./ft. In the area between MW-4 and MW-1 the gradient is 0.0040 ft./ft. and near MW-13 it is 0.0065.

VII. Distribution of Hydrocarbons in Groundwater

Analytical results for BETX and other SW 8260 volatiles in groundwater for the current sampling event are summarized in Table 2. Constituents having detectable concentrations are shown in yellow with concentrations above the New Mexico Water Quality Control Commission (WQCC) standards highlighted in boldface type. The laboratory reports and COC documentation for samples obtained by SESI are included in Appendix D.

Based on the most recent analytical data for samples collected by SESI in June 2009, the distribution of volatile hydrocarbons at the Lea Refinery is described below:

- Volatile hydrocarbon concentrations in upgradient monitoring wells MW-2 and MW-4, process area wells MW-8, MW-9 and MW-10, down-gradient wells MW-3 and MW-13, and off-gradient wells MW-5, MW-12 and MW-14 were below the laboratory detection limit and below WQCC standards. The method reporting limit for all constituents is 0.0050 mg/L except for total xylenes (0.015 mg/L).
- Volatile hydrocarbons were detected in wells MW-1, MW-6, MW-7 and RW-1 (all near the wastewater separator) and in MW-11 directly downgradient from the refinery process area.
- Benzene concentration maps of the entire refinery area and the refinery process area are provided in Figures 9 and 10. Benzene was detected only in MW-11 (0.10 mg/L). Of those volatiles detected, only benzene in MW-11 exceeded a WQCC standard (0.010 mg/L).
- The semi-volatiles naphthalene and acetophenone were detected in MW-6, the well directly downgradient from the wastewater separator. The detection for naphthalene was below the WQCC standard. MW-1 showed a detection of 1-Methylnaphthalene which also was below the WQCC standard. Phenols were detected in MW-1, MW-6 and RW-1; however all concentrations were below the WQCC standard of 0.005 mg/L. There is not a listed water quality standard for acetophenone.
- Various semi-volatile phthalates were seen in all samples, including those from the water wells. The likely source in the monitor wells was the PVC casing or the dedicated tubing. The low levels in the water wells were likely laboratory contamination. Phthalates or phthalate esters, are esters of phthalic acid and are mainly used as plasticizers (substances added to plastics to increase their flexibility, transparency, durability, and longevity).

VIII. Sampling Results for Inorganic Constituents

Sampling was conducted for major cations and anions, total dissolved solids (TDS) and WQCC metals. The results of the sampling are shown in Table 3 and the results highlighted below.

- Analytical results of sampling for WQCC metals showed no detections in excess of WQCC standards except for manganese in wells MW-1, MW-6 and MW-11. These wells also have dissolved phase hydrocarbon impacts which most likely have changed the groundwater environment in the immediate proximity of the wells from aerated to anoxic conditions. Manganese in the environment commonly becomes soluble in the absence of oxygen.
- Results of major anion and TDS sampling showed exceedances of the chloride standard in three wells (MW-2, MW-13 and the south water well). TDS exceeded the standard in MW-13 and the south water well, and was just below the standard in MW-2. Fluoride slightly exceeded the WQCC standard in MW-9.

Chloride concentration maps of the refinery and refinery process area are shown in Figures 11 and 12. The map shows chloride concentrations exceeding 200 mg/L in the vicinity of the process area. Within the process area, Navajo has replaced and tested the wastewater sewer system and the oil desalter sumps. However, well MW-2 with a concentration of 252 mg/L is upgradient of the process area but downgradient from several older oil and gas production areas located just to the northwest and outside the refinery boundary.

MW-13, with a chloride concentration of 425 mg/L is downgradient from a now-inactive oil and gas production site within the refinery itself. In recent years the two wells located there injected waste salt water and could be a potential source of contamination if the well casings had diminished integrity. Both of these wells are now plugged.

Information on the wells and possible integrity problems was researched and summarized in Appendix C. The south well, Lovington Paddock Unit #022, reported a tubing leak in 1997 downhole at a depth of approximately 3,120 feet. The tubing joint and adjacent joints were replaced and it passed an integrity test. However, it appears from aerial photographs that the drilling mud pit was located in the vicinity of MW-13 which could be a source for chlorides seen in the well (Appendix C).

Lastly, the south water well has just under 500 mg/L of chloride. The groundwater flow direction at that location is from southwest to northeast and numerous oil and gas production facilities exist to the west and southwest of the refinery property. Though the OCD has banned pits in the area since at least 1967 older discharges to unlined impoundments had the potential to migrate to groundwater and cause elevated levels of chloride and TDS. This is likely the explanation for the elevated chloride and TDS concentrations seen in the vicinity of the process area and at the south water well.

IX. Groundwater Temperature

Measurement of groundwater temperature in the vicinity of the wastewater separator has shown elevated levels as high as 28.4° centigrade (83.1° Fahrenheit) in MW-9 in August 2001. The elevated temperatures compared to normal summer temperatures of 20-22° C (68-72° F) were considered evidence of a leak in the wastewater system as the separator contained hot water.

Navajo completed emptying, cleaning and sealing the wastewater separator system in 2003. The sumps were sandblasted and coated with oil and waterproof sealants and static tested. Sampling subsequent to that time showed a decline in temperatures though measurement was difficult as water levels declined and wells dried up.

Sampling of the new wells conducted in June 2009 showed no significant difference in temperatures between monitor wells. Upgradient well MW-4 had a temperature of 20.9° C (69.6° F) at the conclusion of purging. MW-1 and MW-7 located adjacent to the separator had temperatures of 22.7° C (72.8° F) and 22.0° C (71.6° F) after purging. And the north and east water wells had temperatures of 22.5° C (72.5° F) and 20.6° C (69.1° F) respectively when sampled. These results lead to the conclusion that the retrofitting of the wastewater separator performed by Navajo has stopped leakage of fluids from the unit.

X. Oil Recovery

Hydrocarbon product had been detected in groundwater in the vicinity of the wastewater separator at the Lea Refinery since installation of the first monitor wells in September 1995. A recovery well and an air sparge/soil vapor extraction system was installed at the facility in November 1996 (see previous footnote). The system included seven air sparge/vapor extraction wells and a Xitech oil recovery pump in RW-1 to remove the source of contamination. A total of 160 gallons of free product was recovered along with 8,870 lbs of TVHC (Total volatile hydrocarbons). The system was shut down in September 1999 because the most recent BTEX and TVHC samplings showed concentrations below detection limits and product had been mostly removed from the monitor wells.

However in 2000-2001 product again increased in the two nearby monitor wells (located within 15-20 feet of the recovery well). The Xitech pump recovered product from the RW-1 which was transferred to a storage container for further recycling to the refinery. The total volume recovered is somewhat in excess of 250 gallons (6 barrels).

In 2001 the depth to product varied depending on pump operation. Product thickness varied from less than 0.01 feet to 4.5 feet. Depth to water was 96.5 feet. However, a downgradient monitor well about 50 feet away on the other side of the wastewater separator did not detect measurable hydrocarbon and very little dissolved phase hydrocarbon.

By 2007 the water table in the vicinity of the recovery well had declined so that product and water in the two monitor wells (MW-1 and MW-7) was not detected (i.e. they were dry). In 2008 the water and product levels in the recovery well (RW-1) had declined so that the installed recovery pump could no longer recover product. At the time of the last measurements of the old wells on March 17, 2009, MW-1 and MW-7 remained dry and in recovery well RW-1 product was 0.6 feet thick and there was slightly over 3 feet of fluid in the well.

Groundwater measurements made in April, June, July and September 2009 have not shown any hydrocarbon product in any of the three replacement wells. These measurements are shown Table 1. Measurements for these three wells are planned to be made quarterly for the foreseeable future.

A plausible reason for the absence of product in the wells is that the leak had been stopped and what was seen in the old wells was oil from the leak seeping through the intervening sandy material to the water table. By drilling new wells adjacent to the old ones, oil in the formation was removed in the drilling process and what is left there is mainly held by capillary forces and little or none will drain by gravity. The design of the wells is such that any further leaks will be detected during quarterly measurements to allow early remedial action and product recovery.

As described previously, following removal of the sand and mud on June 16, water quality samples were taken on June 19, 2009. For the three replacement wells adjacent to the wastewater separator, results of the sampling for dissolved-phase volatile hydrocarbons show no exceedances of New Mexico Water Quality Control Commission or EPA Drinking Water Standards for volatiles. Water quality sampling is to be conducted in these and other refinery monitor wells on a semi-annual basis with the next sampling scheduled for December 2009.

XI. Potential Receptors

Neither a hydrocarbon product nor dissolved phase plume has been detected during the current investigation. However, if one was detected, the nearest receptor is the refinery's own process water supply wells located about 1,000 feet downgradient of the release describe in Section X above. The water supply is monitored quarterly for drinking water parameters and is not used for drinking water. A current rate of pumpage was not available for inclusion in this report.

City of Lovington water supply wells are located as shown on Plate 1. The nearest well, Lovington #9 is about 1,400 feet from the previously described release and MW-11. This well is not considered a potential receptor as localized groundwater flow is southeast toward the Navajo pumping water wells. The other identified water supply wells are not considered potential receptors based on their distance from the refinery, current groundwater flow direction, and engineered remedial controls if such become necessary.

XII. Conclusions

- With the exception of MW-11 benzene concentrations in all wells are below detection levels and below WQCC and EPA drinking water standards. The level in MW-11 is ten times the WQCC standard and is likely due to past releases in the refinery process area. Navajo is retrofitting the process units during refinery expansion and to comply with other provisions of the discharge plan to prevent spills and leaks.
- No hydrocarbon product has been found or hydrocarbon sheen detected in the replacement monitor wells adjacent to the wastewater separator. Groundwater temperatures in these wells are comparable to temperatures in monitor wells away from the area. This leads to the conclusion that the retrofitting completed by Navajo at the separator six years ago has solved the problem of wastewater fluids and oil leaking to the groundwater.
- Minor dissolved concentrations of ethylbenzene, xylenes and naphthalene were found in the replacement monitor wells adjacent to the wastewater separator. However concentrations of these constituents are well below WQCC standards.
- No volatile organic compounds were found in the refinery water supply wells. Chloride and TDS in the south well exceed WQCC standards. Because water from the wells is used by the refinery for hand washing, showering, etc., the wells are now monitored for BETX on at least a semi-annual basis.
- Based on the groundwater flow map and sample results, it appears that the elevated concentrations of chloride and TDS in monitor wells and the south water well are from non-refinery sources. The likely source of chlorides in the process area is migration from upgradient oil production areas northwest of the refinery boundary. The likely source of chlorides in MW-13 is the now inactive oil production/injection well (including a possible drilling pit) site southeast of MW-11. The likely source of chlorides in the south water well is from oil production areas to the southwest of the refinery boundary.

XIII. Future Work

Navajo is continuing semi-annual monitoring with the next sampling event scheduled for December 2009.

XIV. Report Tables and Figures

Table 1. 2009 Water Level Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well, Depth Below TOC (feet)	Elevation Top of Casing (TOC, feet)	Measure- ment Date	Depth to Product (feet)	Depth to Water Below TOC (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Saturated Water Thickness (feet)	Change from previous (feet)
MW-1 129.10	3,838.40	04/30/09	--	106.35	0	106.35	3,732.05	22.8	--
		06/10/09	--	106.49	0	106.49	3,731.91	22.6	-0.14
		06/19/09	--	106.68	0	106.68	3,731.72	22.4	-0.19
		07/02/09	--	106.75	0	106.75	3,731.65	22.4	-0.07
		07/24/09	--	106.84	0	106.84	3,731.56	22.3	-0.09
		09/24/09	--	107.31	0	107.31	3,731.09	21.8	-0.47
		10/27/09	--	107.44	0	107.44	3,730.96	21.7	-0.13
MW-2 126.41	3,837.35	06/22/09	--	104.32	0	104.32	3,733.03	22.1	--
MW-3 130.45	3,831.65	06/18/09	--	102.65	0	102.65	3,729.00	27.8	--
MW-4 128.02	3,839.89	06/16/09	--	106.79	0	106.79	3,733.10	21.2	--
MW-5 115.00	3,819.15	06/16/09	--	90.84	0	90.84	3,728.31	24.2	--
MW-5 before plugging, 3.2 feet water 3/17/09									
MW-6 129.73	3,838.16	06/18/09	--	106.64	0	106.64	3,731.52	23.1	--
		07/24/09	--	106.92	0	106.92	3,731.24	22.8	-0.28
		09/24/09	--	107.44	0	107.44	3,730.72	22.3	-0.52
MW-6R before plugging, 4.0 feet water 3/17/09		10/27/09	--	107.55	0	107.55	3,730.61	22.2	-0.11
MW-7 129.53	3,838.42	04/30/09	--	106.37	0	106.37	3,732.05	23.2	--
		06/10/09	--	106.48	0	106.48	3,731.94	23.1	-0.11
		06/19/09	--	106.68	0	106.68	3,731.74	22.9	-0.20
		07/02/09	--	106.75	0	106.75	3,731.67	22.8	-0.07
		07/24/09	--	106.84	0	106.84	3,731.58	22.7	-0.09
		09/24/09	--	107.33	0	107.33	3,731.09	22.2	-0.49
		10/27/09	--	107.46	0	107.46	3,730.96	22.1	-0.13

Table 1. 2009 Water Level Elevation Measurements, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well, Depth Below TOC (feet)	Elevation Top of Casing (TOC, feet)	Measure- ment Date	Depth to Product (feet)	Depth to Water Below TOC (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Saturated Water Thickness (feet)	Change from previous (feet)
MW-8 132.30	3,839.98	06/18/09	--	109.37	0	109.37	3,730.61	22.9	--
MW-9 129.18	3,835.22	06/16/09	--	104.58	0	104.58	3,730.64	24.6	--
MW-10 129.14	3,833.66	06/18/09	--	102.57	0	102.57	3,731.09	26.6	--
MW-11 117.51	3,839.56	03/17/09	--	107.91	0	107.91	3,731.65	9.6	--
		06/18/09	--	108.65	0	108.65	3,730.91	8.9	-0.74
MW-12 100.51	3,822.73	03/17/09	--	93.75	0	93.75	3,728.98	6.8	--
		06/16/09	--	93.83	0	93.83	3,728.90	6.7	-0.08
MW-13 119.70	3,837.06	03/17/09	--	108.36	0	108.36	3,728.70	11.3	--
		06/16/09	--	108.58	0	108.58	3,728.48	11.1	-0.22
MW-14 105.04	3,823.03	03/17/09	--	93.84	0	93.84	3,729.19	11.2	--
		06/16/09	--	93.92	0	93.92	3,729.11	11.1	-0.08
RW-1 129.25	3,838.48	04/30/09	--	106.45	0	106.45	3,732.03	22.8	--
		06/10/09	--	106.59	0	106.59	3,731.89	22.7	-0.14
		06/19/09	--	106.61	0	106.61	3,731.87	22.6	-0.02
		07/02/09	--	106.82	0	106.82	3,731.66	22.4	-0.21
		07/24/09	--	106.92	0	106.92	3,731.56	22.3	-0.10
		09/24/09	--	107.42	0	107.42	3,731.06	21.8	-0.50
		10/27/09	--	107.53	0	107.53	3,730.95	21.7	-0.11
Notes:									
1. Monitoring wells MW-1 through MW-7 installed September 1995; plugged and redrilled April 2009.									
2. Monitoring wells MW-8 through MW-10 installed March and April 1996; plugged and redrilled April 2009.									
3. Monitoring wells MW-6R, MW-11, MW-12 installed April and May 2002; MW-6R plugged April 2009.									
4. Monitoring wells MW-13 and MW-14 installed January 2004.									

Table 2. Organic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Sample Date	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Total Xylenes (mg/L)	Total BETX (mg/L)	MTBE (mg/L)	Total Naphthalene (8260, mg/L)	Total Naphthalene (8270, mg/L)	Acetophenone (mg/L)	Other volatiles? (see notes)	Other semi-volatiles?	Type?
MW-1	06/19/09	<0.0050	0.012	<0.0050	0.031	0.043	<0.0050	<0.0050	0.00037	<0.00020	Yes	Yes	Phthalates, phenol
MW-2	06/22/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-3	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-4	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-5	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-6	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.0075	0.0041	0.021	Yes	Yes	Phthalates, phenol
(duplicate)	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.0074	0.0040	0.021	Yes	Yes	Phthalates, phenol
MW-7	06/19/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	Yes	Yes	Phthalates
MW-8	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-9	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	0.00087	<0.00020	No	Yes	Phthalates
MW-10	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-11	06/18/09	0.10	<0.0050	<0.0050	<0.015	0.10	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-12	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-13	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
MW-14	06/16/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
RW-1	06/19/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	Yes	Yes	Phthalates, phenol
NM WQCC Groundwater Standards (mg/L):		0.010	0.75	0.75	0.62	--	--	0.03	0.03	--	--	--	--

Table 2. Organic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Sample Date	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Total Xylenes (mg/L)	Total BTX (mg/L)	MTBE (mg/L)	Total Naphthalene (8260, mg/L)	Total Naphthalene (8270, mg/L)	Acetophenone (mg/L)	Other volatiles? (see notes)	Other semi-volatiles?	Type?
North Well	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
South Well	06/22/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
East Well	06/18/09	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	No	Yes	Phthalates
Trip Blanks (6)		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0050	--	--	No	--	--
NM WQCC Groundwater Standards (mg/L):		0.010	0.75	0.75	0.62	--	--	0.03	0.03	--	--	--	--
Notes:													
Yellow, constituent detected. Bold , exceeds NM WQCC standard													
MW-1, Low level detections for 1,2,4-Trimethylbenzene (0.0067 mg/L), and 2-Butanone (0.060 mg/L)													
MW-6, Low level detections for 1,2,4-Trimethylbenzene (0.0058 mg/L), 2-Butanone (0.30 mg/L) and Acetone (0.059 mg/L)													
MW-6, Duplicate, Low level detections for 1,2,4-Trimethylbenzene (0.0061 mg/L), 2-Butanone (0.28 mg/L) and Acetone (0.057 mg/L)													
MW-7, Low level detection for 2-Butanone (0.030 mg/L)													
RW-1, Low level detection for 2-Butanone (0.038 mg/L)													
Analyses performed by ALS Laboratory Group, Houston, Texas													

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Sample Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)
MW-1	06/19/09	131	0.827	3.75	123	694	<0.0100	0.00914	0.147	0.175	<0.00200	<0.00500	<0.00500
MW-2	06/22/09	252	0.765	2.69	66.8	988	0.0657	0.0386	0.0803	0.190	<0.00200	<0.00500	<0.00500
MW-3	06/16/09	29.1	3.38	2.19	64.6	504	0.308	0.00815	0.115	0.160	<0.00200	0.00709	<0.00500
MW-4	06/16/09	28.9	0.841	1.84	61.5	422	0.180	<0.00500	0.174	0.160	<0.00200	0.00534	<0.00500
MW-5	06/16/09	186	1.39	3.31	131	952	0.796	0.0233	0.0639	0.116	<0.00200	<0.00500	<0.00500
MW-6 (duplicate)	06/18/09	188	0.113	0.678	101	844	<0.0100	0.0201	0.186	0.175	<0.00200	<0.00500	<0.00500
	06/18/09	168	<0.100	0.682	90.4	812	<0.0100	0.0221	0.200	0.192	<0.00200	<0.00500	<0.00500
MW-7	06/19/09	30.6	1.12	1.66	67.2	384	<0.0100	0.00923	0.169	0.161	<0.00200	<0.00500	<0.00500
MW-8	06/18/09	219	0.730	3.46	73.3	798	<0.0100	0.00501	0.181	0.228	<0.00200	<0.00500	<0.00500
MW-9	06/16/09	23.0	1.69	0.748	73.2	380	0.0468	0.0373	0.0911	0.122	<0.00200	<0.00500	<0.00500
MW-10	06/16/09	32.2	0.878	1.83	76.5	378	<0.0200	<0.00500	0.113	0.138	<0.00200	<0.00500	<0.00500
MW-11	06/18/09	204	0.579	1.23	43.1	994	<0.0100	<0.00500	0.194	0.199	<0.00200	<0.00500	<0.00500
MW-12	06/16/09	23.0	1.16	1.98	49.6	354	<0.0200	0.00516	0.0775	0.200	<0.00200	<0.00500	<0.00500
MW-13	06/16/09	425	0.220	2.65	138	1,790	<0.0200	<0.00500	0.0692	0.253	<0.00200	<0.00500	0.0285
NM WQCC Groundwater Standards:		250	1.6	10	600	1,000	5.0	0.1	1.0	0.750	0.01	0.05	0.05

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Sample Date	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
MW-1	06/19/09	<0.00500	<0.200	<0.00500	0.974	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0124
MW-2	06/22/09	0.00621	<0.200	<0.00500	0.00583	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.110
MW-3	06/16/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.0151	<0.00500	<0.00500	<0.00500	--	<0.0100
MW-4	06/16/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0120
MW-5	06/16/09	<0.00500	0.399	<0.00500	0.0067	<0.000200	0.0103	<0.00500	<0.00500	<0.00500	--	<0.0100
MW-6	06/18/09	<0.00500	0.418	<0.00500	2.86	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.00996
(duplicate)	06/18/09	<0.00500	0.219	<0.00500	2.76	<0.000200	<0.00500	0.00653	<0.00500	<0.00500	--	0.0141
MW-7	06/19/09	<0.00500	<0.200	<0.00500	0.127	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0137
MW-8	06/18/09	<0.00500	<0.200	<0.00500	0.00919	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0458
MW-9	06/16/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	<0.0100
MW-10	06/16/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0127
MW-11	06/18/09	<0.00500	0.571	<0.00500	0.387	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0212
MW-12	06/16/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	<0.0100
MW-13	06/16/09	<0.00500	<0.200	<0.00500	0.0176	<0.000200	<0.00500	0.0126	<0.00500	<0.00500	--	0.0269
NM WQCC Groundwater Standards:		1.0	1.0	0.05	0.20	0.002	1.0	0.2	0.05	0.05	0.03	10.0

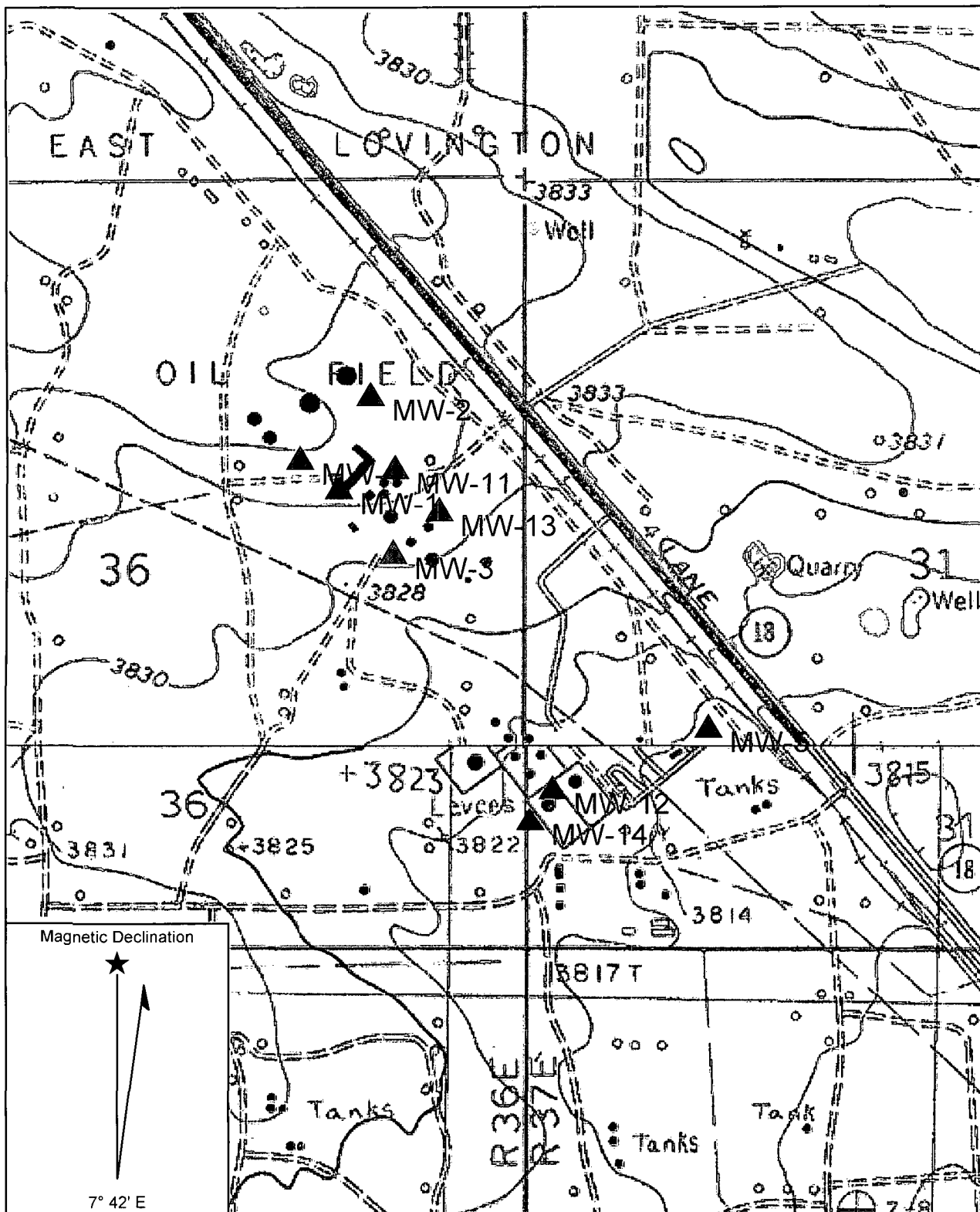
Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Sample Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)
MW-14	06/16/09	93.0	0.851	5.16	60.9	540	<0.0200	<0.00500	0.0770	0.132	<0.00200	<0.00500	<0.00500
RW-1	06/19/09	34.8	1.21	-	70.8	398	<0.0100	0.010	0.160	0.161	<0.00200	<0.00500	<0.00500
North Well	06/18/09	140	0.933	2.72	80.6	664	<0.0100	0.00536	0.0997	0.151	<0.00200	0.0104	<0.00500
South Well	06/22/09	497	0.665	3.02	106	1,450	<0.0100	<0.00500	0.154	0.189	<0.00200	<0.00500	<0.00500
East Well	06/18/09	107	0.980	2.59	84.0	554	0.0131	<0.00500	0.0820	0.143	<0.00200	<0.00500	<0.00500
NM WQCC Groundwater Standards:		250	1.6	10	600	1,000	5.0	0.1	1.0	0.750	0.01	0.05	0.05
		Notes:											
		Bold highlighted, exceeds NM WQCC standard											
		Samples field filtered except for Total Mercury											
		Uranium not analyzed for this sample set											
		Analyses performed by ALS Laboratory Group, Houston, Texas											

Table 3. Inorganic Constituent Concentrations in Groundwater, Navajo Refining Company, Lea Refinery, Lovington, NM

Monitor Well	Sample Date	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
MW-14	06/16/09	<0.00500	<0.200	<0.00500	0.0199	<0.000200	0.0215	<0.00501	<0.00500	<0.00500	--	0.0255
RW-1	06/19/09	<0.00500	<0.200	<0.00500	0.0380	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.00548
North Well	06/18/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	<0.00500
South Well	06/22/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0195
East Well	06/18/09	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	--	0.0172
NM WQCC Groundwater Standards:		1.0	1.0	0.05	0.20	0.002	1.0	0.2	0.05	0.05	0.03	10.0
		Notes:										
		Bold, exceeds NM WQCC standard										
		Samples field filtered except for Total Mercury										
		Uranium not analyzed for this sample set										
		Analyses performed by ALS Laboratory Group, Houston, Texas										

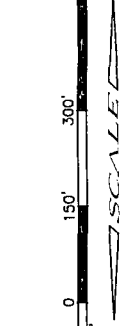
**Figure 1. Location Map, Navajo Refining Company, Lea Refinery,
Lovington, New Mexico**



Name: LOVINGTON
 Date: 10/7/2009
 Scale: 1 inch equals 1000 feet

Location: 032° 52' 39.49" N 103° 17' 59.87" W NAD83
 Caption: Figure 1. Location Map, Navajo Lea Refinery,
 Lovington, NM

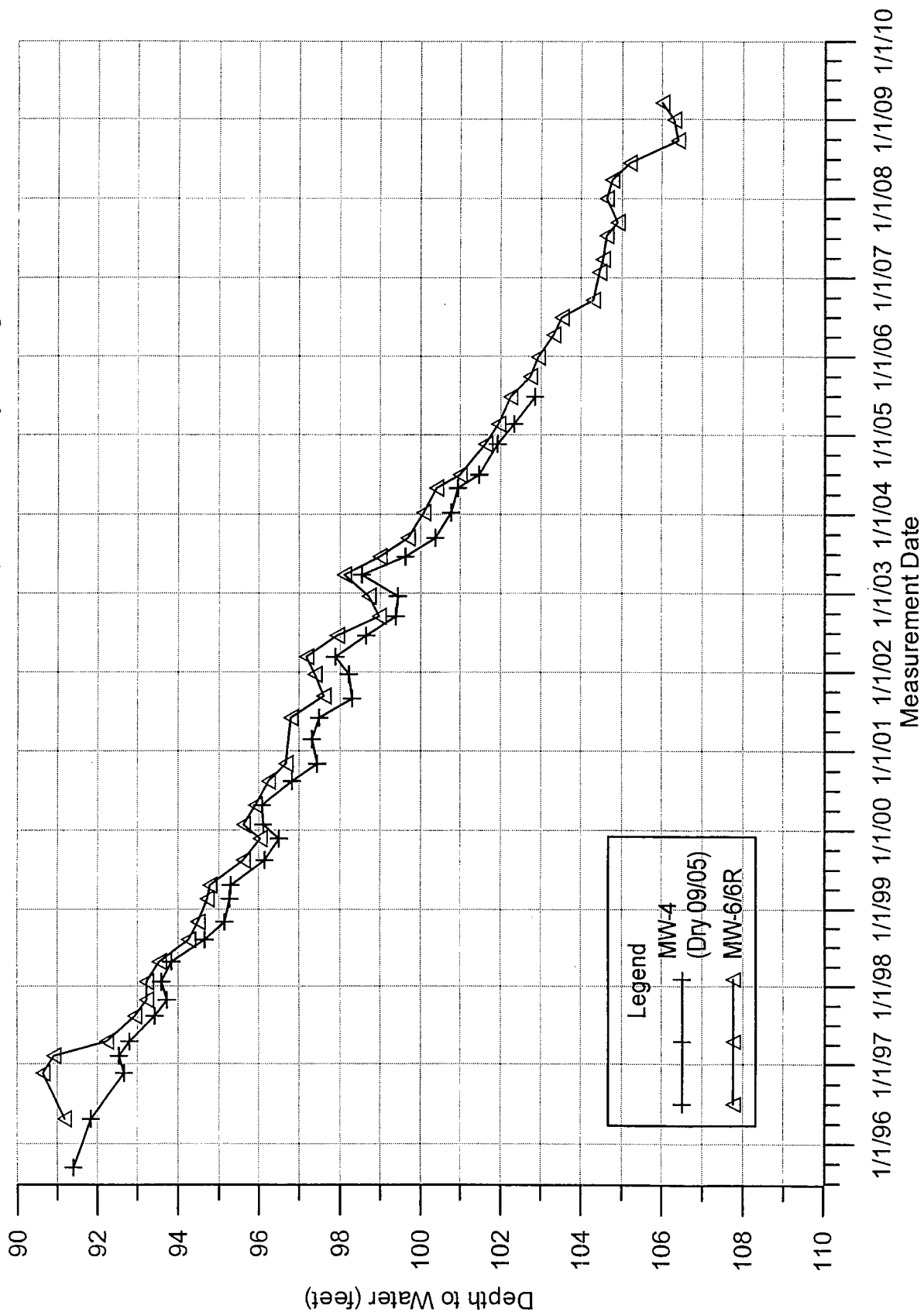
**Figure 2. Site Plan, Navajo Refining Company, Lea Refinery,
Lovington, New Mexico**



	NAVAJO REFINING CO. LEA REFINERY LOVINGTON, NM	
	1" = 300' - 0"	SCALE
DATE 10-6-09	DRAWN BY EJS	CHECKED BY DB
0	APPR BY	DRAWING NUMBER Lovington03B.dwg

DATE 10-6-09	DRAWN BY EJS	CHK'D BY DB	SCALE 1" = 300'-0"	REV. 0
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Figure 3. Water Level Decline, 1995-2009, Navajo Lea Refinery, Lovington, NM



**Figure 4. Cross-Section Location Map,
Navajo Refining Company, Lea Refinery
Lovington, New Mexico**

NEW MEXICO STATE HIGHWAY 18

T. & N.M. RR

CRUDE
UNLOADING

FIRE HOUSE

WW-EAST

B

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MW-11

MW-13

MW-14

MW-15

MW-16

MW-17

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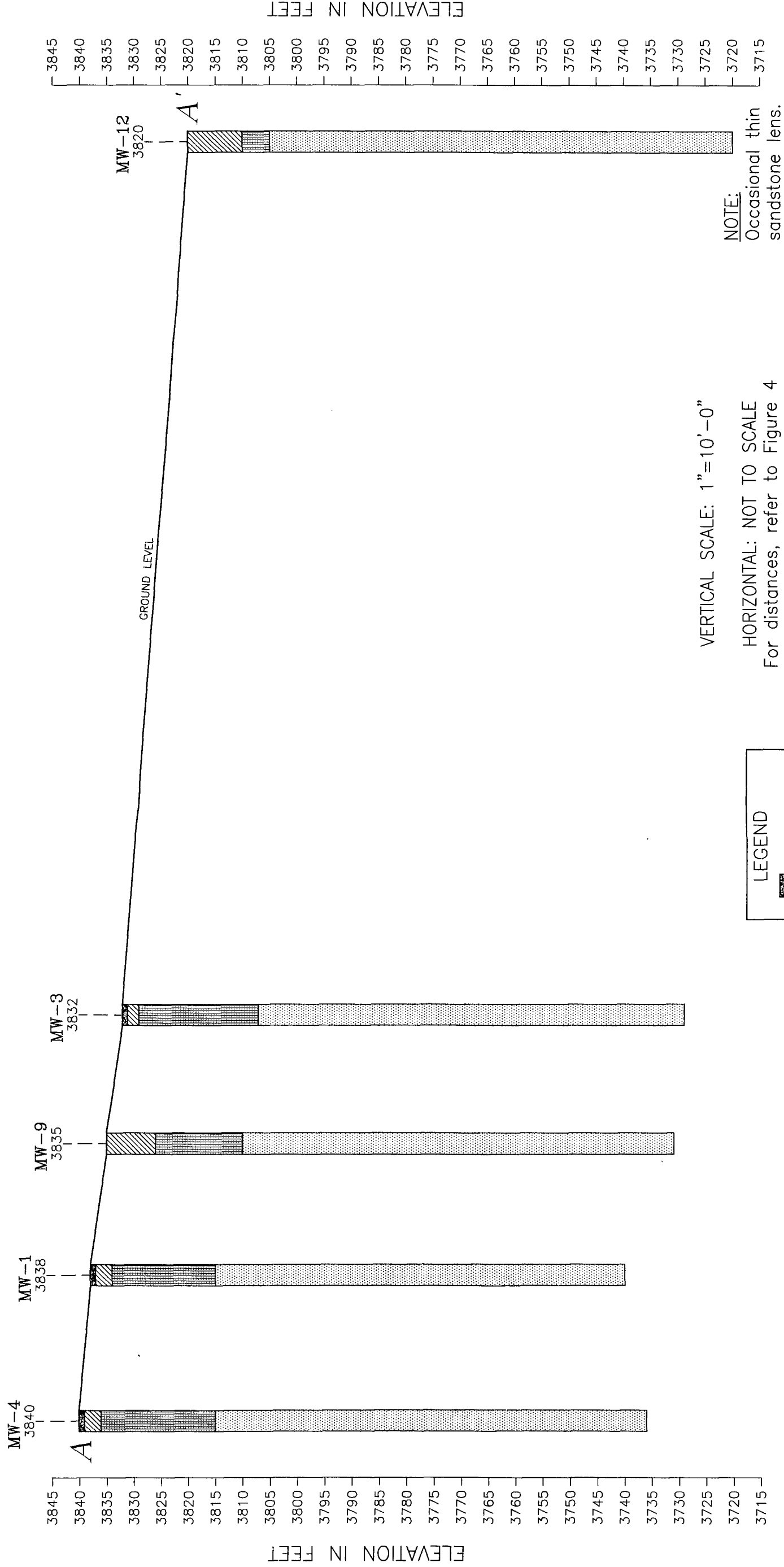
MW-329

MW-330

MW-331

MW-332

**Figure 5. Generalized Cross-Section Map, A-A',
Navajo Refining Company, Lea Refinery
Lovington, New Mexico**



DRAWING TITLE

FIGURE 5
GENERALIZED
CROSS-SECTION MAP
A - A'

 **NAVAJO REFINING CO.**
LEA REFINERY
LOVINGTON, NM

DRAWN BY	CHECKED BY	SCALE
EJS	DB	AS NOTED
DATE	APPROVED BY	DRAWING NUMBER
10-6-09	-	Lovington03B.dwg
REV.		
0		

**Figure 6. Generalized Cross-Section Map, B-B',
Navajo Refining Company, Lea Refinery
Lovington, New Mexico**

MW-2
3837

MW-11
3836

MW-13
3835

MW-5
3816

B

B'

GROUND LEVEL

ELEVATION IN FEET

ELEVATION IN FEET

NOTE:

Occasional thin
sandstone lens
or thin clay.

LEGEND



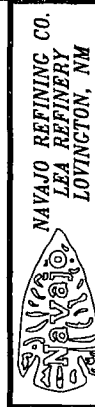
VERTICAL SCALE: 1"=10'-0"

HORIZONTAL: NOT TO SCALE

For distances, refer to Figure 4

DRAWING
TITLE

FIGURE 6
GENERALIZED
CROSS-SECTION MAP
B - B'



NAVJO REFINING CO. LEA REFINERY LOVINGTON, NM	SCALE	AS NOTED
DRAWN BY EJS	CHECKED BY DB	DATE 10-6-08
DATE 10-6-08	DRAWING NUMBER Lovington03B.dwg	REV. 0

**Figure 7. Groundwater Contour Map, June 16-19, 2009,
Navajo Refining Company, Lea Refinery
Lovington, New Mexico**

NEW MEXICO STATE HIGHWAY 18

T. & N.M. RR

CRUDE
UNLOADING

FIRE HOUSE

WW-EAST

OIL
WELLS

SALT WATER
DISPOSAL
WELLS
(2, PLUGGED)

REFINERY
PROCESS
AREA

OFFICE

SHOP

WAREHOUSE

WW-NORTH WW-SOUTH

ASPHALT
RACK
SUMP

PIPELINE
OFFICE

LOVINGTON
PIPELINE
STATION

Monitor Well Name	Water Level Elevation (feet)
MW-1	3731.72
MW-2	3733.03
MW-3	3729.00
MW-4	3733.10
MW-5	3728.31
MW-6	3731.52
MW-7	3731.74
MW-8	3730.61
MW-9	3730.64
MW-10	3731.09
MW-12	3730.91
MW-13	3728.48
MW-14	3729.11
RW-1	3731.87

LEGEND:

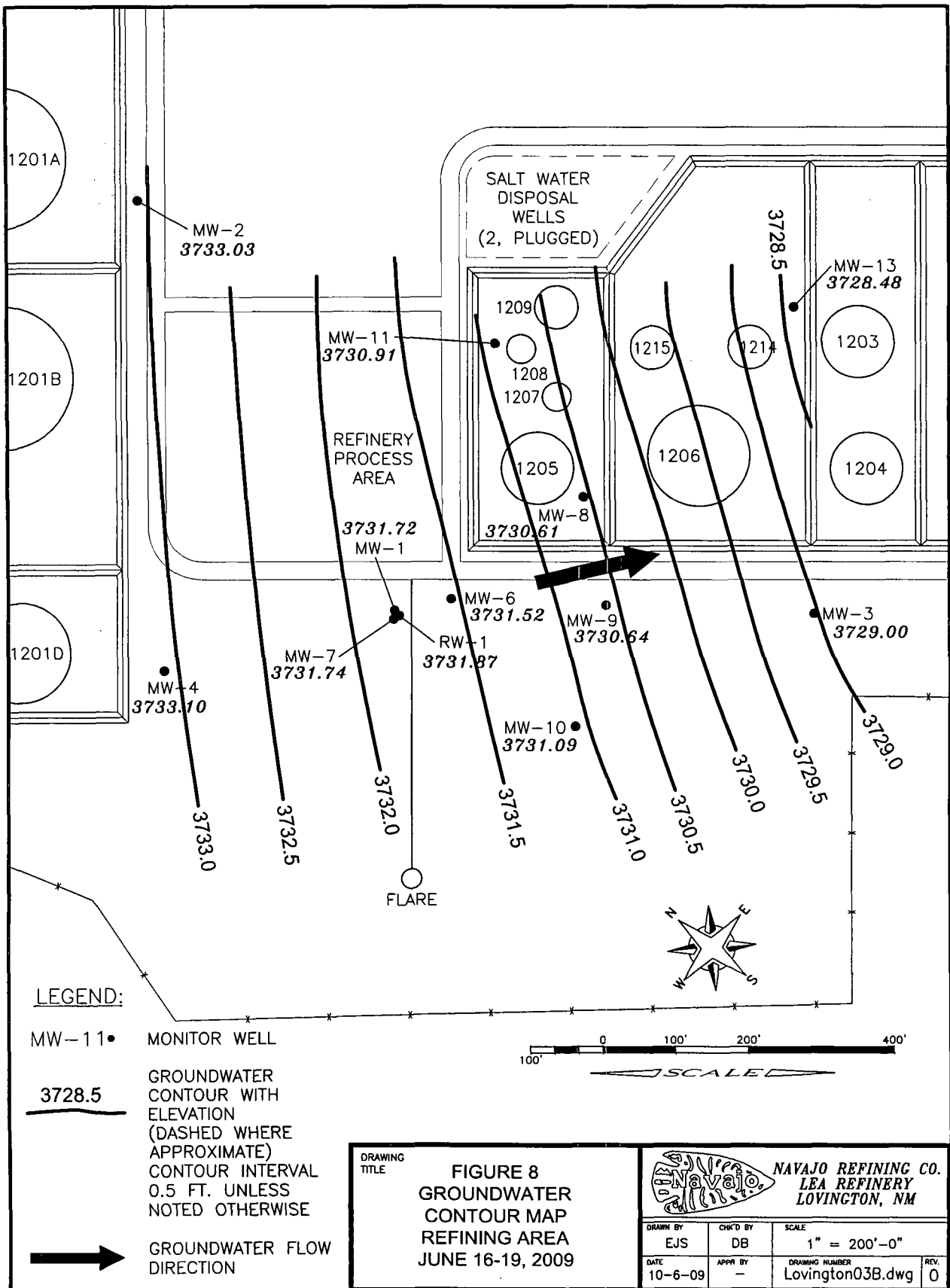
- MW-11 • MONITOR WELL
- 3728.5 — GROUNDWATER CONTOUR WITH ELEVATION (DASHED WHERE APPROXIMATE) CONTOUR INTERVAL 0.5 FT. UNLESS NOTED OTHERWISE
- ↑ GROUNDWATER FLOW DIRECTION



NAVAJO REFINING CO.
LEA REFINERY
LOVINGTON, NM

FIGURE 7
GROUNDWATER
CONTOUR MAP
JUNE 16-19, 2009

DRAWN BY	EJS	CHECKED BY	DB	SCALE	1" = 300'-0"
DATE	10-6-09	APPROVED BY	—	DRAWING NUMBER	Lovington03B.dwg
REV.	0				



**Figure 9. Benzene Concentration Map, June 16-19, 2009,
Navajo Refining Company, Lea Refinery
Lovington, New Mexico**

NEW MEXICO STATE HIGHWAY 18

T. & N.M. RR

CRUDE
UNLOADING

FIRE HOUSE

ND
WW-EAST

SALT WATER
DISPOSAL
WELLS
(2, PLUGGED)

MW-13
ND

MW-11
0.10

REFINERY
PROCESS
AREA

MW-13
ND

1208

1207

1206

1205

MW-8
ND

1203

1204

1202

1201A

1201B

1201C

1201D

MW-2
ND

MW-1
ND

MW-6
ND

RW-1
ND

MW-7
ND

MW-4
ND

MW-9
ND

MW-3
ND

MW-10
ND

FLARE

WW-NORTH
ND

WW-SOUTH
ND

WAREHOUSE

1210

SHOP

OFFICE

ASPHALT
RACK
SUMP

PIPELINE
OFFICE

MW-5
ND

LEGEND:

MW-11 • MONITOR WELL
0.10 WITH TOTAL BENZENE (mg/L)
ND NOT DETECTED
REPORTING LIMIT 0.0050 mg/L

0.01 DISSOLVED BENZENE
CONCENTRATION (mg/L)
(DASHED WHERE APPROXIMATE)

GROUNDWATER FLOW DIRECTION



NAVJO REFINING CO.
LEA REFINERY
LOVINGTON, NM

FIGURE 9
BENZENE
CONCENTRATION MAP
JUNE 16-19, 2009

DRAWING TITLE	DATE	APPR BY	SCALE	REV.
	10-6-09	-	1" = 300'-0"	0

100' 50' 150' 300' 500'

SCALE





NAVJO REFINING CO.
LEA REFINERY
LOVINGTON, NM

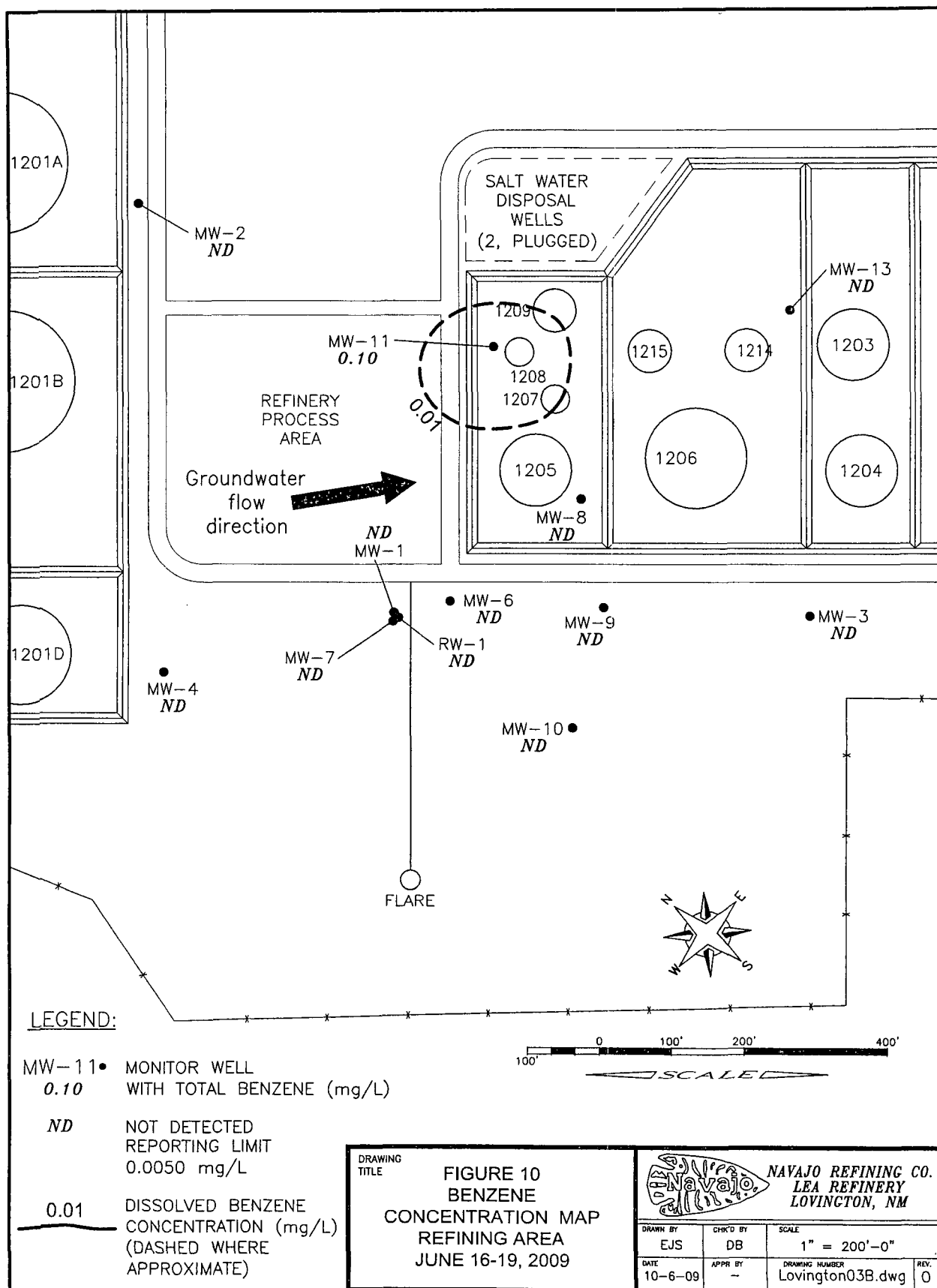
FIGURE 9
BENZENE
CONCENTRATION MAP
JUNE 16-19, 2009

DRAWING TITLE	DATE	APPR BY	SCALE	REV.
	10-6-09	-	1" = 300'-0"	0

100' 50' 150' 300' 500'

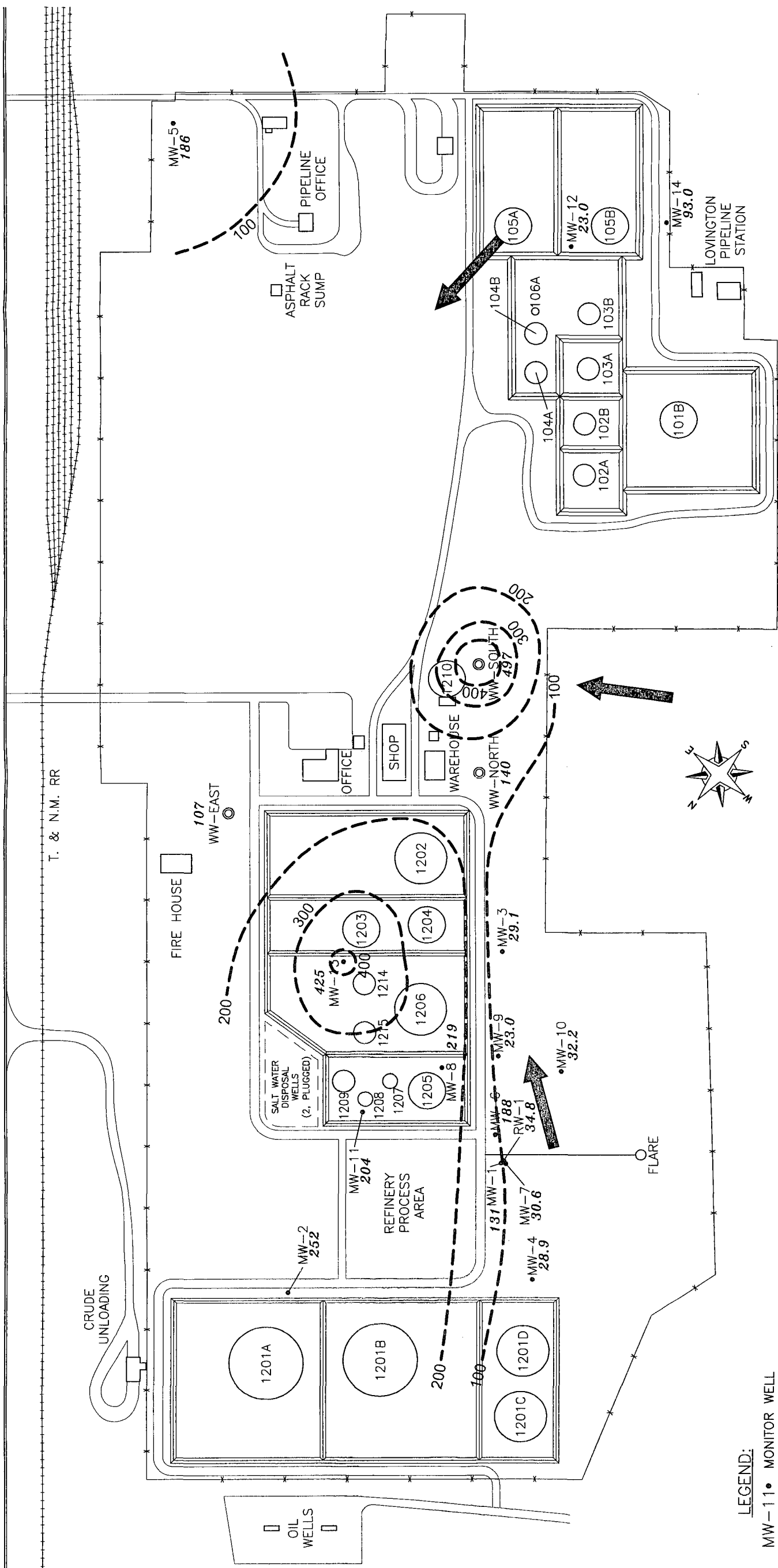
SCALE





**Figure 11. Chloride Concentration Map, June 16-19, 2009,
Navajo Refining Company, Lea Refinery
Lovington, New Mexico**

NEW MEXICO STATE HIGHWAY 18



LEGEND:

- MW-11 • MONITOR WELL
204 WITH TOTAL CHLORIDE (mg/L)
- 300 CHLORIDE CONCENTRATION (mg/L)
(DASHED WHERE APPROXIMATE)
- GROUNDWATER FLOW DIRECTION

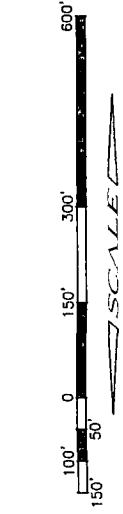
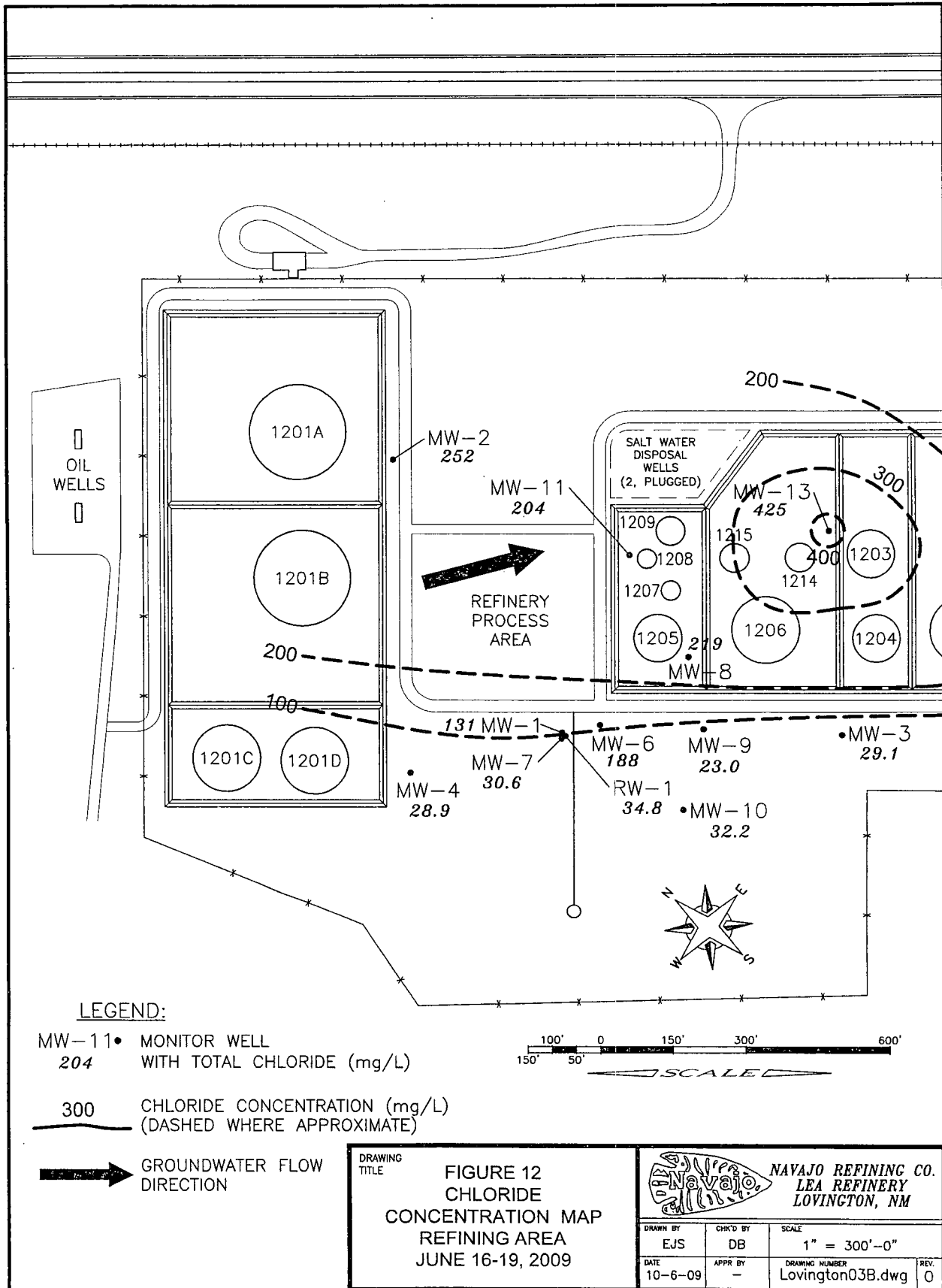


FIGURE 11
CHLORIDE
CONCENTRATION MAP
JUNE 16-19, 2009

DRAWING TITLE			
NAVJO REFINING CO. LEA REFINERY LOVINGTON, NM			
DRAWN BY	CHK'D BY	SCALE	REV.
EJS	DB	1" = 300'-0"	
DATE	APPR BY	DRAWING NUMBER	
10-6-09	-	Lovington03B.dwg	0



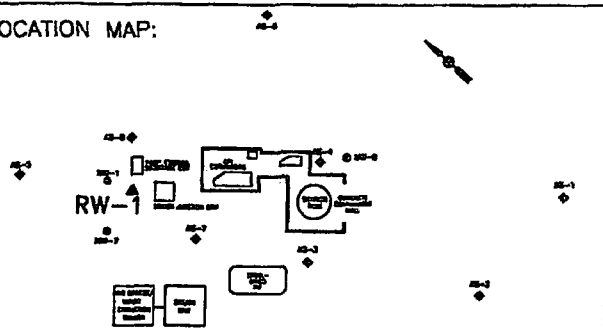
XV. APPENDICES

Appendix A
New and Existing Monitor Well Lithologic and Completion Logs

LITHOLOGIC LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: RW-1

SITE LOCATION (SECTION, TOWNSHIP, RANGE):
NE 1/4 SECTION 36 T-19-S R-36-E

GROUND ELEVATION (ft. MSL): ~3835

STATE: NEW MEXICO COUNTY: LEA

DRILLING METHOD: HOLLOW-STEM AUGER

DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING

DATE STARTED: 3/27/96 DATE COMPLETED: 3/29/96

FIELD REP.: G. VAN DEVENTER (GCL)

COMMENTS: MODERATE TO STRONG HYDROCARBON
ODORS AND STAINING OBSERVED IN BORING

LOCATION DESCRIPTION: LOCATED ADJACENT TO NORTH SIDE OF SEWER JUNCTION BOX

DEPTH	WELL CONST.	LITH.	SAMPLE					PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW-COUNT		
5		CAL							SANDY CALICHE, VERY PALE ORANGE (10YR 8/2), HARD (INDURATED), FRACTURED (WEATHERED), DRY
10		SM		9	10.5	100	8 8 8	280 ppm	SILTY SAND, GRAYISH ORANGE (10YR 7/4), APPROX. 80% V. FINE-GRAINED SAND, 15% SILT, 5% DISSEMINATED CALCIUM CARBONATE, MODERATE HYDROCARBON ODOR, LOOSE AND DRY.
15									AS ABOVE EXCEPT GRAYISH BLACK AND STRONG HYDROCARBON ODOR.
20									SILTY SAND AS ABOVE EXCEPT MEDIUM DENSE (HARD STREAK AT 18-18.5 FEET)
25									
30				19	20.5	100	16 41 23	320 ppm	SAND, BLACK, FINE-GRAINED, SUB-ROUNDED, WELL SORTED, STRONG HYDROCARBON ODOR, LOOSE, MOIST
35				29	30.5	100	5 14 10	360 ppm	
40		sw		39	40.5	50	52 22-1"	340 ppm	SAND AS ABOVE EXCEPT MEDIUM DARK GRAY AND DENSE
45									COLOR CHANGE TO MODERATE YELLOWISH BROWN (10 YR 5/4) ABOUT 45 FEET
50				49	50.5	100	1 54	320 ppm	SAND, MODERATE YELLOWISH BROWN (10YR 5/4), V. FINE TO FINE-GRAINED, SUB ROUNDED, MODERATELY SORTED, MODERATE HYDROCARBON ODOR, STIFF, DRY

LITHOLOGIC LOG
(Continued)

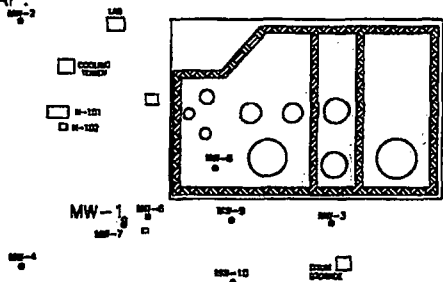
Page 2 of 2
LOCATION ID: RW-1

DEPTH	WELL CONST.	LITH.	SAMPLE						LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW-COUNT	PID READING	
60				59	60.5	50	0 10 50	340 ppm	SAND, MODERATE YELLOWISH BROWN (10 YR 5/4), FINE-GRAINED, SUBROUNDED, WELL SORTED, MODERATE HYDROCARBON ODOR, MEDIUM DENSE, DRY
65									
70				69	70.5	50	0 1 50	240 ppm	SAND, MODERATE YELLOWISH BROWN (10 YR 5/4), FINE-GRAINED, SUBROUNDED, WELL SORTED, MODERATE HYDROCARBON ODOR, MEDIUM DENSE, DRY
75									
80				79	80.5	50	0 3 50	160 ppm	SAND, LIGHT BROWN (5 YR 6/4), FINE-GRAINED, SUBROUNDED, WELL SORTED, MODERATE HYDROCARBON ODOR, MEDIUM DENSE, DRY
85			SW						
90				89	90.5	50	0 6 50	350 ppm	GROUNDWATER/FREE PRODUCT ENCOUNTERED AT APPROX. 90 FEET
95									
100									
105									
110									
115									
120									BOTTOM OF BORING AT 119 FEET

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-1

SITE LOCATION (SECTION, TOWNSHIP, RANGE):

NE 1/4 SECTION 36 T-16-S R-36-E

GROUND ELEVATION (ft. MSL): 3836

STATE: NEW MEXICO COUNTY: LEA

DRILLING METHOD: HOLLOW-STEM AUGER

DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING

DATE STARTED: 8-23-95 DATE COMPLETED: 8-23-95

FIELD REP.: DARRELL MOORE

COMMENTS: HYDROCARBON ODORS AND STAINING

OBSERVED FROM 7ft. TO 97ft. BGS.

LOCATION DESCRIPTION: APPROX. 15 FEET NORTH OF SEWER JUNCTION BOX.

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
			TOP	0	1		NO PID READINGS	TOP SOIL
		G	CAL	1	4	CUTTINGS		ROCK (CALICHE)
5		C		4	7	CUTTINGS		SLIGHTLY SOFTER ROCK TURNING TO VERY FINE GRAINED SAND AT BOTTOM.
				7	10	CUTTINGS		GRAY SAND WITH HYDROCARBON ODOR.
10		SM		10	13	CUTTINGS		GRAY TURNING DARK GRAY.
				13	20	CUTTINGS		DARK GRAY WITH STREAKS OF ROCK AND ODOR.
15								
20				20	23	CUTTINGS		DARK GRAY WITH ODOR TURNING BLACK.
				23	48	CUTTINGS		JET BLACK WITH STRONG ODOR, FINE-GRAINED SAND, MODERATELY WELL SORTED.
25								
30								
35								
40		SW						
45								
50				48	65	CUTTINGS		DARK GRAY GRADING TO LIGHT GRAY VERY FINE-GRAINED SAND.

LITHOLOGIC LOG

(Continued)

Page 2 of 2

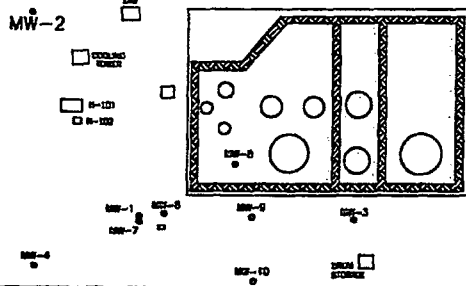
LOCATION ID: MW-1

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60								
65			SW	65	97	CUTTINGS		BROWN TO LIGHT TAN WITH ODOR.
70								
75								
80								
85								
90								GROUNDWATER ENCOUNTERED AT APPROXIMATELY 93 FEET BGS.
95								0.02 FEET OF PRODUCT ON WATER TABLE.
100								BOTTOM OF BORING AT 98 FEET
105								
110								
115								
120								

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-2
 SITE LOCATION (SECTION, TOWNSHIP, RANGE):
NE 1/4 SECTION 36 T-16-S R-36-E
 GROUND ELEVATION (ft. MSL): ~3835
 STATE: NEW MEXICO COUNTY: LEA
 DRILLING METHOD: HOLLOW-STEM AUGER
 DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING
 DATE STARTED: 8-28-95 DATE COMPLETED: 8-28-95
 FIELD REP.: DARRELL MOORE
 COMMENTS: NO HYDROCARBON ODORS OR STAINING
OBSERVED.

LOCATION DESCRIPTION: LOCATED UPGRADIENT APPROX. 150 FEET NORTH OF COOLING TOWER.

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
			TOP	0	1	CUTTINGS	NO PID READINGS	TOP SOIL
		G C	CAL					CAPROCK (CALICHE) TURNING TO SAND AT BOTTOM.
5			SM	4	102	CUTTINGS		TAN SAND, VERY FINE-GRAINED
10								
15								
20								
25			SW	25	102	CUTTINGS		SAND, FINE-GRAINED, MODERATELY WELL SORTED.
30								
35								
40								
45								
50								

LITHOLOGIC LOG
(Continued)

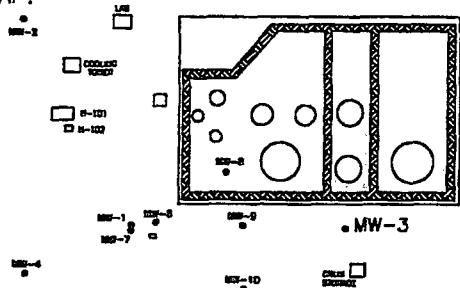
Page 2 of 2
LOCATION ID: MW-2

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60			SW	25	102	CUTTINGS		TAN SAND, FINE GRAINED, MODERATELY WELL SORTED.
65								
70								
75								
80								
85								
90								GROUNDWATER ENCOUNTERED AT 89.18 FEET.
95								
100								
105								BOTTOM OF BORING AT 102 FEET
110								
115								
120								

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-3

SITE LOCATION (SECTION, TOWNSHIP, RANGE):

NE 1/4 SECTION 36 T-16-S R-36-E

GROUND ELEVATION (ft. MSL): ~3830

STATE: NEW MEXICO COUNTY: LEA

DRILLING METHOD: HOLLOW-STEM AUGER

DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING

DATE STARTED: 8-29-95 DATE COMPLETED: 8-29-95

FIELD REP.: DARRELL MOORE

COMMENTS: NO ODORS. NO VISIBLE CONTAMINATION

LOCATION DESCRIPTION: LOCATED DOWNGRAIDENT APPROX. 600 FEET SOUTH OF SEWER JUNCTION BOX.

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
			TOP	0	1	CUTTINGS	NO PID READINGS	TOP SOIL
			CAL	1	3	CUTTINGS		CAPROCK (CALICHE) TURNING TO SAND AT BOTTOM.
			SM	3	103	CUTTINGS		TAN SAND, VERY FINE-GRAINED
5								
10								
15								
20								
25			SW	25	103	CUTTINGS		SAND, FINE-GRAINED, MODERATELY WELL SORTED.
30								
35								
40								
45								
50								

LITHOLOGIC LOG
(Continued)

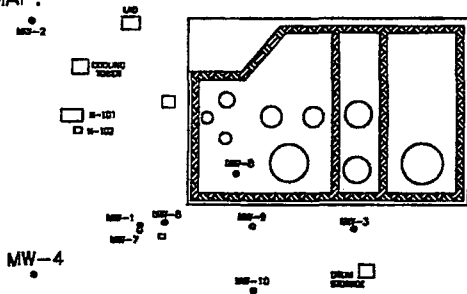
Page 2 of 2
LOCATION ID: MW-3

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60			SW	25	102	CUTTINGS		TAN SAND, FINE GRAINED, MODERATELY WELL SORTED.
65								
70								
75								
80								
85								
90								
95								
100								
105								
110								
115								
120								
								GROUNDWATER ENCOUNTERED AT 91.4 FEET.
								BOTTOM OF BORING AT 103 FEET

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-4

SITE LOCATION (SECTION, TOWNSHIP, RANGE):

NE 1/4 SECTION 36 T-16-S R-36-E

GROUND ELEVATION (ft. MSL): ~3838

STATE: NEW MEXICO COUNTY: LEA

DRILLING METHOD: HOLLOW-STEM AUGER

DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING

DATE STARTED: 8-30-95 DATE COMPLETED: 8-30-95

FIELD REP.: DARRELL MOORE

COMMENTS: NO HYDROCARBON ODORS OR STAINING OBSERVED.

LOCATION DESCRIPTION: LOCATED UPGRADE APPROX. 300 FEET WEST-NORTHWEST OF SEWER JUNCTION BOX.

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE		
			TOP	0	1	CUTTINGS	NO PID READINGS	TOP SOIL
		G	CAL	1	4	CUTTINGS		CAPROCK (CALICHE) TURNING TO SAND AT BOTTOM.
5		C	SM	4	102	CUTTINGS		TAN SAND, VERY FINE-GRAINED
10								
15								
20								
25			SW	25	102	CUTTINGS		SAND, FINE-GRAINED, MODERATELY WELL SORTED.
30								
35								
40								
45								
50								

LITHOLOGIC LOG (Continued)

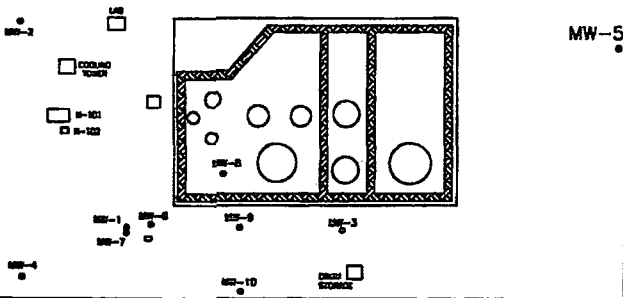
Page 2 of 2
LOCATION ID: MW-4

DEPTH H	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60			SW	25	102	CUTTINGS		TAN SAND, FINE GRAINED, MODERATELY WELL SORTED.
65								
70								
75								
80								
85								
90								
95								
100								
105								GROUNDWATER ENCOUNTERED AT 92.72 FEET.
110								
115								
120								
								BOTTOM OF BORING AT 104 FEET

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-5

SITE LOCATION (SECTION, TOWNSHIP, RANGE):

NE 1/4 SECTION 36 T-16-S R-36-E

GROUND ELEVATION (ft. MSL): ~3814

STATE: NEW MEXICO COUNTY: LEA

DRILLING METHOD: HOLLOW-STEM AUGER

DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING

DATE STARTED: 9-06-95 DATE COMPLETED: 9-06-95

FIELD REP.: DARRELL MOORE

COMMENTS: NO HYDROCARBON ODORS OR STAINING OBSERVED.

LOCATION DESCRIPTION: LOCATED DOWNGRAIENT NEAR SOUTHEAST BOUNDARY OF PROPERTY.

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE		
			TOP	0	1	CUTTINGS	NO PID READINGS	TOP SOIL
		G C	CAL	1	4	CUTTINGS		CAPROCK (CALICHE) TURNING TO SAND AT BOTTOM.
5			SM	4	96	CUTTINGS		TAN SAND, VERY FINE-GRAINED
10								
15								
20								
25			SW	25	96	CUTTINGS		SAND, FINE-GRAINED, MODERATELY WELL SORTED.
30								
35								
40								
45								
50								

(Continued)

Page 2 of 2

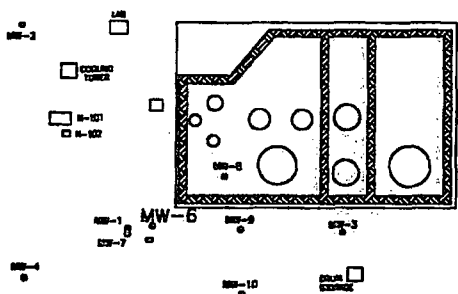
LOCATION ID: MW-5

DEPTH H	WELL CONST.	LITH.	SAMPLE				LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	
60			SW	25	96	CUTTINGS	TAN SAND, FINE GRAINED, MODERATELY WELL SORTED.
65							
70							
75							
80							
85							
90							
95							
100							
105							
110							
115							
120							

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-6
 SITE LOCATION (SECTION, TOWNSHIP, RANGE):
NE 1/4 SECTION 36 T-16-S R-36-E
 GROUND ELEVATION (ft. MSL): ~3836
 STATE: NEW MEXICO COUNTY: LEA
 DRILLING METHOD: HOLLOW-STEM AUGER
 DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING
 DATE STARTED: 8-31-95 DATE COMPLETED: 8-31-95
 FIELD REP.: DARRELL MOORE
 COMMENTS: HYDROCARBON ODORS NOTED AT 91 FEET BGS
(FORMERLY BORING 7).

LOCATION DESCRIPTION: LOCATED DOWNGRADIENT APPROXIMATELY 50 FEET SOUTHEAST OF SEWER JUNCTION BOX.

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE		
			TOP	0	1	CUTTINGS	NO PID READINGS	TOP SOIL
		G	CAL	1	4	CUTTINGS		CAPROCK (CALICHE) TURNING TO SAND AT BOTTOM.
5		C	SM	4	99	CUTTINGS		TAN SAND, VERY FINE-GRAINED
10								
15								
20								
25			SW	25	99	CUTTINGS		SAND, FINE-GRAINED, MODERATELY WELL SORTED.
30								
35								
40								
45								
50								

LITHOLOGIC LOG
(Continued)

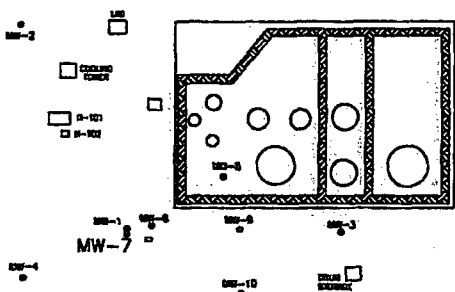
Page 2 of 2
LOCATION ID: MW-6

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE		
60			SW	25	99	CUTTINGS		TAN SAND, FINE GRAINED, MODERATELY WELL SORTED.
65								
70								
75								
80								
85								
90								HYDROCARBON ODOR NOTED AT APPROX. 91 FEET.
95								GROUNDWATER ENCOUNTERED AT 93 FEET.
100								BOTTOM OF BORING AT 99 FEET
105								
110								
115								
120								

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-7
 SITE LOCATION (SECTION, TOWNSHIP, RANGE):
NE 1/4 SECTION 36 T-16-S R-36-E
 GROUND ELEVATION (ft. MSL): ~3836
 STATE: NEW MEXICO COUNTY: LEA
 DRILLING METHOD: HOLLOW-STEM AUGER
 DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING
 DATE STARTED: 9-06-95 DATE COMPLETED: 9-07-95
 FIELD REP.: DARRELL MOORE
 COMMENTS: 0.05 FEET OF FREE PRODUCT AT 93 FEET BGS
(FORMERLY BORING 10).

LOCATION DESCRIPTION: LOCATED APPROXIMATELY 15 FEET NORTH OF SEWER JUNCTION BOX.

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
			TOP	0	1	CUTTINGS	NO PID READINGS	TOP SOIL
		G C	CAL	1	4	CUTTINGS		CAPROCK (CALICHE) TURNING TO SAND AT BOTTOM.
5			SM	4	100	CUTTINGS		TAN SAND, VERY FINE-GRAINED
10								
15								
20								
25			SW	25	100	CUTTINGS		SAND, FINE-GRAINED, MODERATELY WELL SORTED.
30								
35								
40								
45								
50								

LITHOLOGIC LOG

(Continued)

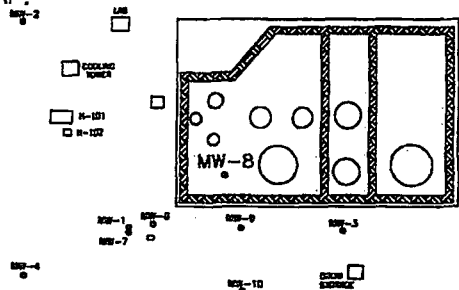
Page 2 of 2LOCATION ID: MW-7

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60			SW	25	100	CUTTINGS		TAN SAND, FINE GRAINED, MODERATELY WELL SORTED.
65								
70								
75								
80								
85								
90								
95								GROUNDWATER ENCOUNTERED AT 93 FEET. WITH 0.05 FEET OF FREE PRODUCT.
100								BOTTOM OF BORING AT 100 FEET
105								
110								
115								
120								

LITHOLOGIC LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-8

SITE LOCATION (SECTION, TOWNSHIP, RANGE):

NE 1/4 SECTION 36 T-16-S R-36-E

GROUND ELEVATION (ft. MSL): ~ 3835

STATE: NEW MEXICO COUNTY: LEA

DRILLING METHOD: HOLLOW-STEM AUGER

DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING

DATE STARTED: 4-15-96 DATE COMPLETED: 4-15-96

FIELD REP.: G. VAN DEVENTER (GCL)

COMMENTS: NO HYDROCARBON ODORS OR STAINING
OBSERVED IN DRILL CUTTINGS

LOCATION DESCRIPTION: LOCATED APPROX. 20 FEET SOUTHEAST OF TANK NO. 1205

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
		G C	CAL					SANDY CALICHE, GRAYISH ORANGE (10 YR 7/4), HARD, FRACTURED AND DRY.
5								
10				10	10	CUTTINGS	<1 ppm	SILTY SAND, GRAYISH ORANGE (10 YR 7/4), APPROX. 80% VERY FINE-GRAINED SAND, 15% SILT, 5% DISSEMINATED CALCIUM CARBONATE, SUBROUNDED, MODERATELY SORTED, LOOSE, DRY
15			SM					
20				20	20	CUTTINGS	<1 ppm	SILTY SAND, GRAYISH ORANGE (10 YR 7/4), APPROX. 80% VERY FINE-GRAINED SAND, 15% SILT, 5% DISSEMINATED CALCIUM CARBONATE, SUBROUNDED, MODERATELY SORTED, LOOSE, DRY
25								
30				30	30	CUTTINGS	<1 ppm	SAND, LIGHT BROWN (5 YR 5/6), VERY FINE AND FINE GRAINED SAND, MODERATELY SORTED, SUBROUNDED, LOOSE, DRY
35								
40			SW	40	40	CUTTINGS	<1 ppm	SAND, LIGHT BROWN (5 YR 5/6), VERY FINE AND FINE GRAINED SAND, MODERATELY SORTED, SUBROUNDED, LOOSE, DRY
45								
50				50	50	CUTTINGS	<1 ppm	SAND, LIGHT BROWN (5 YR 6/4), VERY FINE AND FINE-GRAINED SAND, MODERATELY SORTED, SUBROUNDED, LOOSE, DRY

LITHOLOGIC LOG
(Continued)

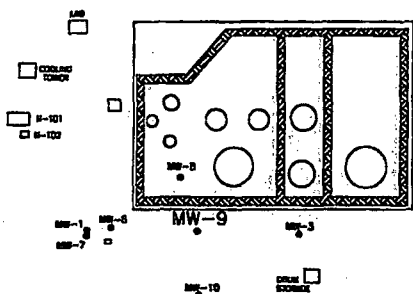
Page 2 of 2
LOCATION ID: MW-8

DEPTH H	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60				60	60	CUTTINGS	<1 ppm	SAND, LIGHT BROWN (5 YR 6/4), VERY FINE AND FINE- GRAINED SAND, MODERATELY SORTED, SUBROUNDED, LOOSE, DRY
65								
70				70	70	CUTTINGS	<1 ppm	SAND, LIGHT BROWN (5 YR 6/4), VERY FINE AND FINE- GRAINED SAND, MODERATELY SORTED, SUBROUNDED, LOOSE, DRY
75								
80			SW	80	80	CUTTINGS	<1 ppm	SAND, LIGHT BROWN (5 YR 6/4), FINE-GRAINED, WELL SORTED, SUBROUNDED, LOOSE, DRY
85								
90				90	90	CUTTINGS	<1 ppm	GROUNDWATER ENCOUNTERED AT APPROX. 90 FEET
95								
100								
105								
110								
115								
120								
								BOTTOM OF BOREHOLE AT 105 FEET

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-9
 SITE LOCATION (SECTION, TOWNSHIP, RANGE):
 NE 1/4 SECTION 36 T-16-S R-36-E
 GROUND ELEVATION (ft. MSL): 3835
 STATE: NEW MEXICO COUNTY: LEA
 DRILLING METHOD: HOLLOW-STEM AUGER
 DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING
 DATE STARTED: 4-1-96 DATE COMPLETED: 4-2-96
 FIELD REP.: G. VAN DEVENTER
 COMMENTS: NO HYDROCARBON ODORS OR STAINING
 OBSERVED IN DRILL CUTTINGS.

LOCATION DESCRIPTION: LOCATED APPROX. 55 FEET EAST OF SIX LPG TANKS (20) FEET WEST OF ROAD

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE		
4		C				NO SAMPLES COLLECTED		SANDY CALICHE, PALE YELLOWISH BROWN (10 YR 6/2), HARD, FRACTURED AND DRY.
5		C	CAL					
10		C		10	10	CUTTINGS	<1PPM	SILTY SAND, GRAYISH ORANGE (10 YR 7/4), 80% VERY FINE-GRAINED SAND, 15% SILT, 5% DISSEMINATED CALCIUM CARBONATE, LOOSE, DRY
15		C	SM					
20		C		20	20	CUTTINGS	<1PPM	SILTY SAND, LIGHT BROWN (5 YR 6/4), 80% VERY FINE-GRAINED SAND, 15% SILT, 5% DISSEMINATED CALCIUM CARBONATE, LOOSE, DRY
25		C						
30		C		30	30	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY
35		C						
40		C	SW	40	40	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY
45		C						
50		C		50	50	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY

LITHOLOGIC LOG
(Continued)

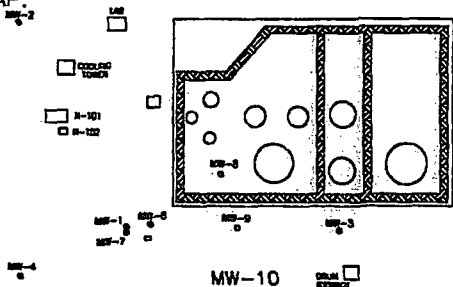
Page 2 of 2
LOCATION ID: MW-9

DEPTH	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60				60	60	CUTTINGS	<1 ppm	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY DARK YELLOWISH ORANGE (10 YR 6/6)
65								
70				70	70	CUTTINGS	<1 ppm	MODERATE YELLOWISH BROWN (10 YR 5/4)
75								
80			SW	80	80	CUTTINGS	<1 ppm	LIGHT BROWN (5 YR 6/4)
85								
90				90	90	CUTTINGS	<1 ppm	GROUNDWATER ENCOUNTERED AT APPROXIMATELY 88 FEET BGS
95								
100								
105								BOTTOM OF BORING AT 104 FEET
110								
115								
120								

LITHOLOGICAL LOG

Page 1 of 2

LOCATION MAP:



SITE ID: LOVINGTON REFINERY LOCATION ID: MW-10

SITE LOCATION (SECTION, TOWNSHIP, RANGE):

NE 1/4 SECTION 36 T-16-S R-36-E

GROUND ELEVATION (ft. MSL): 3835

STATE: NEW MEXICO COUNTY: LEA

DRILLING METHOD: HOLLOW-STEM AUGER

DRILLING CONTR.: POOL ENVIRONMENTAL DRILLING

DATE STARTED: 3-29-96 DATE COMPLETED: 4-1-96

FIELD REP.: G. VAN DEVENTER

COMMENTS: NO HYDROCARBON ODORS OR STAINING
OBSERVED IN DRILL CUTTINGS.

LOCATION DESCRIPTION: LOCATED APPROX. 60 FEET WEST OF SIX LPG TANKS

DEPTH	WELL CONST.	LITH.	SAMPLE				PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE		
4		C				NO SAMPLES COLLECTED		SANDY CALICHE, PALE YELLOWISH BROWN (10 YR 6/2), HARD, FRACTURED, DRY
5		C	CAL					
10		C		10	10	CUTTINGS	<1PPM	SILTY CALCAREOUS SAND, GRAYISH ORANGE (10 YR 7/4), 80% VERY FINE GRAINED SAND, 15% SILT, 5% DISSEMINATED CALCIUM CARBONATE, LOOSE, DRY
15		C	SM					
20		C		20	20	CUTTINGS	<1PPM	SILTY CALCAREOUS SAND, LIGHT BROWN (5 YR 6/4), 80% VERY FINE GRAINED SAND, 15% SILT, 5% DISSEMINATED CALCIUM CARBONATE, LOOSE, DRY
25		C		25	25	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY
30		C		30	30	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY
35		C						
40		C	SW	40	40	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY
45		C						
50		C		50	50	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY

LITHOLOGIC LOG
(Continued)

Page 2 of 2
LOCATION ID: MW-10

DEPTH H	WELL CONST.	LITH.	SAMPLE					LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	TYPE	PID READING	
60				60	60	CUTTINGS	<1PPM	SAND, LIGHT BROWN (5 YR 5/6), FINE-GRAINED, SUBROUNDED, WELL SORTED, LOOSE, DRY
65								DARK YELLOWISH ORANGE (10 YR 6/6)
70				70	70	CUTTINGS	<1PPM	MODERATE YELLOWISH BROWN (10 YR 5/4)
75								
80			SW	80	80	CUTTINGS	<1PPM	LIGHT BROWN (5 YR 6/4)
85								
90				90	90	CUTTINGS	<1PPM	GROUNDWATER ENCOUNTERED AT APPROXIMATELY 90 FEET BGS
95								
100								
105								BOTTOM OF BORING AT 105 FEET
110								
115								
120								



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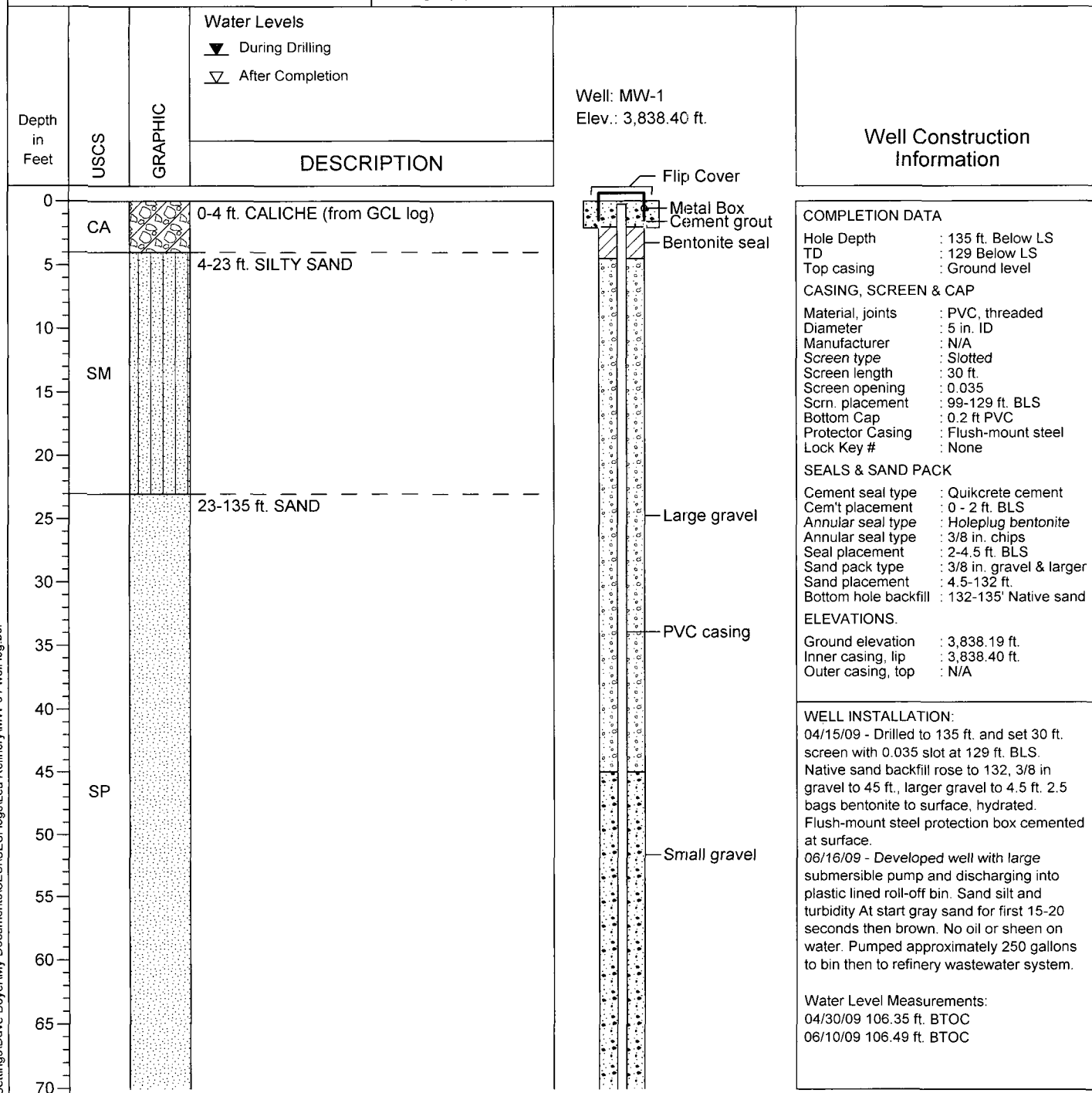
WELL COMPLETION LOG MW-1

(Page 1 of 2)

Monitor Well 1
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.89", W103° 18' 12.36"

Date/Time Started : 04/15/09, 1000
Date/Time Completed : 04/15/09, 1600
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

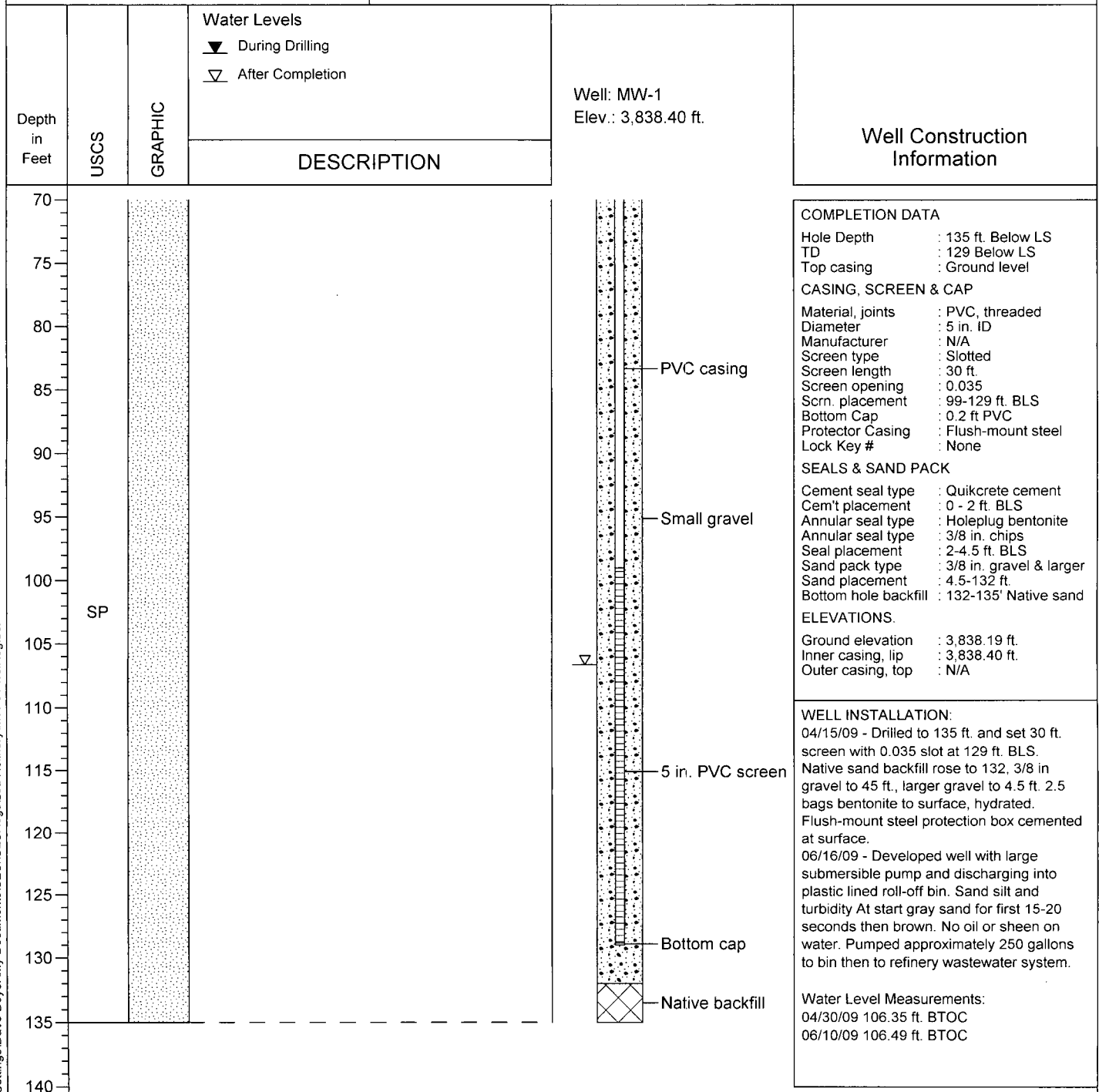
WELL COMPLETION LOG MW-1

(Page 2 of 2)

Monitor Well 1
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.89", W103° 18' 12.36"

Date/Time Started : 04/15/09, 1000
Date/Time Completed : 04/15/09, 1600
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

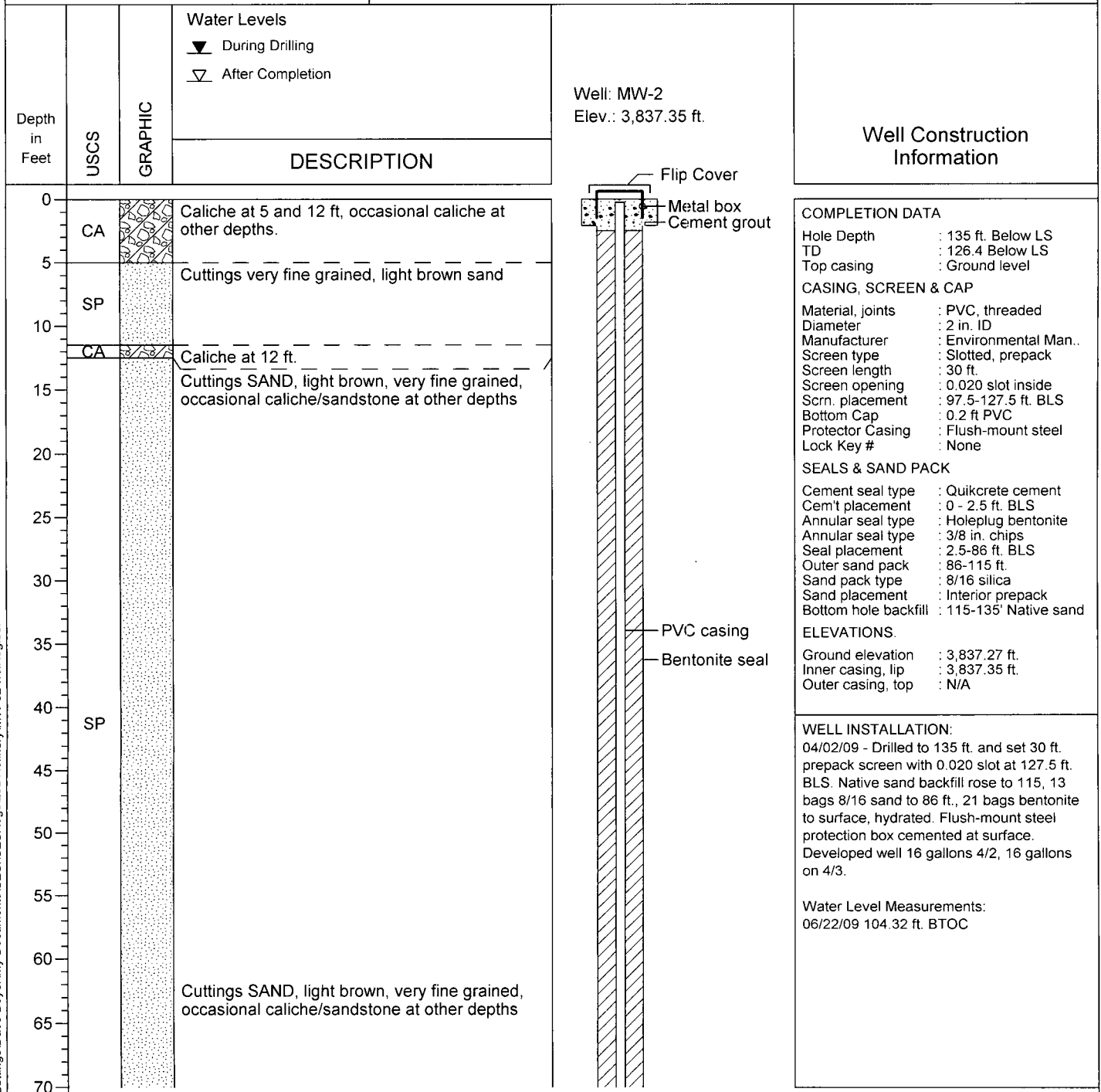
WELL COMPLETION LOG MW-2

(Page 1 of 2)

Monitor Well 2
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 54.18", W103° 18' 09.83"

Date/Time Started : 04/02/09, 0935
Date/Time Completed : 04/02/09, 1830
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

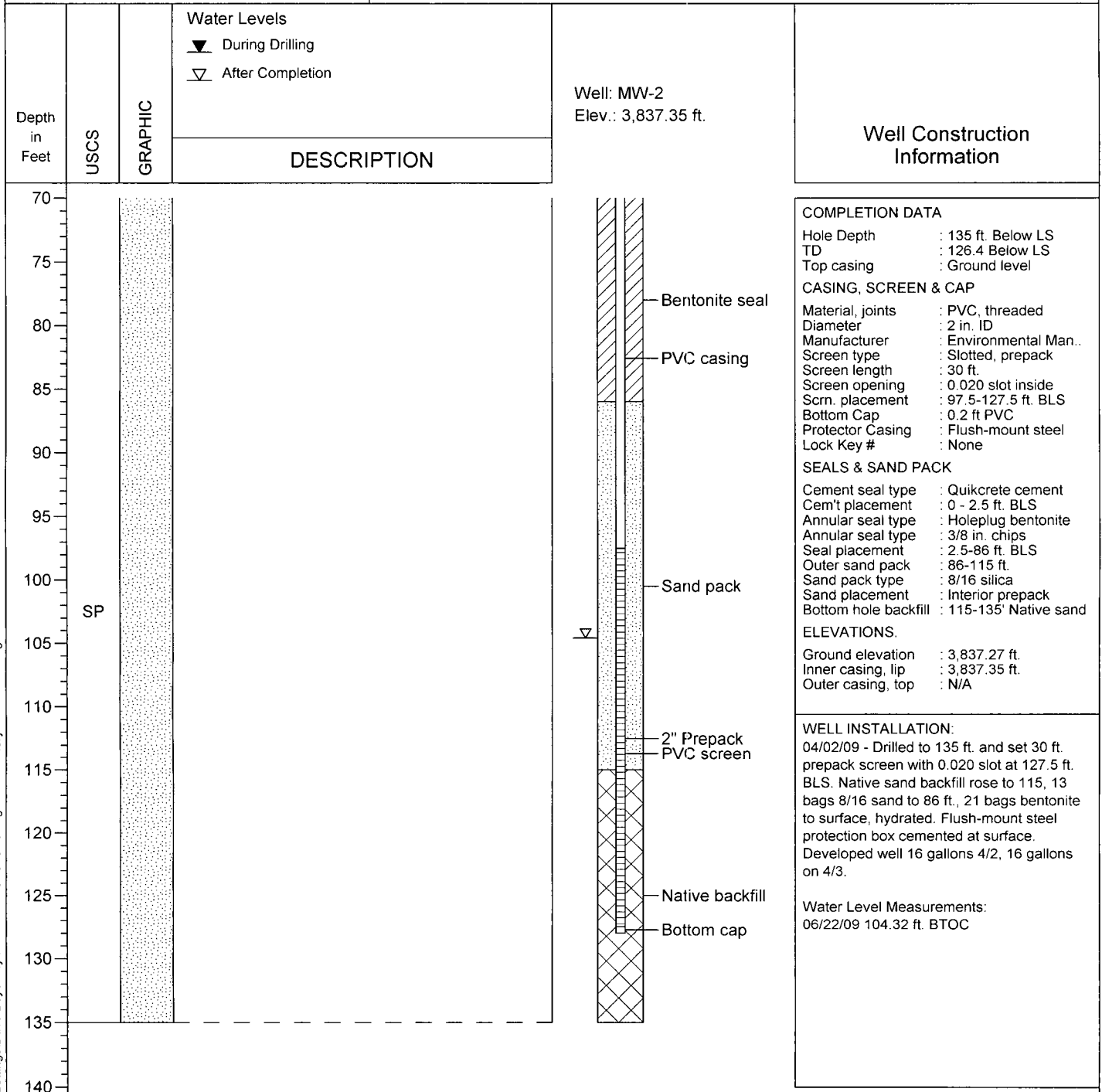
WELL COMPLETION LOG MW-2

(Page 2 of 2)

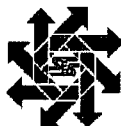
Monitor Well 2
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 54.18", W103° 18' 09.83"

Date/Time Started : 04/02/09, 0935
Date/Time Completed : 04/02/09, 1830
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

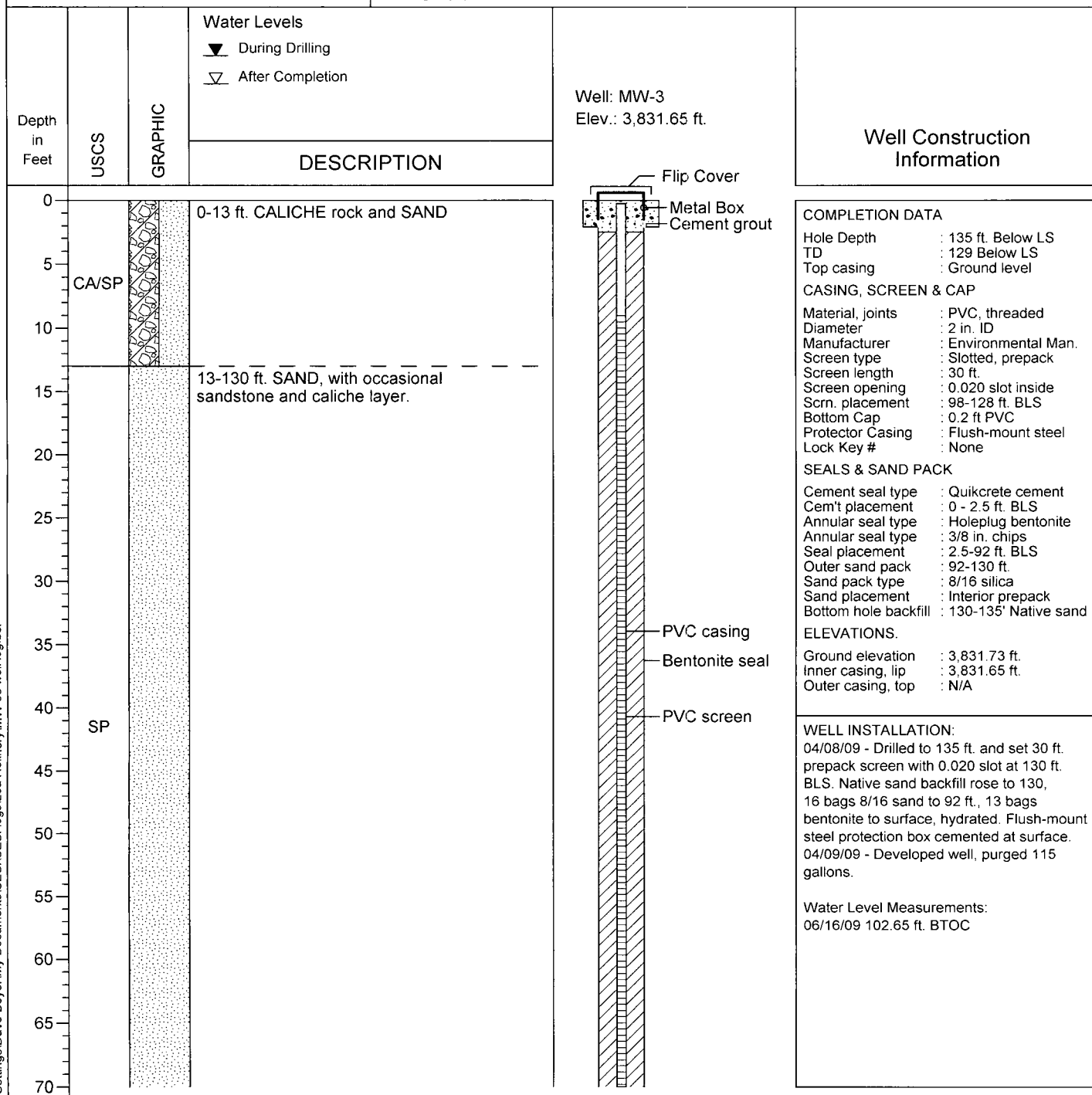
WELL COMPLETION LOG MW-3

(Page 1 of 2)

Monitor Well 3
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 43.46", W103° 18' 08.07"

Date/Time Started : 04/06/09, 0700
Date/Time Completed : 04/06/09, 1735
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : Brian Cuellar, SESI



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
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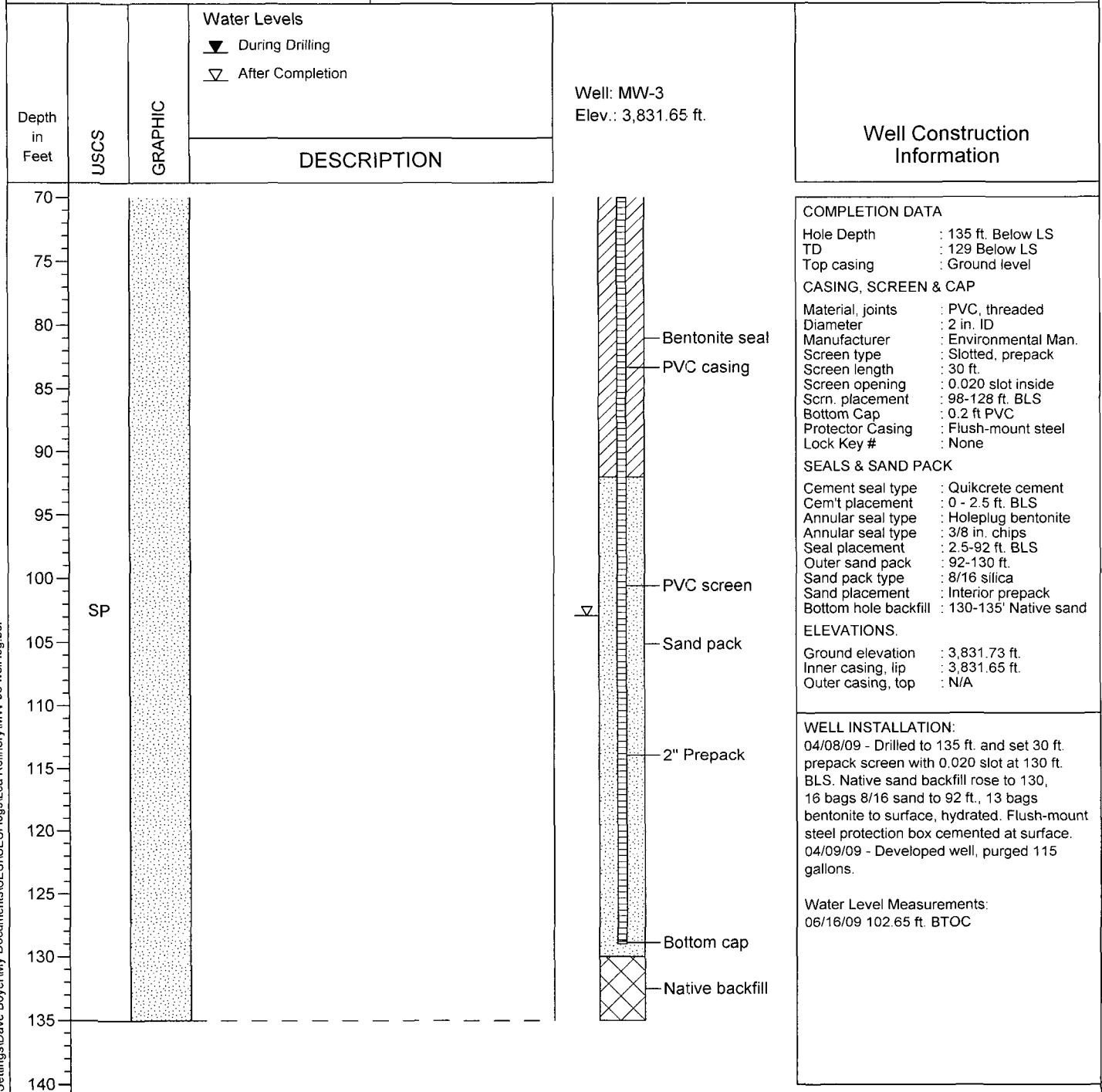
WELL COMPLETION LOG MW-3

(Page 2 of 2)

Monitor Well 3
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 43.46", W103° 18' 08.07"

Date/Time Started : 04/06/09, 0700
Date/Time Completed : 04/06/09, 1735
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : Brian Cuellar, SESI



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
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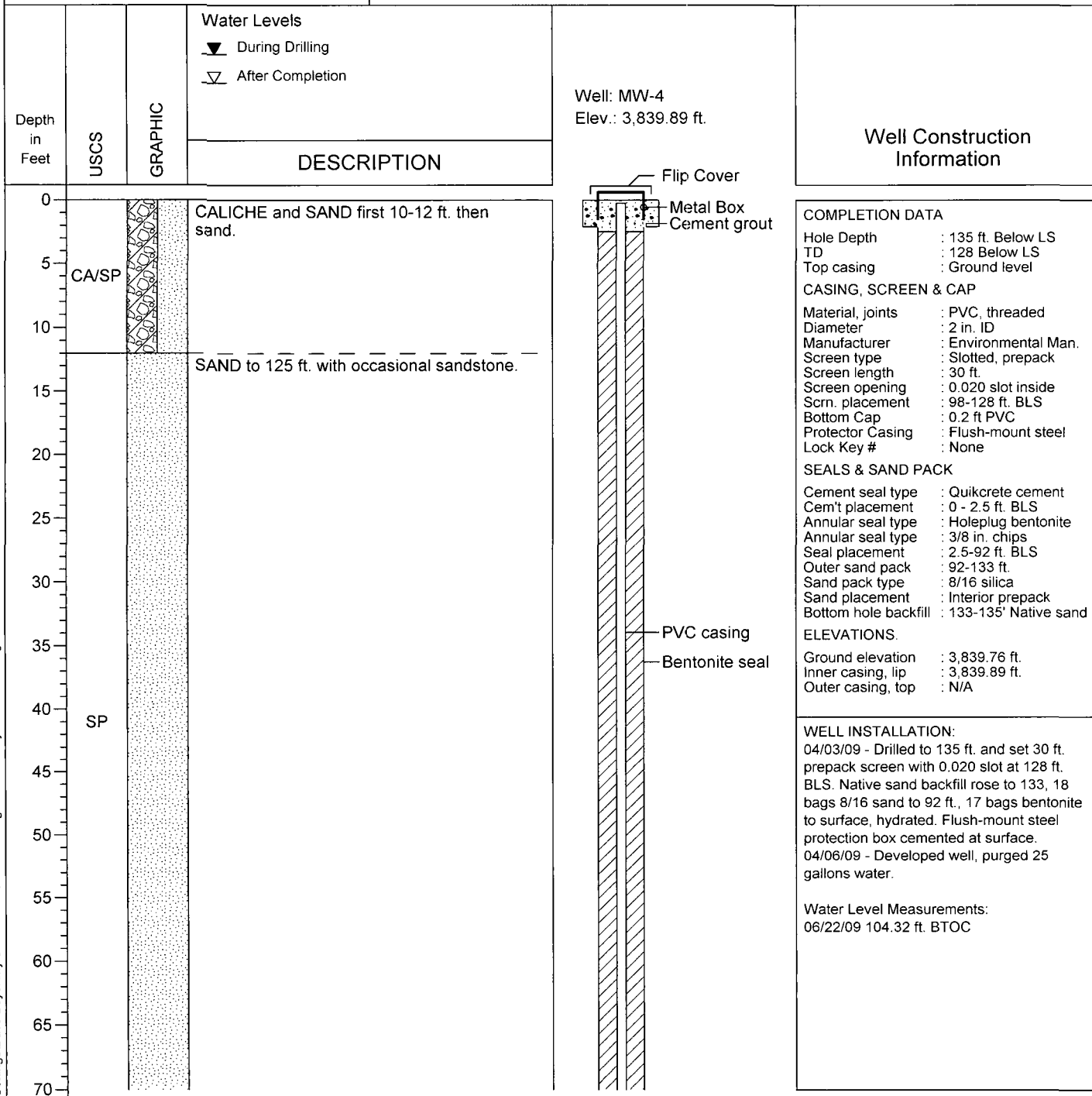
WELL COMPLETION LOG MW-4

(Page 1 of 2)

Monitor Well 4
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 49.78", W103° 18' 15.51"

Date/Time Started : 04/03/09, 1000
Date/Time Completed : 04/03/09, 1600
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:

H/C - Petroleum hydrocarbon



**Safety & Environmental
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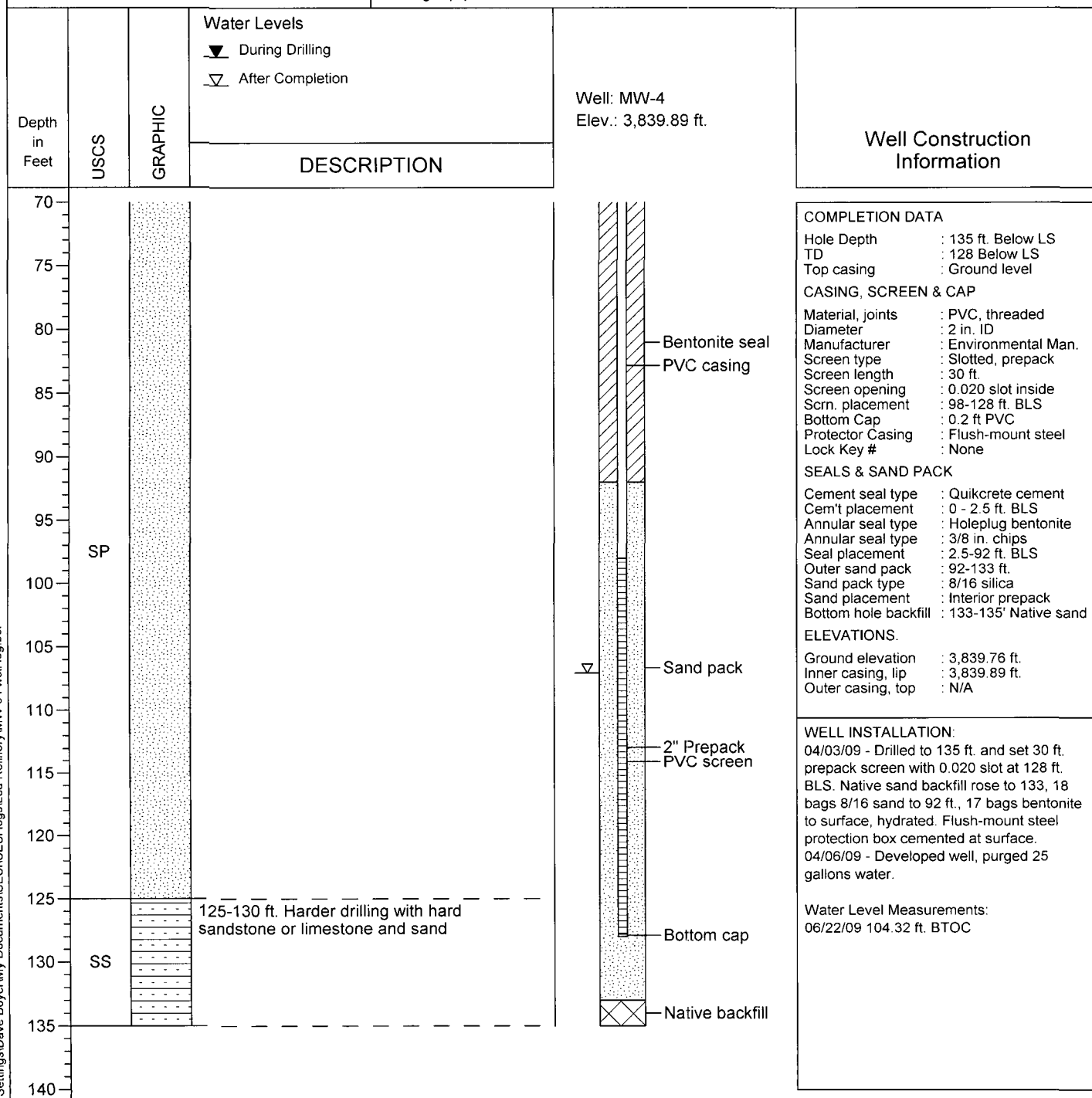
WELL COMPLETION LOG MW-4

(Page 2 of 2)

Monitor Well 4
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 49.78", W103° 18' 15.51"

Date/Time Started : 04/03/09, 1000
Date/Time Completed : 04/03/09, 1600
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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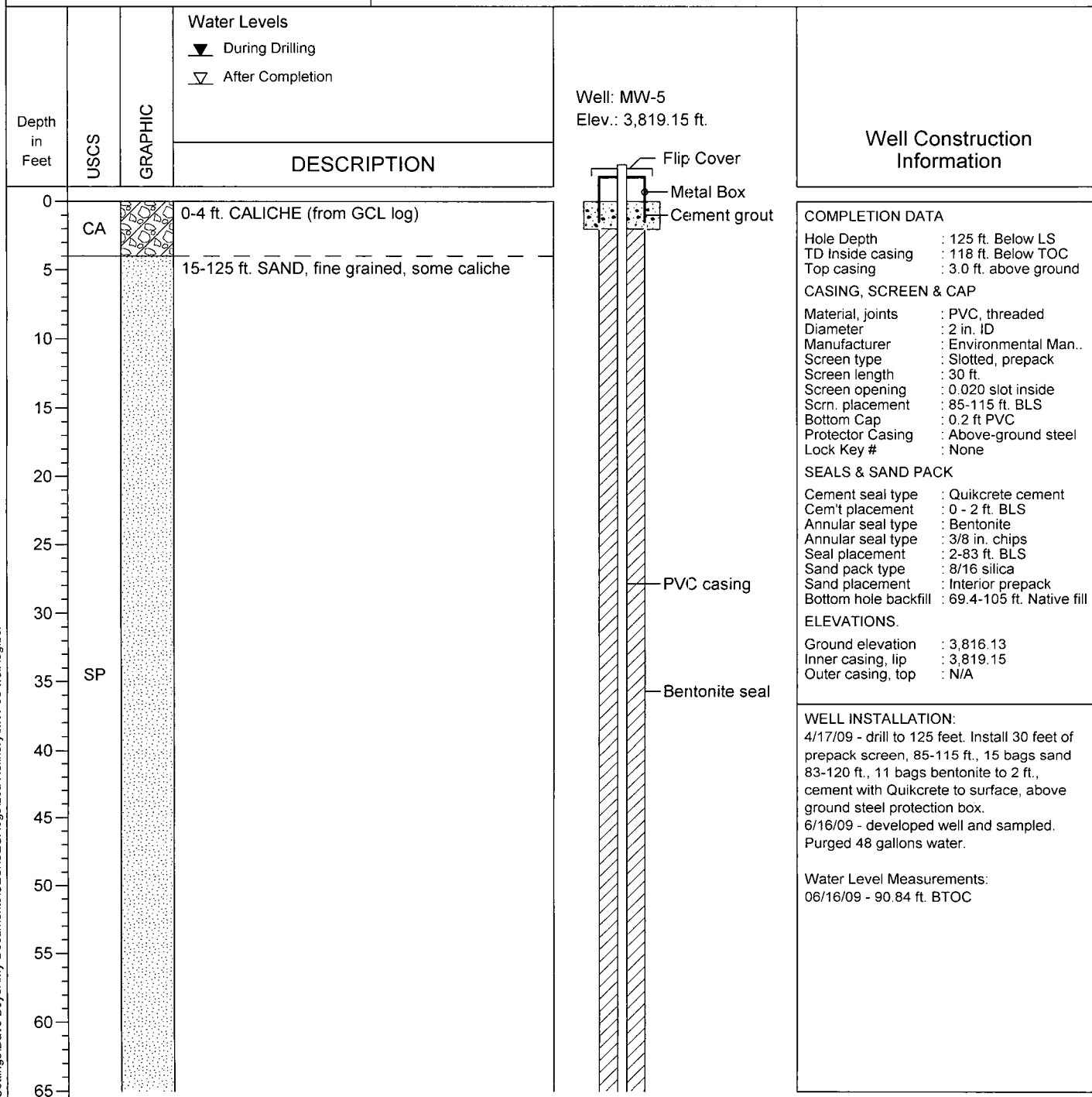
WELL COMPLETION LOG MW-5

(Page 1 of 2)

Monitor Well 5
Navajo Refining Company, Lea Refinery
Section 31, T16S, R37E
Lea County, New Mexico
N32° 52' 31.75", W103° 17' 43.14"

Date/Time Started : 04/17/09, 0645
Date/Time Completed : 04/17/09
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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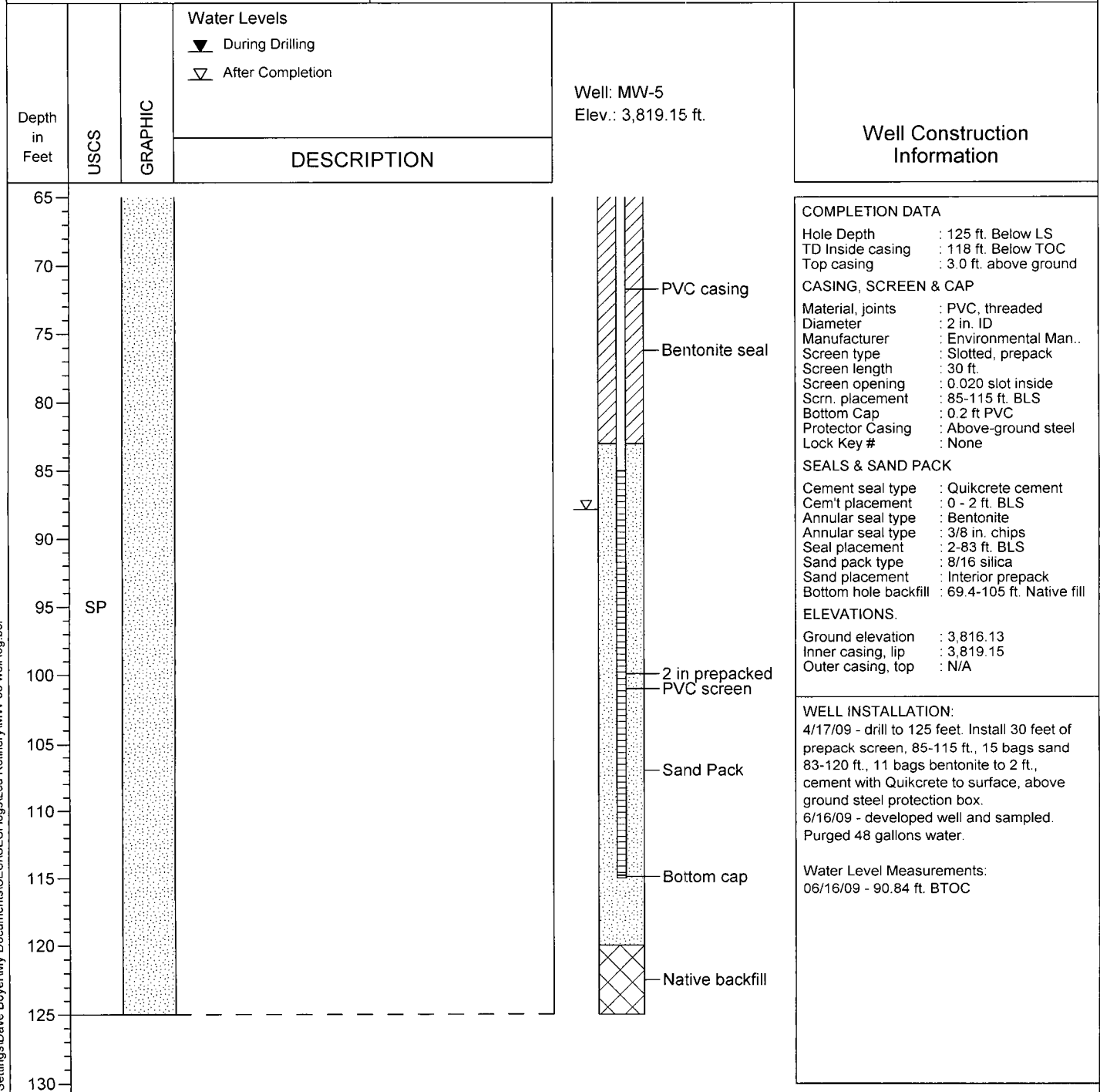
WELL COMPLETION LOG MW-5

(Page 2 of 2)

Monitor Well 5
Navajo Refining Company, Lea Refinery
Section 31, T16S, R37E
Lea County, New Mexico
N32° 52' 31.75", W103° 17' 43.14"

Date/Time Started : 04/17/09, 0645
Date/Time Completed : 04/17/09
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
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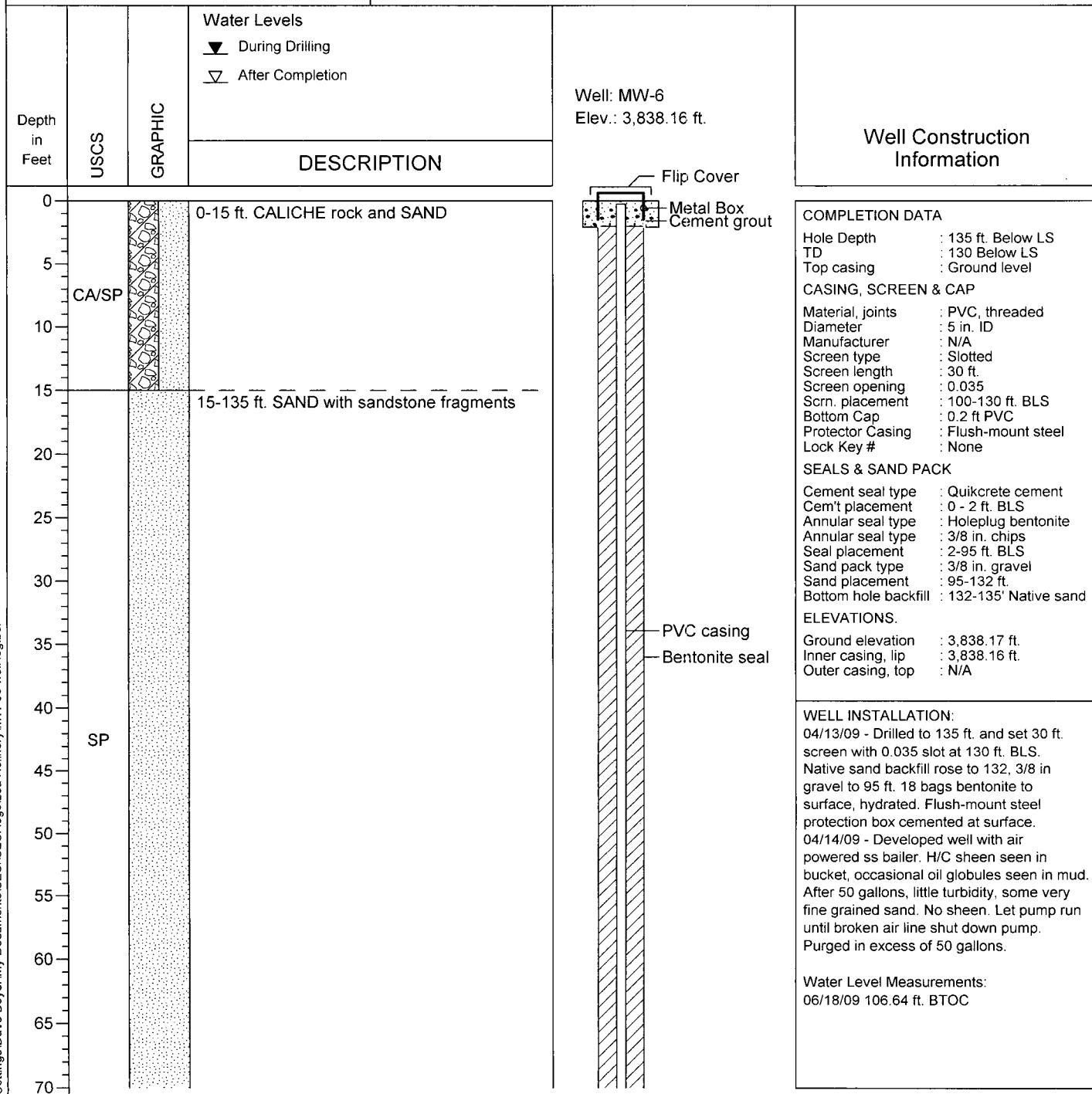
WELL COMPLETION LOG MW-6

(Page 1 of 2)

Monitor Well 6
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.40", W103° 18' 11.63"

Date/Time Started : 04/13/09, 0730
Date/Time Completed : 04/13/09, 1830
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:

H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

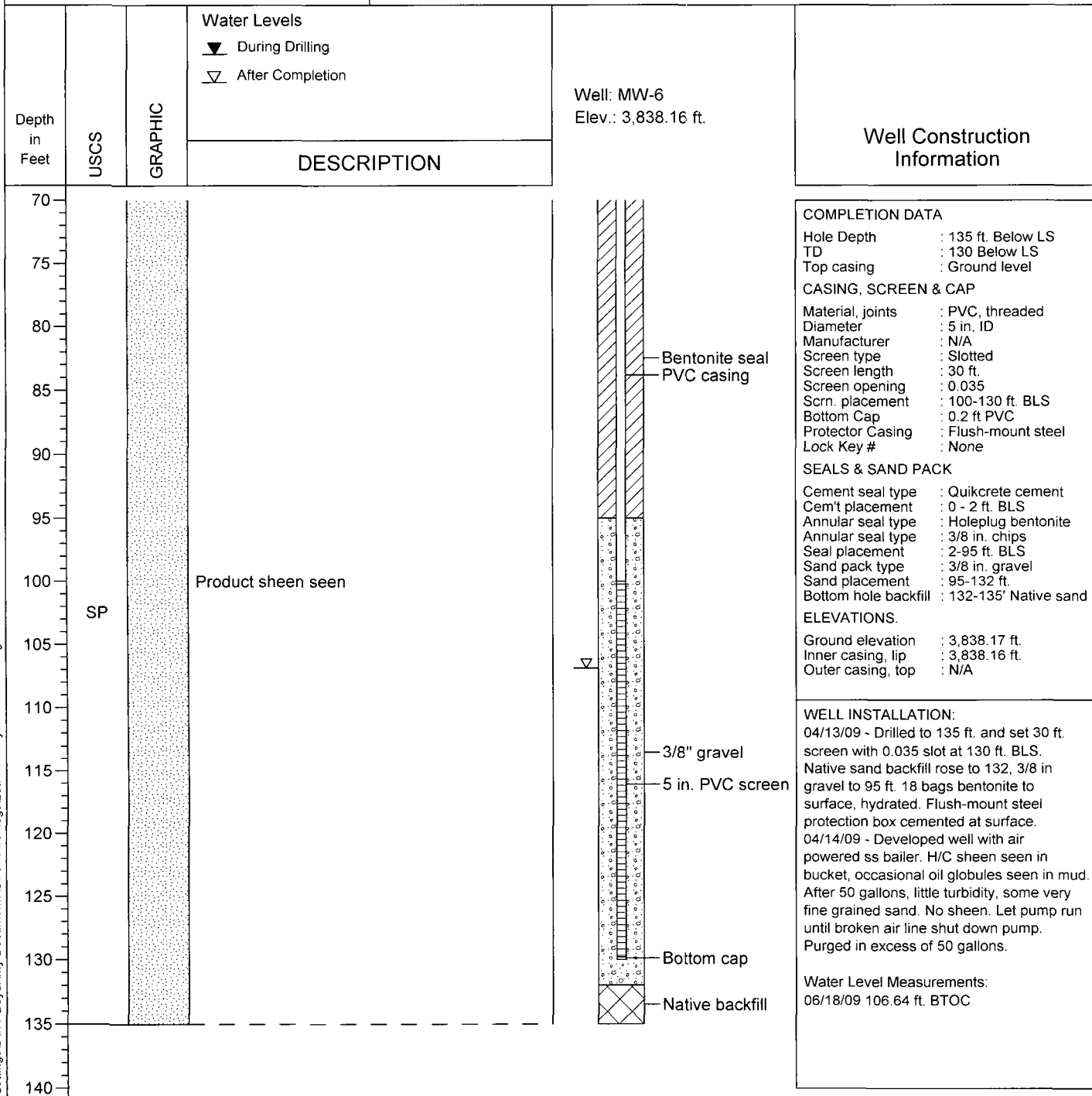
WELL COMPLETION LOG MW-6

(Page 2 of 2)

Monitor Well 6
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.40", W103° 18' 11.63"

Date/Time Started : 04/13/09, 0730
Date/Time Completed : 04/13/09, 1830
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

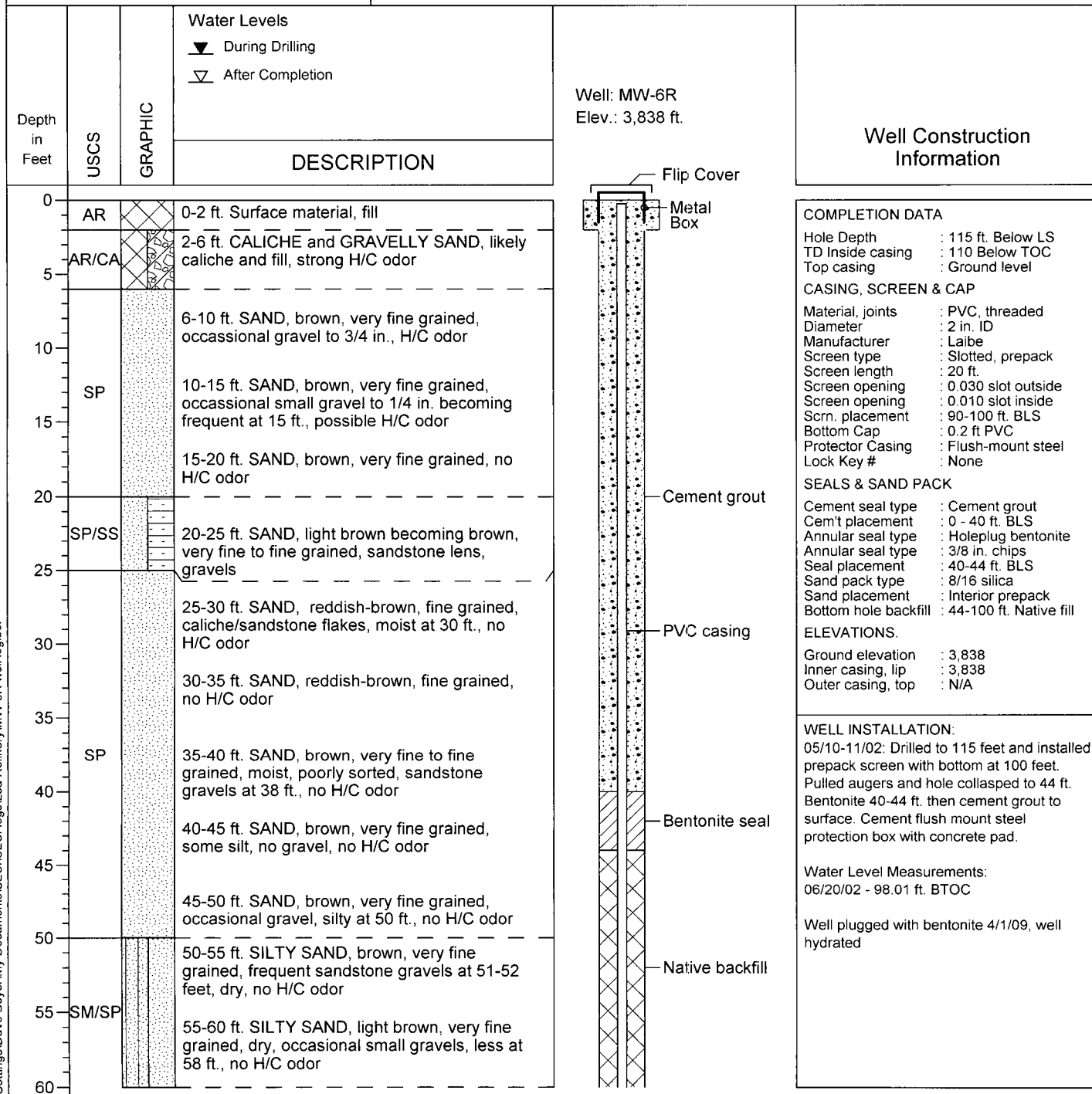
WELL COMPLETION LOG MW-6R

(Page 1 of 2)

Monitor Well 6R
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.40", W103° 18' 11.63"

Date/Time Started : 05/10/02, 1515
Date/Time Completed : 05/10/02, 1330
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Ingersol-Rand A-300

Drilled By : Atkins Engineering
Sampling Method : Cuttings
Logged By : David Boyer, PG



COMPLETION DATA

Hole Depth : 115 ft. Below LS
TD Inside casing : 110 Below TOC
Top casing : Ground level

CASING, SCREEN & CAP

Material, joints : PVC, threaded
Diameter : 2 in. ID
Manufacturer : Laibe
Screen type : Slotted, prepack
Screen length : 20 ft.
Screen opening : 0.030 slot outside
Screen opening : 0.010 slot inside
Scr. placement : 90-100 ft. BLS
Bottom Cap : 0.2 ft PVC
Protector Casing : Flush-mount steel
Lock Key # : None

SEALS & SAND PACK

Cement seal type : Cement grout
Cem't placement : 0 - 40 ft. BLS
Annular seal type : Holeplug bentonite
Annular seal type : 3/8 in. chips
Seal placement : 40-44 ft. BLS
Sand pack type : 8/16 silica
Sand placement : Interior prepack
Bottom hole backfill : 44-100 ft. Native fill

ELEVATIONS.

Ground elevation : 3,838
Inner casing, lip : 3,838
Outer casing, top : N/A

WELL INSTALLATION:

05/10-11/02: Drilled to 115 feet and installed prepack screen with bottom at 100 feet. Pulled augers and hole collapsed to 44 ft. Bentonite 40-44 ft. then cement grout to surface. Cement flush mount steel protection box with concrete pad.

Water Level Measurements:
06/20/02 - 98.01 ft. BTOC

Well plugged with bentonite 4/1/09, well hydrated

Notes:

H/C - Petroleum hydrocarbon



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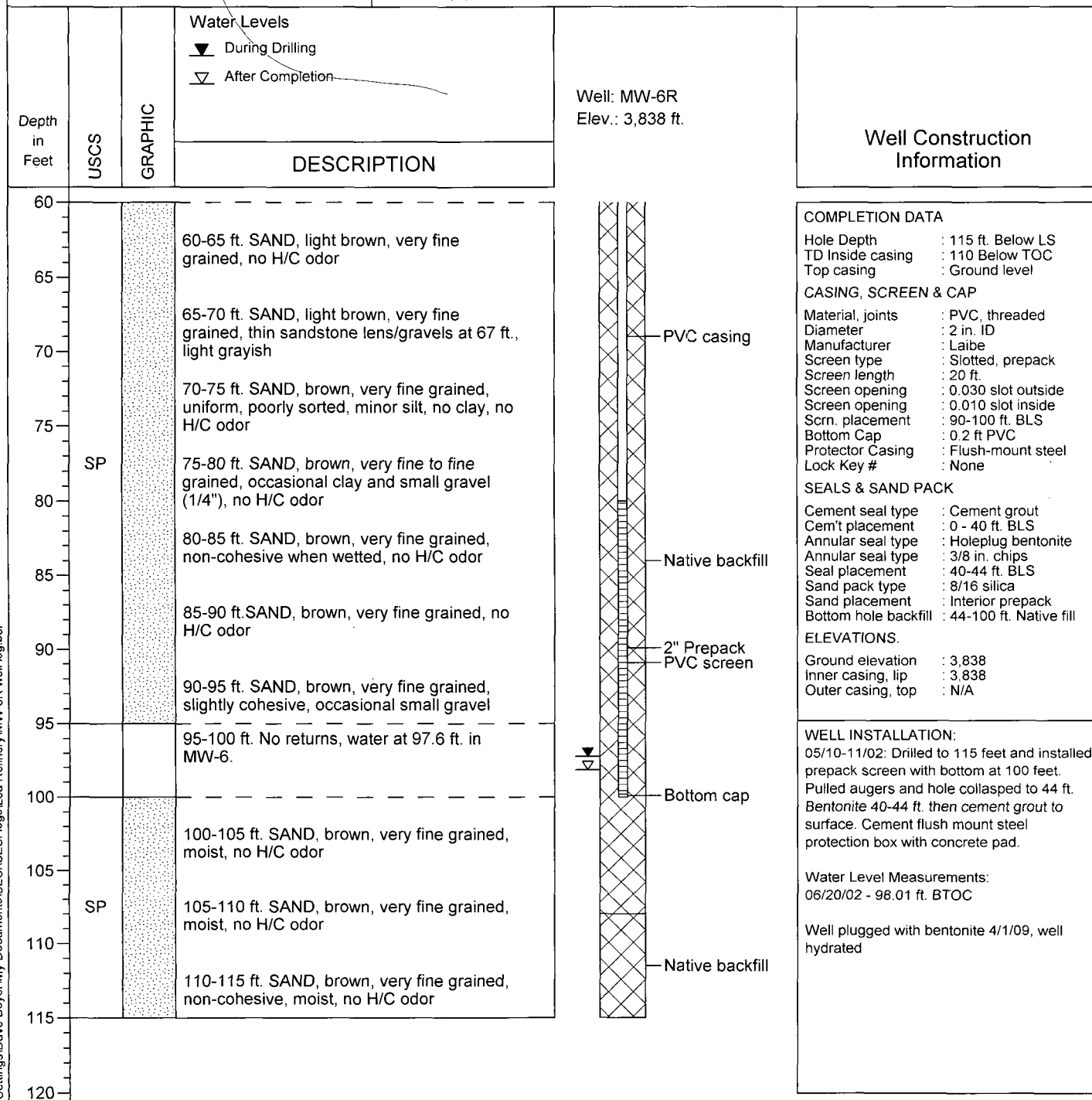
WELL COMPLETION LOG MW-6R

(Page 2 of 2)

Monitor Well 6R
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.40", W103° 18' 11.63"

Date/Time Started : 05/10/02, 1515
Date/Time Completed : 05/10/02, 1330
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Ingersol-Rand A-300

Drilled By : Atkins Engineering
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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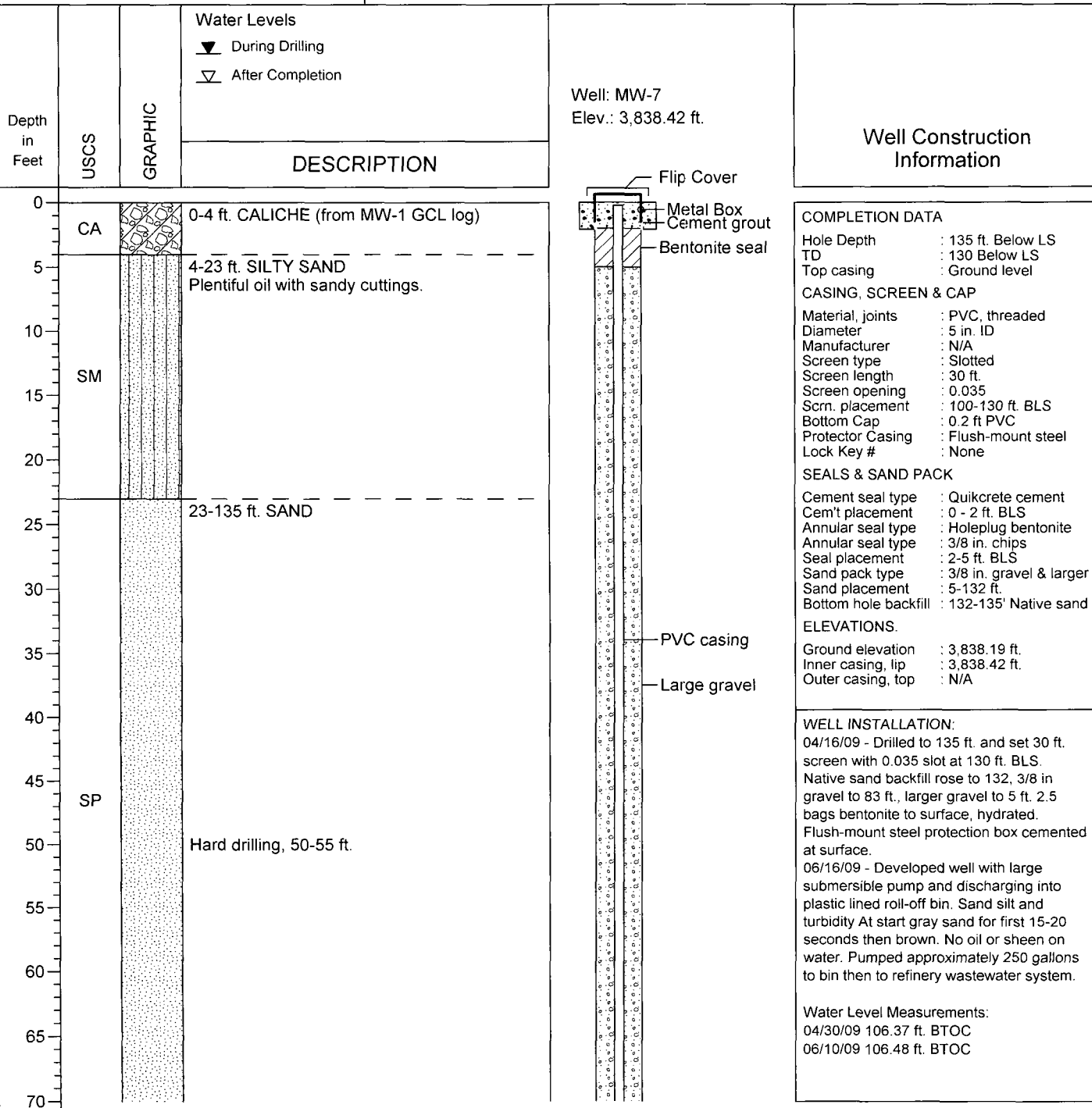
WELL COMPLETION LOG MW-7

(Page 1 of 2)

Monitor Well 7
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.82", W103° 18' 12.48"

Date/Time Started : 04/16/09, 0830
Date/Time Completed : 04/16/09, 1630
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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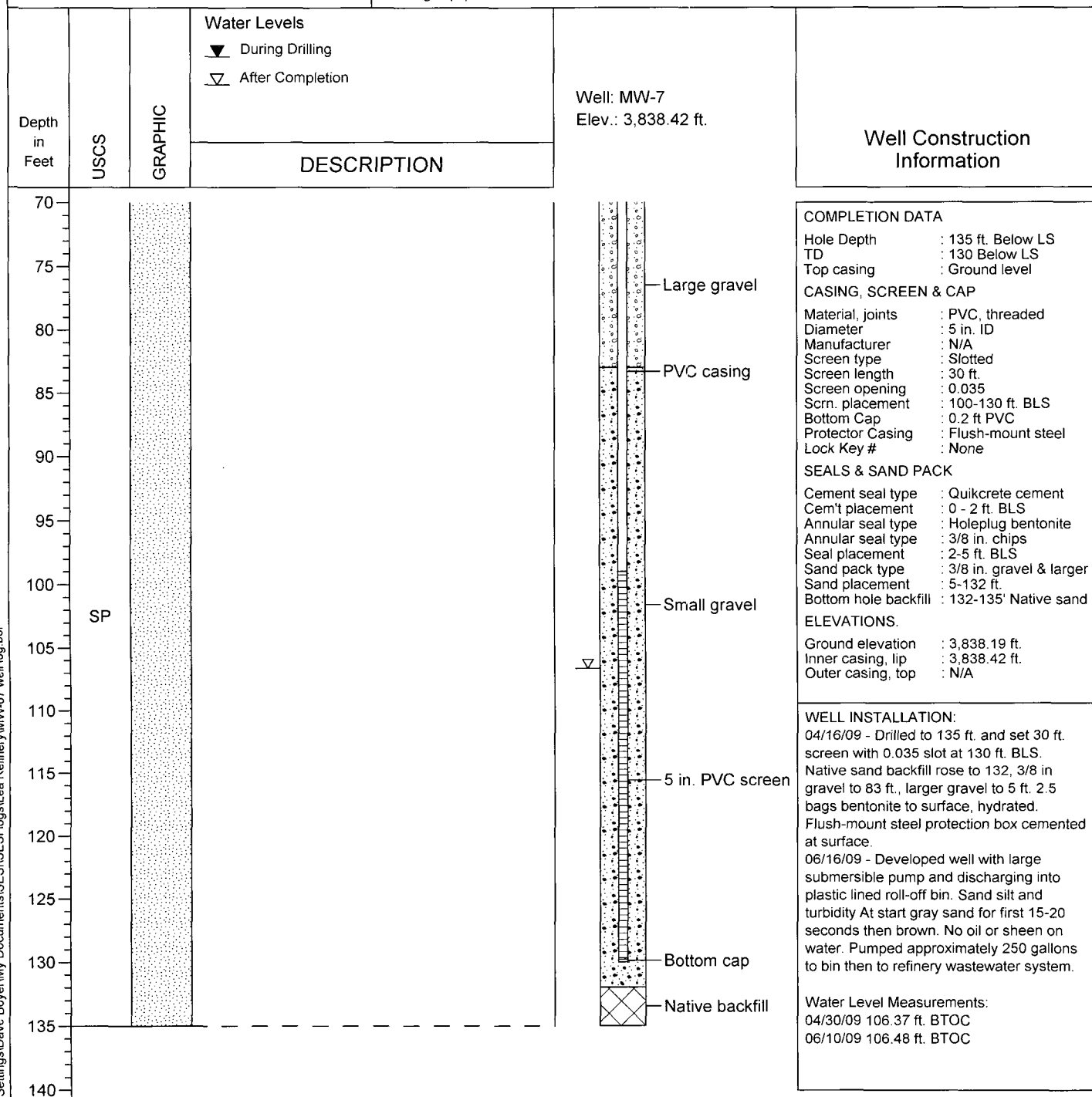
WELL COMPLETION LOG MW-7

(Page 2 of 2)

Monitor Well 7
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.82", W103° 18' 12.48"

Date/Time Started : 04/16/09, 0830
Date/Time Completed : 04/16/09, 1630
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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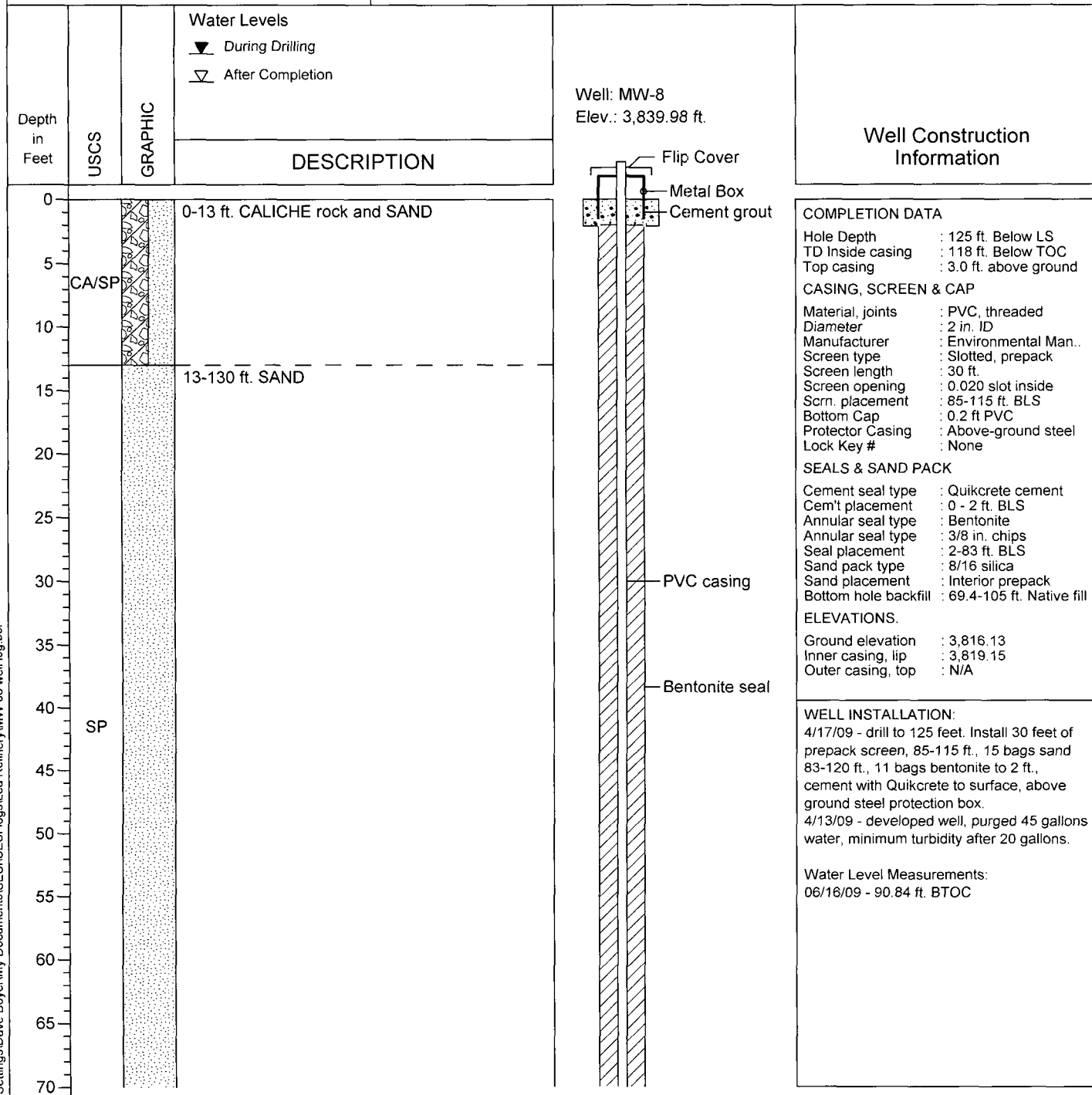
WELL COMPLETION LOG MW-8

(Page 1 of 2)

Monitor Well 8
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 46.89", W103° 18' 08.97"

Date/Time Started : 04/09/09, 0700
Date/Time Completed : 04/09/09, 1230
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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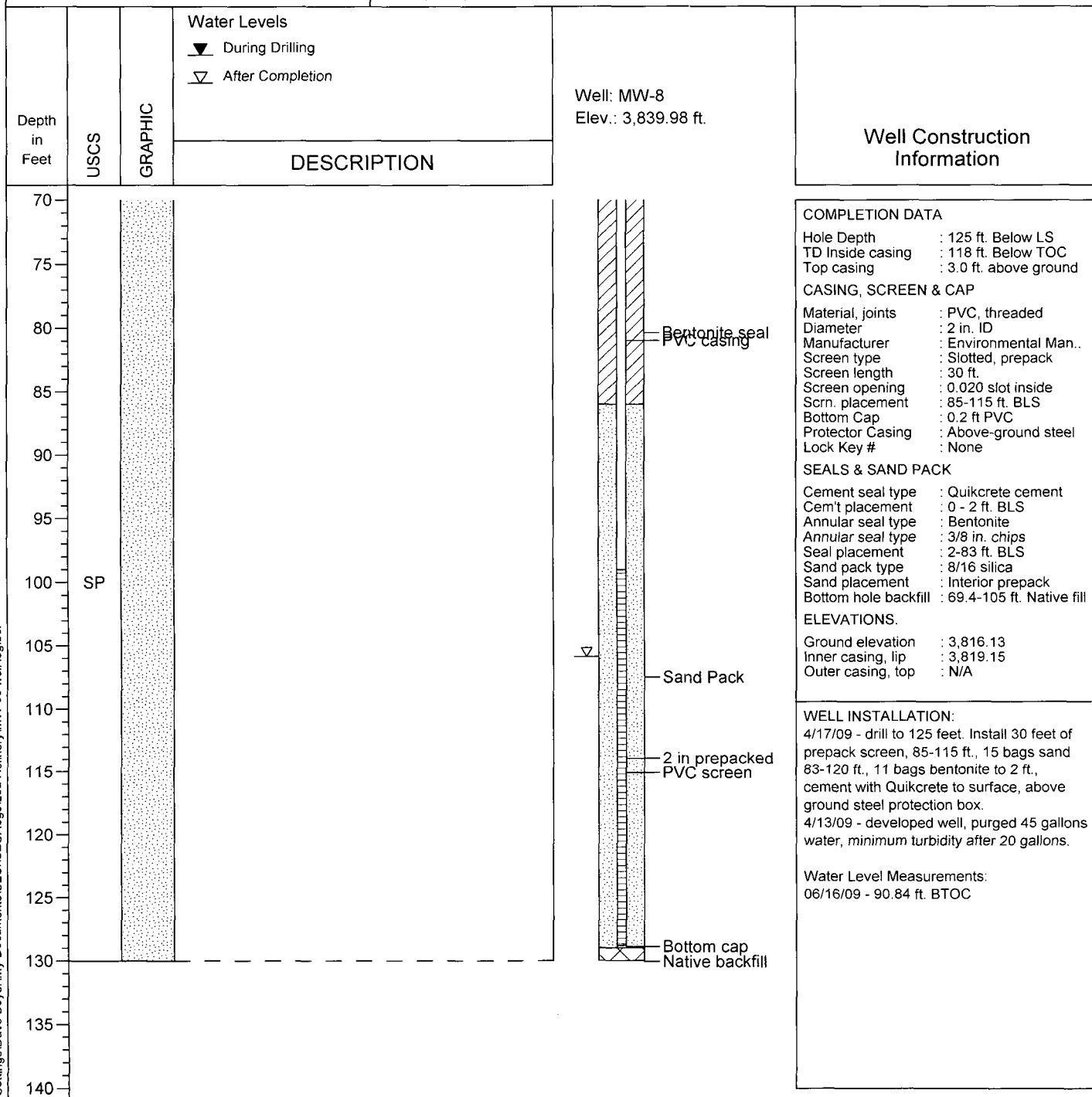
WELL COMPLETION LOG MW-8

(Page 2 of 2)

Monitor Well 8
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 46.89", W103° 18' 08.97"

Date/Time Started : 04/09/09, 0700
Date/Time Completed : 04/09/09, 1230
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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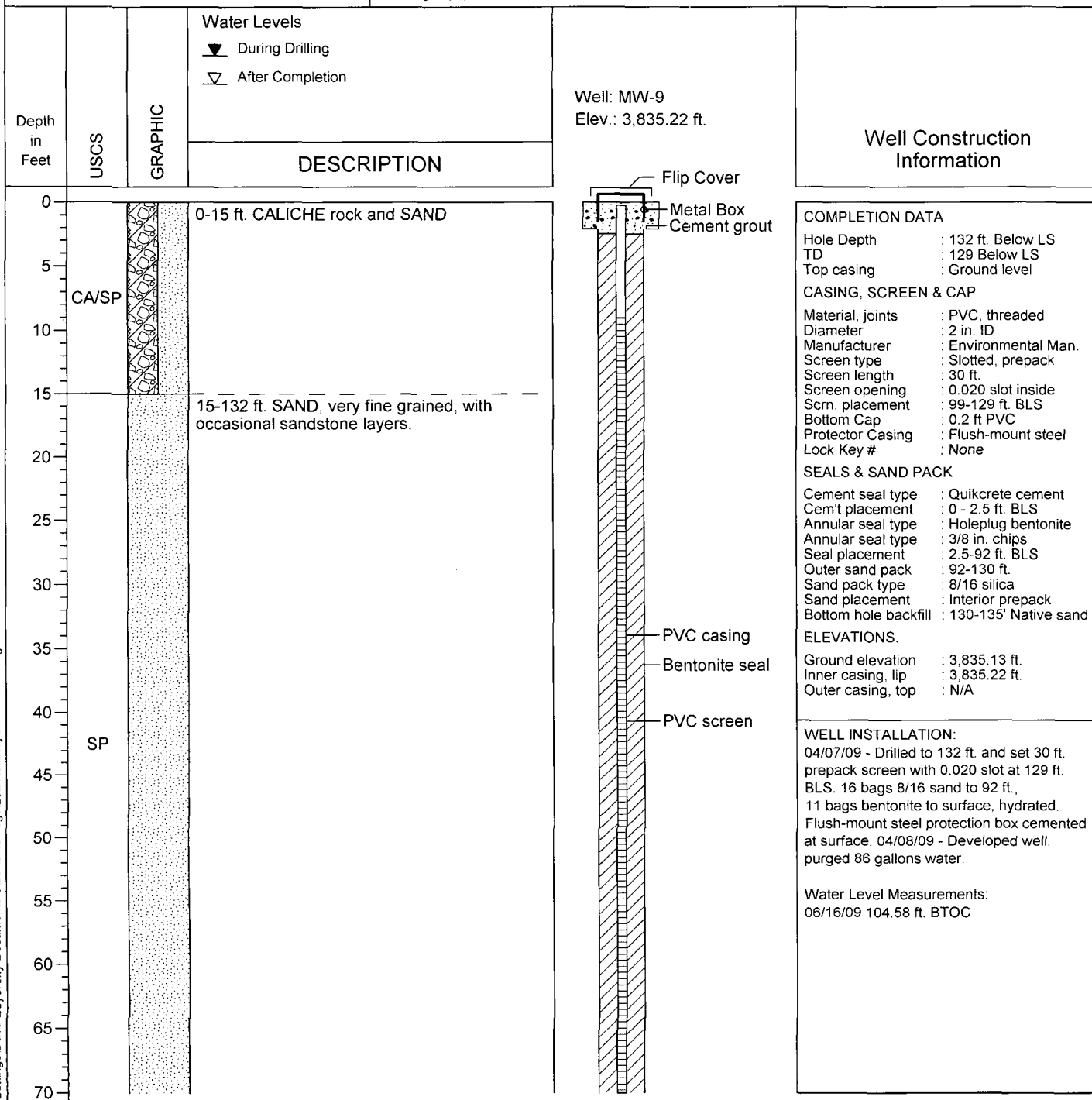
WELL COMPLETION LOG MW-9

(Page 1 of 2)

Monitor Well 9
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 44.96", W103° 18' 11.95"

Date/Time Started : 04/07/09, 0700
Date/Time Completed : 04/07/09
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : Brian Cuellar, SESI



Notes:

H/C - Petroleum hydrocarbon



**Safety & Environmental
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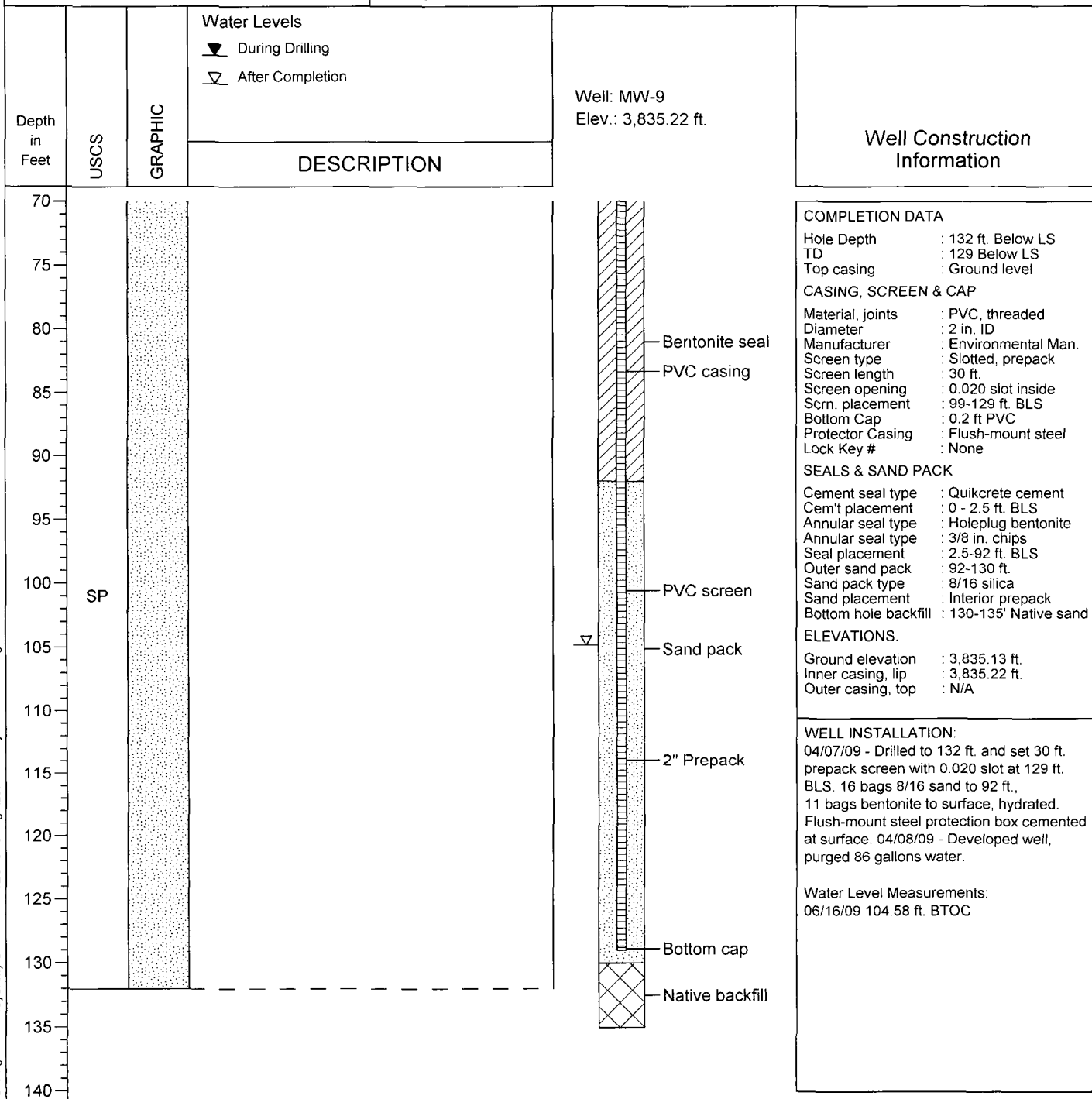
WELL COMPLETION LOG MW-9

(Page 2 of 2)

Monitor Well 9
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 44.96", W103° 18' 11.95"

Date/Time Started : 04/07/09, 0700
Date/Time Completed : 04/07/09
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : Brian Cuellar, SESI



Notes:
H/C - Petroleum hydrocarbon



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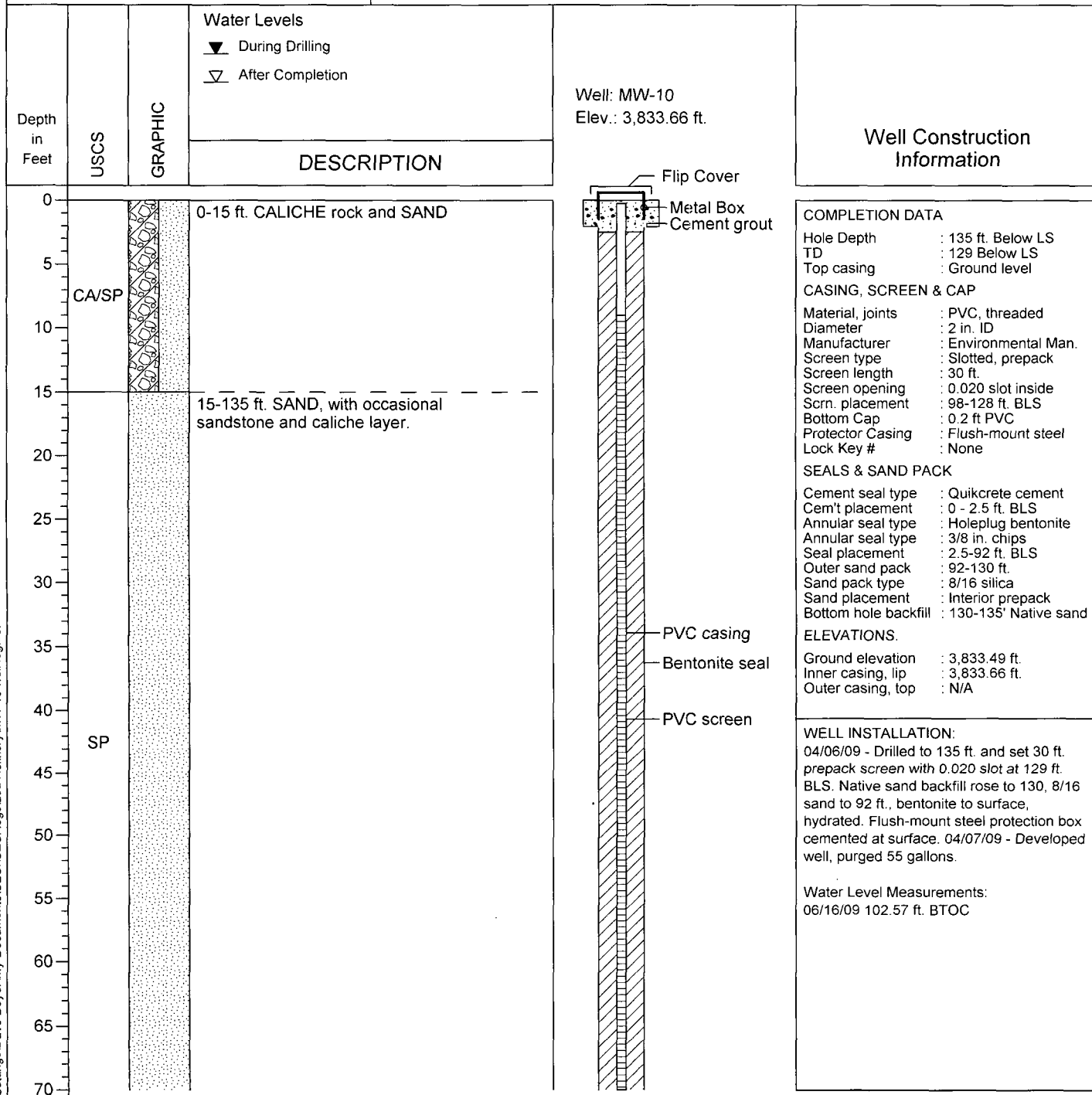
WELL COMPLETION LOG MW-10

(Page 1 of 2)

Monitor Well 10
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 44.96", W103° 18' 11.95"

Date/Time Started : 04/06/09, 0700
Date/Time Completed : 04/06/09, 1735
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : Brian Cuellar, SESI



Notes:
H/C - Petroleum hydrocarbon



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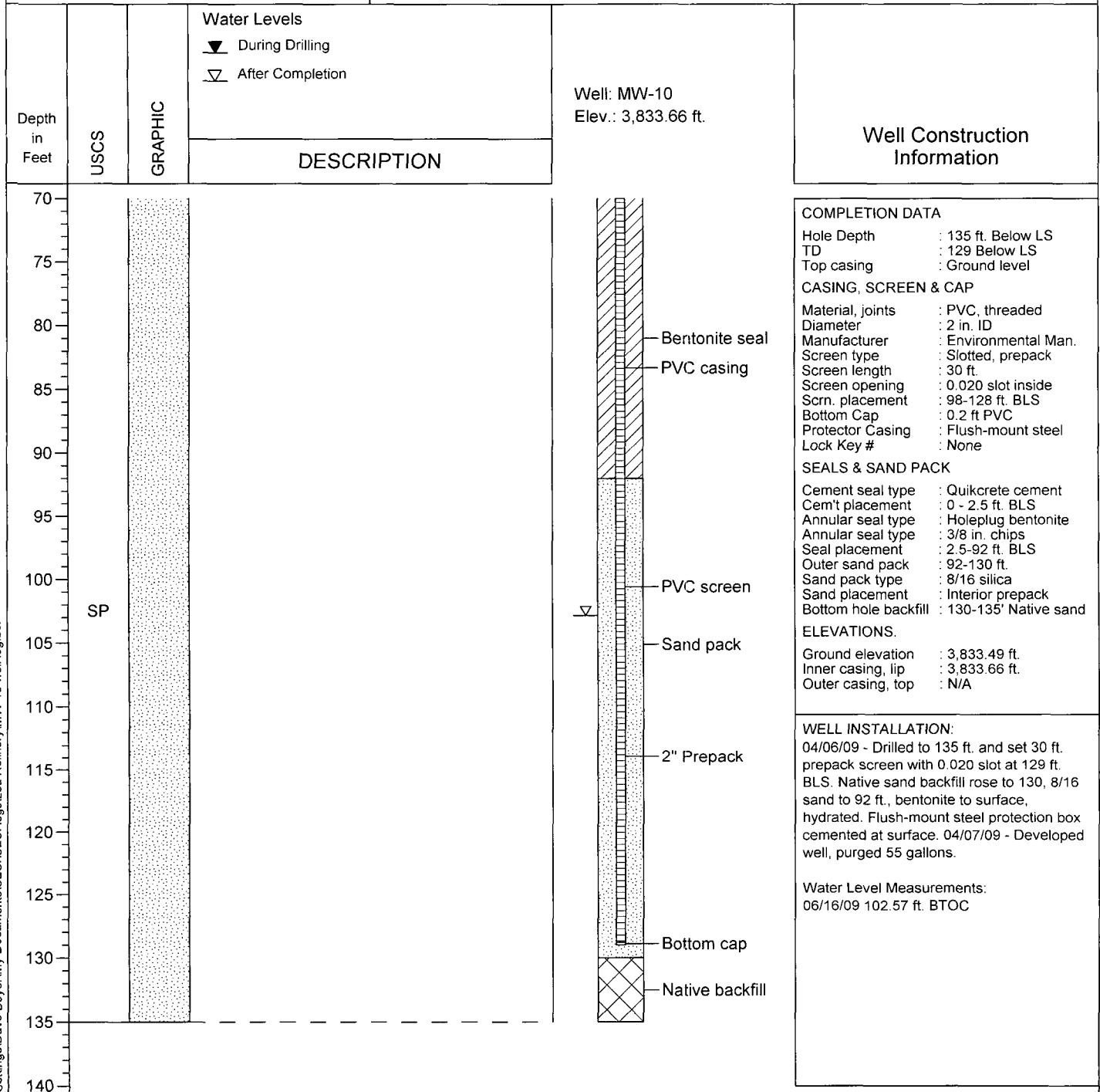
WELL COMPLETION LOG MW-10

(Page 2 of 2)

Monitor Well 10
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 44.96", W103° 18' 11.95"

Date/Time Started : 04/06/09, 0700
Date/Time Completed : 04/06/09, 1735
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : Brian Cuellar, SESI



Notes:
H/C - Petroleum hydrocarbon



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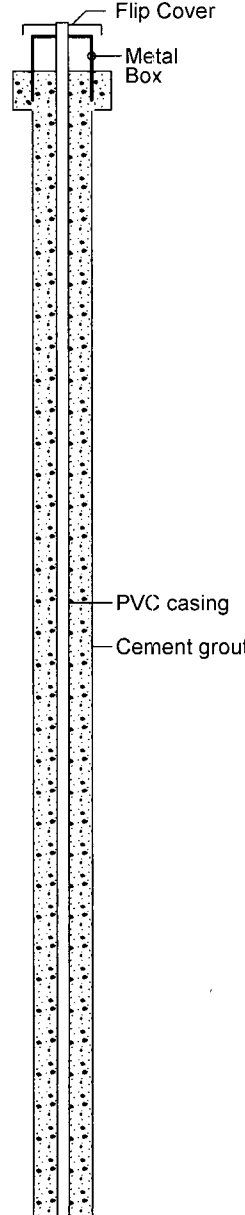
WELL COMPLETION LOG MW-11

(Page 1 of 2)

Monitor Well 11
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 49.18", W103° 18' 07.95"

Date/Time Started : 04/24/02, 0910
Date/Time Completed : 04/24/02, 1630
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Ingersol-Rand A-300

Drilled By : Atkins Engineering
Sampling Method : Cuttings
Logged By : David Boyer, PG

Depth in Feet	USCS	GRAPHIC	Water Levels	DESCRIPTION		Well Construction Information
			▼ During Drilling ▽ After Completion			
0	AR			0-5 ft. Surface material, asphalt, caliche, gray, wet, slight odor, clayey at 3 ft. Out of moist soil at 5 ft.		COMPLETION DATA Hole Depth : 115 ft. Below LS TD Inside casing : 117.5 Below TOC Top casing : 3.4 ft. above ground CASING, SCREEN & CAP Material, joints : PVC, threaded Diameter : 2 in. ID Manufacturer : Laibe Screen type : Slotted, prepack Screen length : 20 ft. Screen opening : 0.030 slot outside Screen opening : 0.010 slot inside Scrn. placement : 95-115 ft. BLS Bottom Cap : 0.2 ft PVC Protector Casing : Above-ground steel Lock Key # : None SEALS & SAND PACK Cement seal type : Cement grout Cem't placement : 0 - 64.5 ft. BLS Annular seal type : Holeplug bentonite Annular seal type : 3/8 in. chips Seal placement : 64.5-68 ft. BLS Sand pack type : 8/16 silica Sand placement : Interior prepack Bottom hole backfill : 68-115 ft. Native fill ELEVATIONS. Ground elevation : 3,836.14 Inner casing, lip : 3,839.56 Outer casing, top : N/A WELL INSTALLATION: 04/24/02: Drilled to 70 feet. Offhole 1400 due to hydraulic leak, auger remains in ground. 05/09/02: On site to finish hole. Drilled to 115 feet and installed prepack screen with bottom at 115 feet. Pulled augers and hole collapsed to 68 ft. Bentonite 64.5-68 ft. then cement grout to surface. Cement above-ground steel protection box with concrete pad. Water Level Measurements: 06/20/02 - 99.93 ft. BTOC
5				5-10 ft. SILTY SAND, very light brown, some clay, dry, sandvery fine to fine grained, no H/C odor		
10	SM			10-15 ft. SILTY SAND, increased fines, clayey silt, no H/C odor		
15						
20	SC			15-20 ft. CLAYEY SAND, sand very fine grained		
25				20-25 ft. SAND, light brown, very fine to fine grained, no H/C odor		
30				25-30 ft. SAND, brown, very fine to fine grained, no H/C odor		
35				30-35 ft. SAND, brown, very fine to fine grained, uniform, damp, occasional small gravels (sandstone pieces), 1/4 in.		
40	SP			35-40 ft. SAND, light brown, fine grained, frequent sandstone gravels to 1/2 in., gravels with CaCO3 cement, very friable		
45				40-45 ft. SAND, light brown, very fine to fine grained, less gravel		
50				45-50 ft. SAND, light brown, very fine grained		
55				50-55 ft. SAND, light brown, very fine grained		
60				55-60 ft. SAND, light brown, very fine grained, uniform		

Notes:
H/C - Petroleum hydrocarbon



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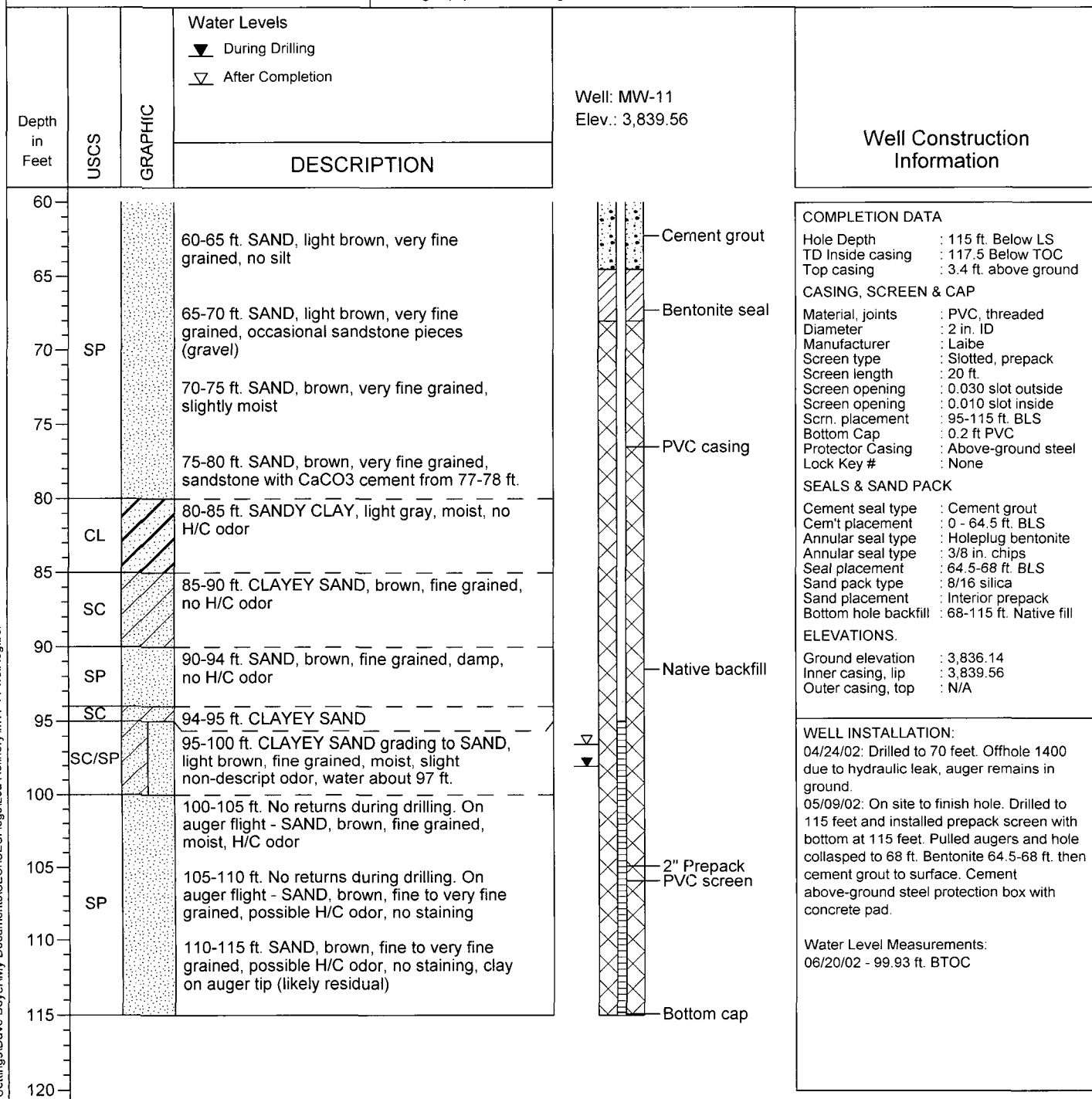
WELL COMPLETION LOG MW-11

(Page 2 of 2)

Monitor Well 11
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 49.18", W103° 18' 07.95"

Date/Time Started : 04/24/02, 0910
Date/Time Completed : 04/24/02, 1630
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Ingersol-Rand A-300

Drilled By : Atkins Engineering
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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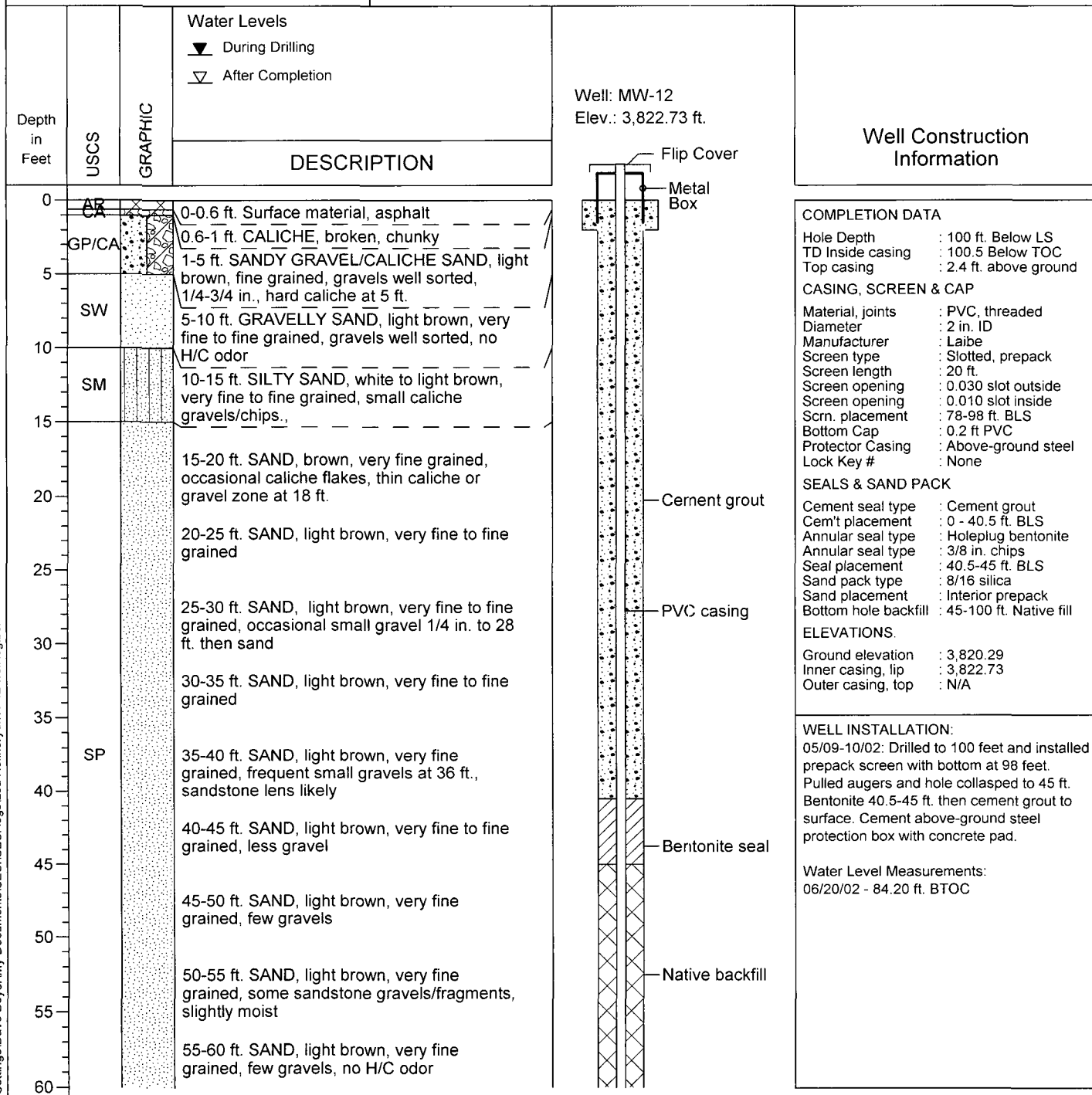
WELL COMPLETION LOG MW-12

(Page 1 of 2)

Monitor Well 12
Navajo Refining Company, Lea Refinery
Section 31, T16S, R37E
Lea County, New Mexico
N32° 52' 27.55", W103° 17' 55.36"

Date/Time Started : 05/09/02, 1730
Date/Time Completed : 05/10/02, 1445
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Ingersol-Rand A-300

Drilled By : Atkins Engineering
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



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WELL COMPLETION LOG MW-12

(Page 2 of 2)

Monitor Well 12
Navajo Refining Company, Lea Refinery
Section 31, T16S, R37E
Lea County, New Mexico
N32° 52' 27.55", W103° 17' 55.36"

Date/Time Started : 05/09/02, 1730
Date/Time Completed : 05/10/02, 1445
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : Ingersol-Rand A-300

Drilled By : Atkins Engineering
Sampling Method : Cuttings
Logged By : David Boyer, PG

Depth in Feet	USCS	GRAPHIC	Water Levels	DESCRIPTION	Well: MW-12 Elev.: 3,822.73 ft.	Well Construction Information
			▼ During Drilling ▽ After Completion			
60	SP			60-65 ft. SAND, light brown, very fine grained, uniform, dry, no H/C odor		COMPLETION DATA Hole Depth : 100 ft. Below LS TD Inside casing : 100.5 Below TOC Top casing : 2.4 ft. above ground CASING, SCREEN & CAP Material, joints : PVC, threaded Diameter : 2 in. ID Manufacturer : Laibe Screen type : Slotted, prepack Screen length : 20 ft. Screen opening : 0.030 slot outside Screen opening : 0.010 slot inside Scrn. placement : 78-98 ft. BLS Bottom Cap : 0.2 ft PVC Protector Casing : Above-ground steel Lock Key # : None SEALS & SAND PACK Cement seal type : Cement grout Cem't placement : 0 - 40.5 ft. BLS Annular seal type : Holeplug bentonite Annular seal type : 3/8 in. chips Seal placement : 40.5-45 ft. BLS Sand pack type : 8/16 silica Sand placement : Interior prepack Bottom hole backfill : 45-100 ft. Native fill ELEVATIONS. Ground elevation : 3,820.29 Inner casing, lip : 3,822.73 Outer casing, top : N/A WELL INSTALLATION: 05/09-10/02: Drilled to 100 feet and installed prepack screen with bottom at 98 feet. Pulled augers and hole collapsed to 45 ft. Bentonite 40.5-45 ft. then cement grout to surface. Cement above-ground steel protection box with concrete pad. Water Level Measurements: 06/20/02 - 84.20 ft. BTOC
65				65-70 ft. SAND, light brown, very fine to fine grained, slightly moist, frequent sandstone gravels (not fragments) to 1/2 in.		
70				70-75 ft. SAND, light brown, very fine to fine grained, slightly moist, no gravels (occasional gravels at 75 ft.), no H/C odor		
75	SM			75-80 ft. SILTY SAND, light brown, very fine grained, slightly cohesive - possible clay		
80				80-85 ft. SAND, light brown, very fine grained, with sandstone flakes, clean, uniform, becoming moist at 85 ft.		
85	SP			85-90 ft. SAND, brown, fine grained, some silt, poorly sorted, no gravels, moist, no H/C odor		
90				90-95 ft. SAND, brown, some silt/clay, poorly sorted, moist, no H/C odor		
95				95-100 ft. No returns		
100						
105						
110						
115						
120						

Notes:
H/C - Petroleum hydrocarbon



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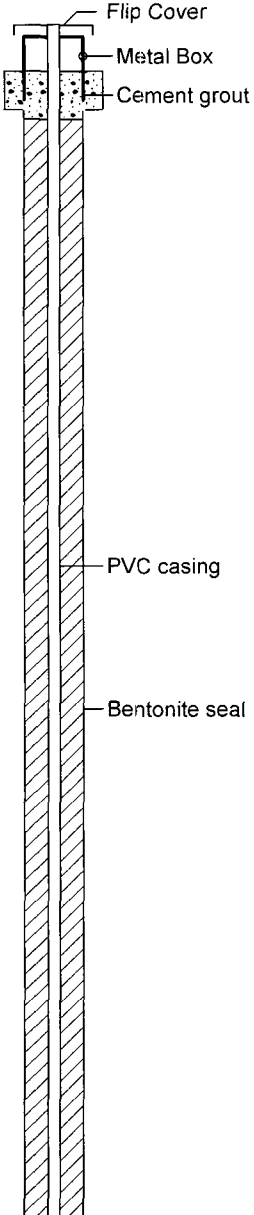
WELL COMPLETION LOG MW-13

(Page 1 of 2)

Monitor Well 13
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 46.36", W103° 18' 4.42"

Date/Time Started : 12/19/03, 1530
Date/Time Completed : 01/03/04
Hole Diameter : 8 1/4 in.
Drilling Method : Air Rotary, 12/19/03
Drilling Equipment : Ingersol-Rand T2W

Drilling Method : Hollow Stem Auger
Drilling Equipment : CME-75, 1/3/04
Drilled By : Eco Drilling, Midland, TX
Sampling Method : Cuttings
Logged By : David Boyer, PG

Depth in Feet	USCS	GRAPHIC	Water Levels	DESCRIPTION		Well Construction Information
			▼ During Drilling ▽ After Completion			
0	CA			0-5 ft. CALICHE, drilled in 6 in. increments to check for buried lines		COMPLETION DATA Hole Depth : 117 ft. Below LS TD Inside casing : 119.7 Below TOC Top casing : 2.4 ft. above ground CASING, SCREEN & CAP Material, joints : PVC, threaded Diameter : 2 in. ID Manufacturer : N/A Screen type : Slotted Screen length : 20 ft. Screen opening : 0.010 slot Scrn. placement : 96-116 ft. BLS Bottom Cap : 0.2 ft PVC Protector Casing : Above-ground steel Lock Key # : None SEALS & SAND PACK Cement seal type : Quikcrete cement Cem't placement : 0 - 2.5 ft. BLS Annular seal type : Bentonite Annular seal type : 3/8 in. chips Seal placement : 2.5-91.8 ft. BLS Sand pack type : 8/16 silica Sand placement : 91.8-100 ft. Bottom hole backfill : 100-118 ft. Native fill ELEVATIONS. Ground elevation : 3,834.75 Inner casing, lip : 3,837.06 Outer casing, top : N/A WELL INSTALLATION: 12/19/03 - Drilled with air rotary rig to 115 ft. Formation caving, flowing sand, no way to keep hole open, ceased drilling, pulled pipe. 12/31/03 - Drilling with hollow stem auger. Hole caved in to 82 ft. 1/2/04 - Drilling to 105 ft. when interior rods drop to 118 ft. Need fishing tool. 1/3/04 - Drillers fish tools out of hole. Set 20 feet 0.010 in. screen, 96-116 ft., 10 bags sand to 91.8 ft., 33 bags bentonite to 2.5 ft., 5 bags Quikcrete to surface, above ground steel protection box. 1/23/04 - Well developed by purging 63 gallons water with pump. Water Level Measurements: 01/03/04 - 100.93 ft. BTOC 04/30/04 - 101.41 ft. BTOC
5				5 ft. SAND, light brown, very fine to fine grained, occasional small caliche fragments, no H/C odor		
10				10 ft. SAND, light brown, very fine to fine grained, uniform, occasional caliche/sandstone fragments to 3/4 in., no H/C staining or odor		
15				15 ft. SAND, light brown, very fine to fine grained, occasional caliche/sandstone fragments to 1/4 in., no H/C staining or odor		
20				20 ft. SAND, light brown, very fine to fine grained		
25				25 ft. SAND, light brown, fine grained, slightly damp, no H/C staining or odor		
30	SP			30 ft. SAND, light brown, fine grained, occasional sandstone fragments to 1/2 in., no H/C staining or odor		
35				35 ft. SAND, light brown, fine grained, occasional sandstone fragments to 3/4 in., drill chatter at 25 ft.		
40				40 ft. SAND, very light brown, very fine to fine grained, no H/C staining or odor		
45				45 ft. SAND, very light brown, very fine to fine grained, no H/C staining or odor		
50				50 ft. SAND, very light brown, very fine to fine grained, occasional sandstone chips/fragments, no H/C staining or odor		
55				55 ft. SAND, light brown, very fine grained, occasional sandstone fragments, no H/C staining or odor		
60				60 ft. SAND, light brown, very fine grained		

Notes:
H/C - Petroleum hydrocarbon



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WELL COMPLETION LOG MW-13

(Page 2 of 2)

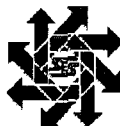
Monitor Well 13
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 46.36", W103° 18' 4.42"

Date/Time Started : 12/19/03, 1530
Date/Time Completed : 01/03/04
Hole Diameter : 8 1/4 in.
Drilling Method : Air Rotary, 12/19/03
Drilling Equipment : Ingersol-Rand T2W

Drilling Method : Hollow Stem Auger
Drilling Equipment : CME-75, 1/3/04
Drilled By : Eco Drilling, Midland, TX
Sampling Method : Cuttings
Logged By : David Boyer, PG

Depth in Feet	USCS	GRAPHIC	Water Levels	DESCRIPTION	Well: MW-13 Elev.: 3,837.06 ft.	Well Construction Information
			▼ During Drilling ▽ After Completion			
60						COMPLETION DATA Hole Depth : 117 ft. Below LS TD Inside casing : 119.7 Below TOC Top casing : 2.4 ft. above ground CASING, SCREEN & CAP Material, joints : PVC, threaded Diameter : 2 in. ID Manufacturer : N/A Screen type : Slotted Screen length : 20 ft. Screen opening : 0.010 slot Scrn. placement : 96-116 ft. BLS Bottom Cap : 0.2 ft PVC Protector Casing : Above-ground steel Lock Key # : None SEALS & SAND PACK Cement seal type : Quikcrete cement Cem't placement : 0 - 2.5 ft. BLS Annular seal type : Bentonite Annular seal type : 3/8 in. chips Seal placement : 2.5-91.8 ft. BLS Sand pack type : 8/16 silica Sand placement : 91.8-100 ft Bottom hole backfill : 100-118 ft. Native fill ELEVATIONS: Ground elevation : 3,834.75 Inner casing, lip : 3,837.06 Outer casing, top : N/A WELL INSTALLATION: 12/19/03 - Drilled with air rotary rig to 115 ft. Formation caving, flowing sand, no way to keep hole open, ceased drilling, pulled pipe. 12/31/03 - Drilling with hollow stem auger. Hole caved in to 82 ft. 1/2/04 - Drilling to 105 ft. when interior rods drop to 118 ft. Need fishing tool. 1/3/04 - Drillers fish tools out of hole. Set 20 feet 0.010 in. screen, 96-116 ft., 10 bags sand to 91.8 ft., 33 bags bentonite to 2.5 ft., 5 bags Quikcrete to surface, above ground steel protection box. 1/23/04 - Well developed by purging 63 gallons water with pump. Water Level Measurements: 01/03/04 - 100.93 ft. BTOC 04/30/04 - 101.41 ft. BTOC
65				65 ft. SAND, very light brown, very fine grained, occasional sandstone fragments to 1/4 in., no H/C staining or odor		
70				70 ft. SAND, very light brown, very fine grained		
75				75 ft. SAND, very light brown, very fine grained, no H/C staining or odor		
80				80 ft. SAND, very light brown, very fine grained		
85				85 ft. SAND, very light brown, very fine grained		
90	SP			90 ft. SAND, light brown, very fine grained, slightly damp		
95				95 ft. SAND, light brown, very fine grained, uniform, slightly damp, no H/C staining or odor, drill reports getting wet		
100				100 ft. SAND, light brown, very fine grained, uniform, damp, no H/C staining or odor		
105				105 ft. SAND, light brown, very fine grained, wet, no H/C staining or odor		
110				110 ft. SAND, light brown, very fine grained, wet 110-115 ft. Formation caving, flowing SAND		
115						
120						

Notes:
H/C - Petroleum hydrocarbon



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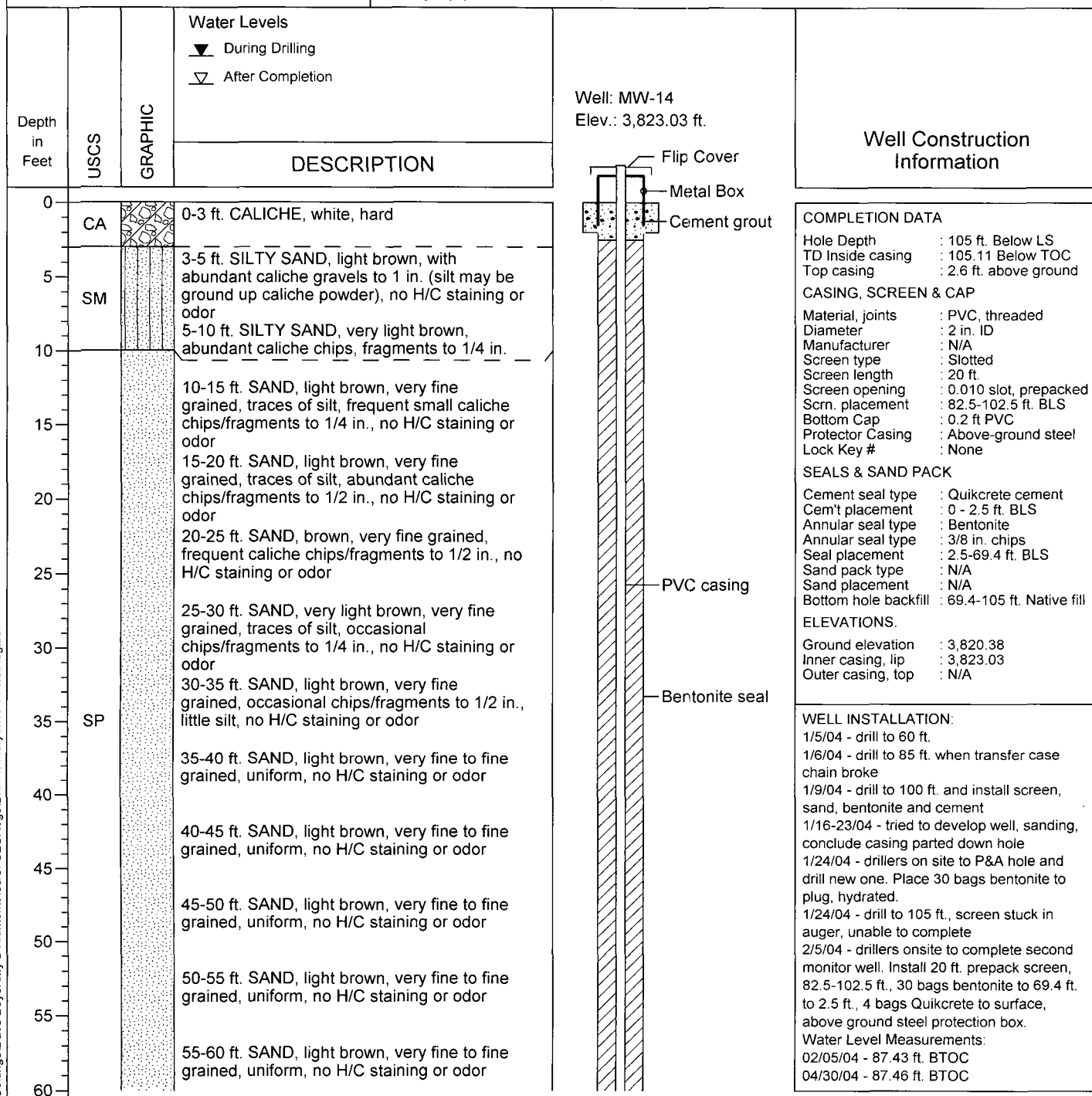
WELL COMPLETION LOG MW-14

(Page 1 of 2)

Monitor Well 14
Navajo Refining Company, Lea Refinery
Section 31, T16S, R37E
Lea County, New Mexico
N32° 52' 25.43", W103° 17' 54.18"

Date/Time Started : 01/05/04, 1300
Date/Time Completed : 02/05/04
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : CME-75, 1/3/04

Drilled By : Eco Drilling, Midland, TX
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:

H/C - Petroleum hydrocarbon



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WELL COMPLETION LOG MW-14

(Page 2 of 2)

Monitor Well 14
Navajo Refining Company, Lea Refinery
Section 31, T16S, R37E
Lea County, New Mexico
N32° 52' 25.43", W103° 17' 54.18"

Date/Time Started : 01/05/04, 1300
Date/Time Completed : 02/05/04
Hole Diameter : 8 1/4 in.
Drilling Method : Hollow Stem Auger
Drilling Equipment : CME-75, 1/3/04

Drilled By : Eco Drilling, Midland, TX
Sampling Method : Cuttings
Logged By : David Boyer, PG

Depth in Feet	USCS	GRAPHIC	Water Levels	Well: MW-14 Elev.: 3,823.03 ft.	Well Construction Information
			▼ During Drilling ▽ After Completion		
			DESCRIPTION		
60	SP		60-65 ft. SAND, light brown, very fine grained, uniform, no H/C staining or odor	Bentonite seal PVC casing Native backfill 2 in prepacked PVC screen Bottom cap	COMPLETION DATA Hole Depth : 105 ft. Below LS TD Inside casing : 105.11 Below TOC Top casing : 2.6 ft. above ground CASING, SCREEN & CAP Material, joints : PVC, threaded Diameter : 2 in. ID Manufacturer : N/A Screen type : Slotted Screen length : 20 ft. Screen opening : 0.010 slot, prepacked Scrn. placement : 82.5-102.5 ft. BLS Bottom Cap : 0.2 ft PVC Protector Casing : Above-ground steel Lock Key # : None SEALS & SAND PACK Cement seal type : Quikcrete cement Cem't placement : 0 - 2.5 ft. BLS Annular seal type : Bentonite Annular seal type : 3/8 in. chips Seal placement : 2.5-69.4 ft. BLS Sand pack type : N/A Sand placement : N/A Bottom hole backfill : 69.4-105 ft. Native fill ELEVATIONS. Ground elevation : 3,820.38 Inner casing, lip : 3,823.03 Outer casing, top : N/A WELL INSTALLATION: 1/5/04 - drill to 60 ft. 1/6/04 - drill to 85 ft. when transfer case chain broke 1/9/04 - drill to 100 ft. and install screen, sand, bentonite and cement 1/16-23/04 - tried to develop well, sanding, conclude casing parted down hole 1/24/04 - drillers on site to P&A hole and drill new one. Place 30 bags bentonite to plug, hydrated. 1/24/04 - drill to 105 ft., screen stuck in auger, unable to complete 2/5/04 - drillers onsite to complete second monitor well. Install 20 ft. prepack screen, 82.5-102.5 ft., 30 bags bentonite to 69.4 ft. to 2.5 ft., 4 bags Quikcrete to surface, above ground steel protection box. Water Level Measurements: 02/05/04 - 87.43 ft. BTOC 04/30/04 - 87.46 ft. BTOC
65			65-70 ft. SAND, light brown, very fine grained, uniform, no H/C staining or odor		
70			70-75 ft. SAND, light brown, very fine grained, uniform, frequent small caliche/sandstone chips/fragments <1/4 in.		
75			75-80 ft. SAND, light brown, very fine grained, uniform, some small chips/fragments <1/8 in.		
80			80-85 ft. SAND, light brown, very fine grained, uniform, some small chips/fragments <1/8 in.		
85			85-90 ft. SAND, light brown, very fine grained, uniform, wet, no H/C staining or odor		
90			90-95 ft. SAND, light brown, very fine grained, uniform, wet, no H/C staining or odor		
95			95-100 ft. SAND, light brown, very fine grained, uniform, wet, no H/C staining or odor		
100					
105					
110					
115					
120					

Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

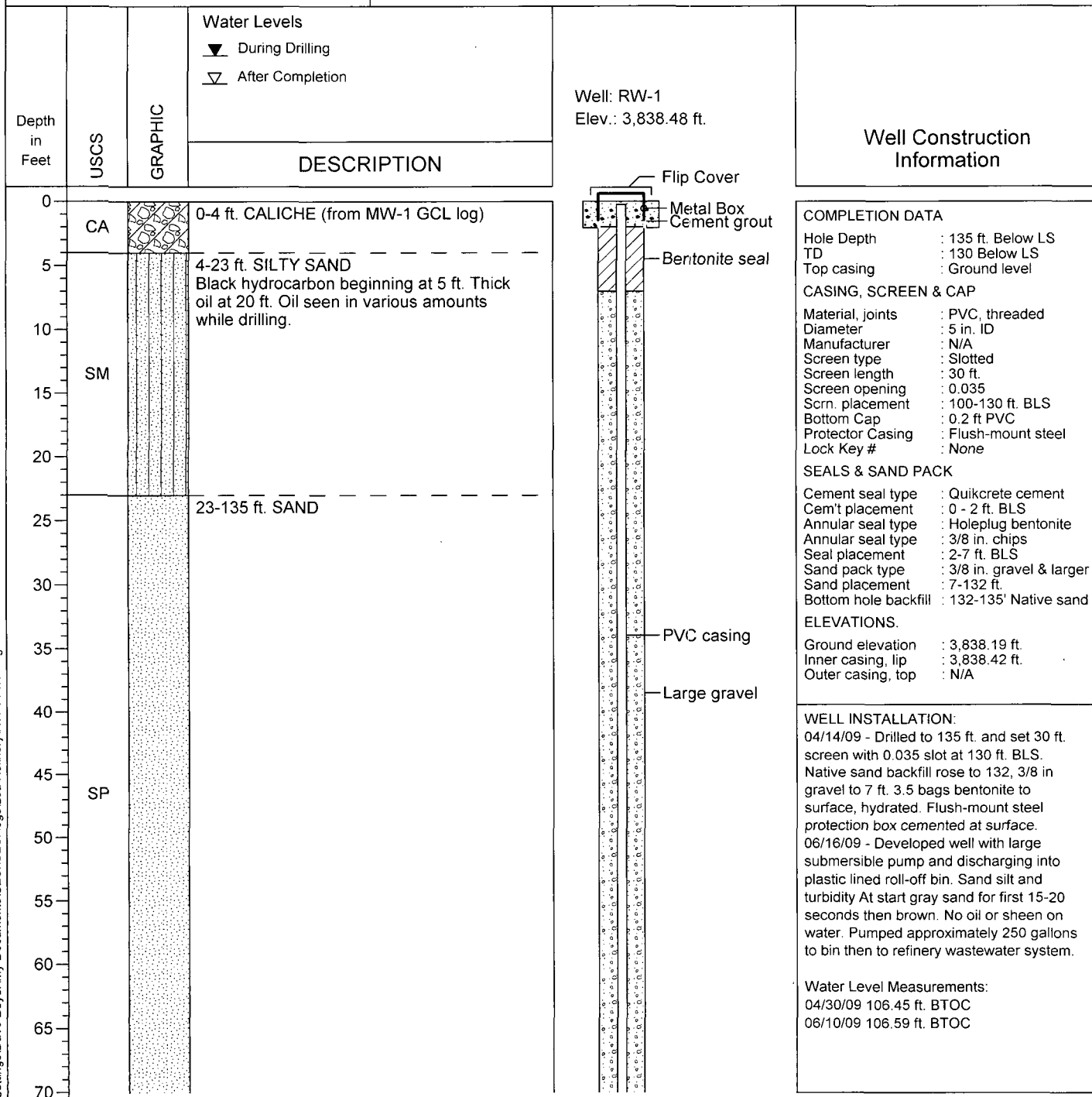
WELL COMPLETION LOG RW-1

(Page 1 of 2)

Recovery Well 1
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.79", W103° 18' 12.37"

Date/Time Started : 04/16/09, 0830
Date/Time Completed : 04/16/09, 1630
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon



**Safety & Environmental
Solutions, Inc.**

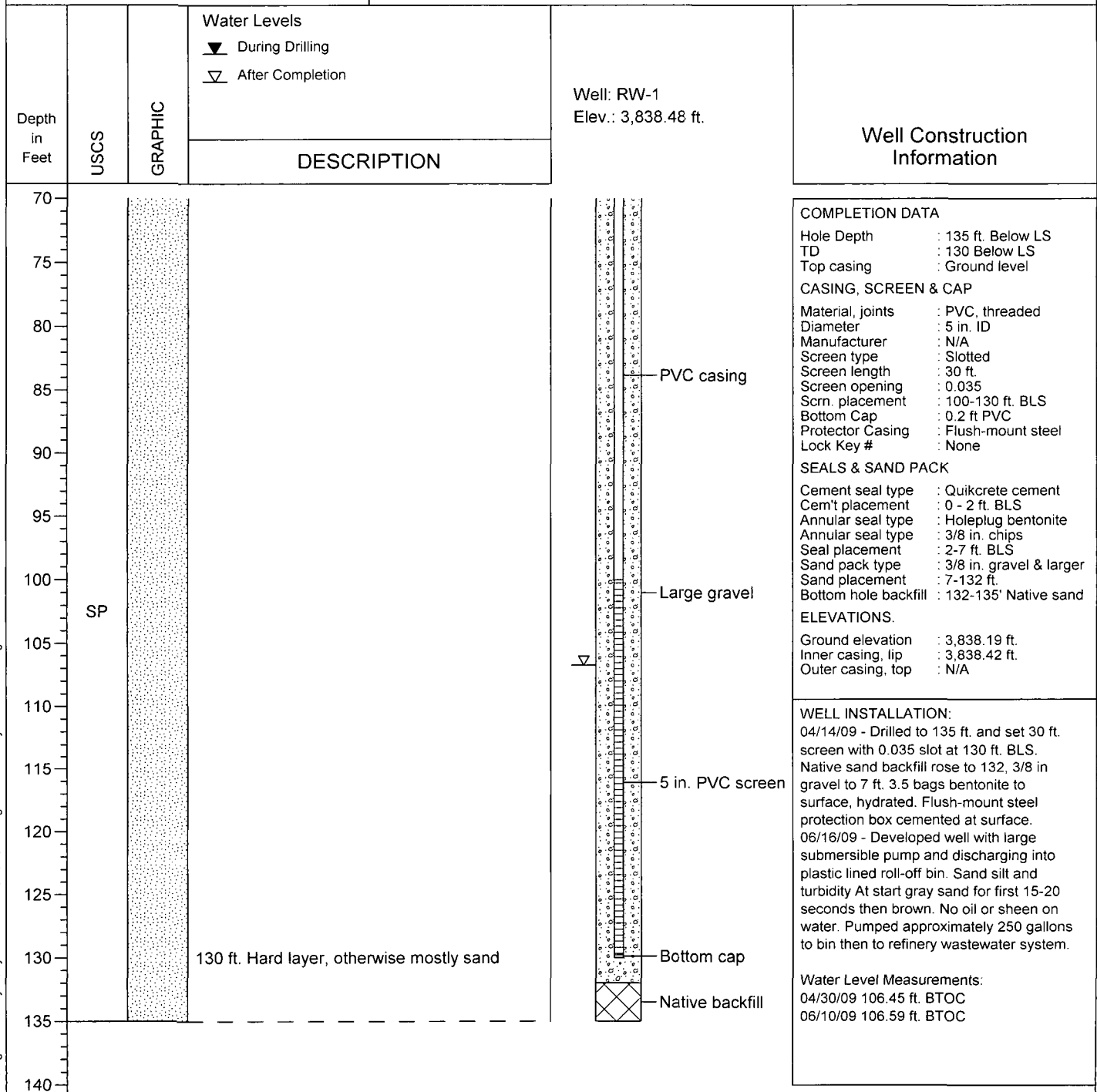
WELL COMPLETION LOG RW-1

(Page 2 of 2)

Recovery Well 1
Navajo Refining Company, Lea Refinery
Section 36, T16S, R36E
Lea County, New Mexico
N32° 52' 47.79", W103° 18' 12.37"

Date/Time Started : 04/16/09, 0830
Date/Time Completed : 04/16/09, 1630
Hole Diameter : 6 1/8 in. tricone
Drilling Method : Mud Rotary
Drilling Equipment : GEFCO SD-200

Drilled By : Eco/Enviro Drilling
Sampling Method : Cuttings
Logged By : David Boyer, PG



Notes:
H/C - Petroleum hydrocarbon

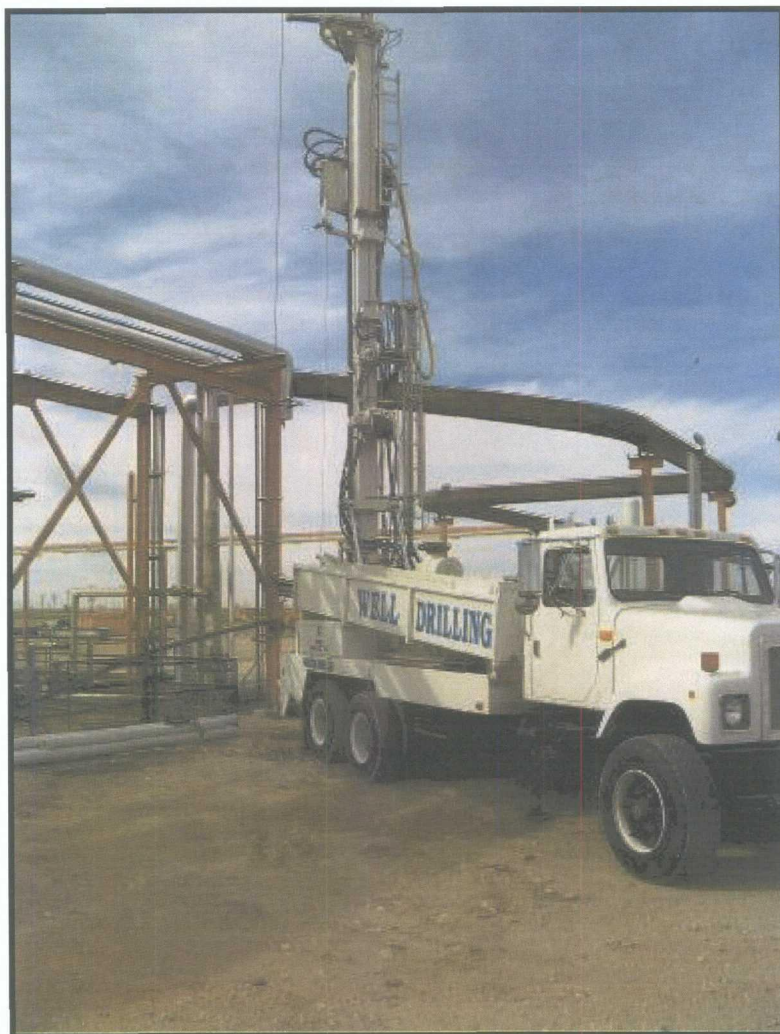
Appendix B
Site Photographs – Monitor Well Replacement



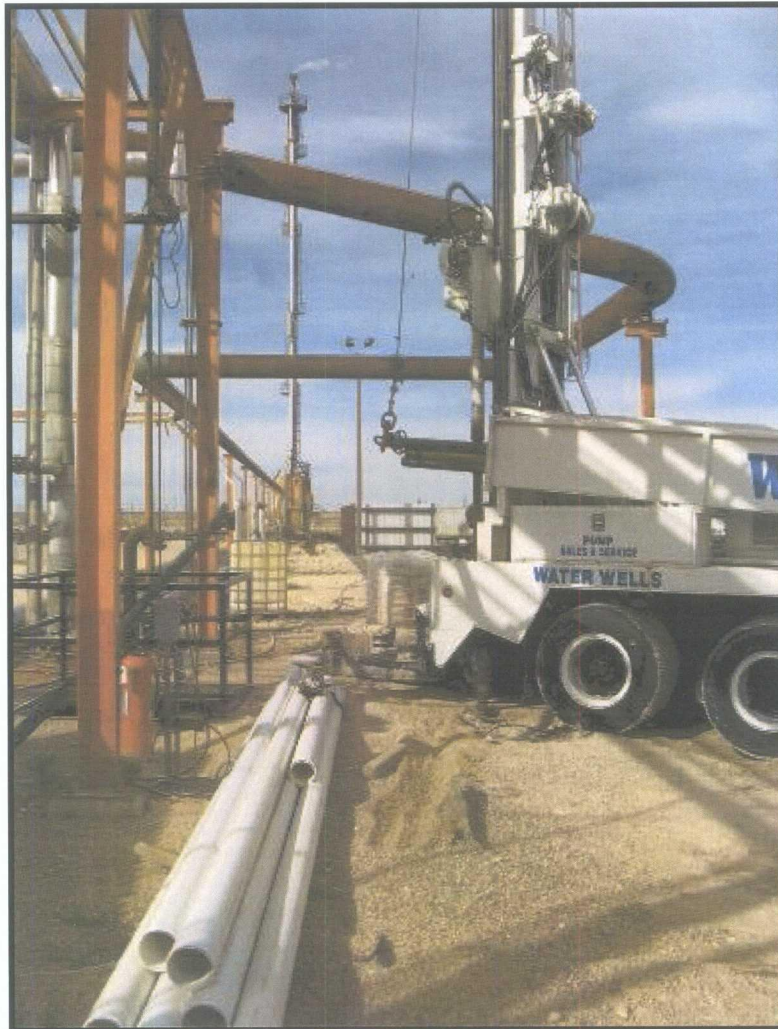
Looking northeast to refinery process area, April 2009.



Drill rig positioned next to wastewater separator, April 2009



Drill rig positioned next to wastewater separator unit, April 2009



Drill rig positioned next to wastewater separator unit, April 2009



Drill rig and mud tank (plastic lined roll-off bin), April 2009



Mud tank (roll-off bin) with floating oil, April 2009



Mud tank (roll-off bin) with floating oil, April 2009



Cuttings separator box with oil and hydrocarbon sheen, April 2009



Cuttings separator box with oil, next to leak detection sump, April 2009



Cuttings separator box with oil, April 2009



Mud tank (roll-off bin) with floating oil, April 2009



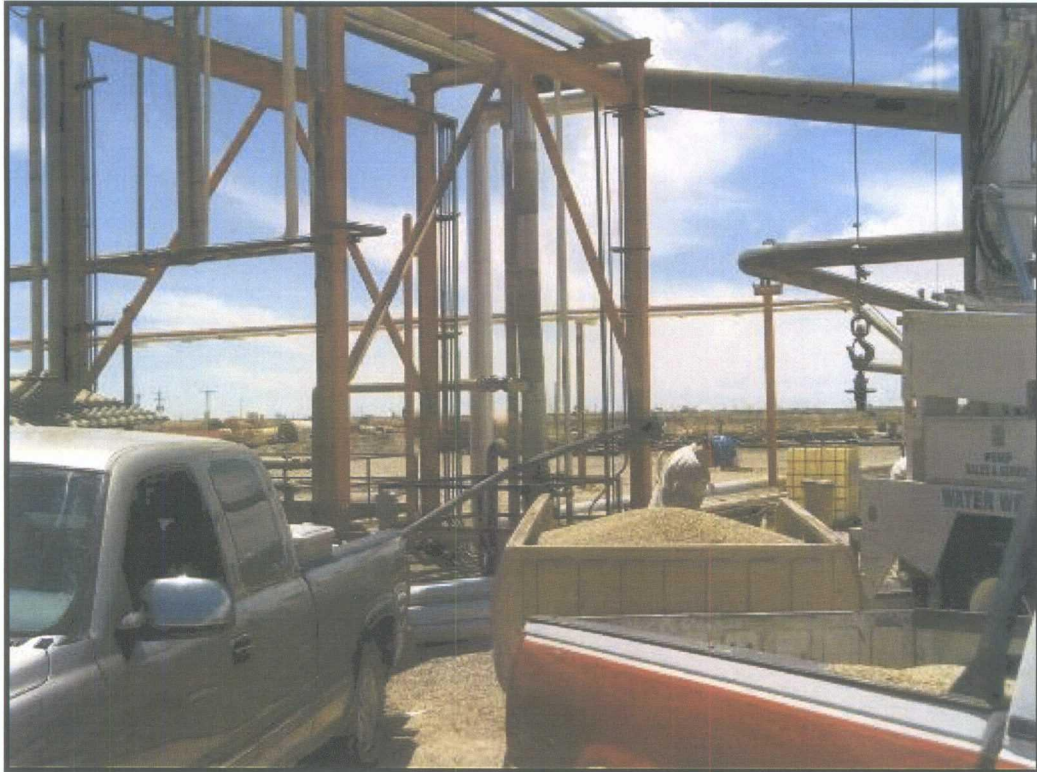
Mud tank (roll-off bin) with floating oil, April 2009



Less oil with depth, April 2009



Mud tank (roll-off bin) with floating oil, April 2009



Gravel fines for well. Screen length 30 feet, gravel above screen for oil recovery, April 2009



View from drilling area to process area, April 2009

Appendix C

Water Level Summary, New and Existing Monitor Wells

Appendix C. Water Level Summary, New and Existing Wells, Navajo Refining Company, Lovington Refinery

Monitor Well, Depth Below TOC (feet)	Elevation Top of Casing (TOC, feet)	Measure- ment Date	Depth to Product (feet)	Depth to Water Below TOC (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Saturated Water Thickness (ft)	Change from previous reading (ft)
MW-1	3,838.40	04/30/09	--	106.35	0	106.35	3,732.05	22.8	--
129.10		06/10/09	--	106.49	0	106.49	3,731.91	22.6	-0.14
		06/19/09	--	106.57	0	106.57	3,731.83	22.5	-0.08
		07/02/09	--	106.74	0	106.74	3,731.66	22.4	-0.17
		07/24/09	--	106.83	0	106.83	3,731.57	22.3	-0.09
		09/24/09	--	107.31	0	107.31	3,731.09	21.8	-0.48
		10/27/09	--	107.44	0	107.44	3,730.96	21.7	-0.13
Note: Replacement well, drilled April 2009.									
MW-2	3,837.35	06/22/09	--	104.32	0	104.32	3,733.03	22.1	--
126.41									
Note: Replacement well, drilled April 2009.									
MW-3	3,831.65	06/18/09	--	102.65	0	102.65	3,729.00	27.8	--
130.45									
Note: Replacement well, drilled April 2009.									
MW-4	3,839.89	06/16/09	--	106.79	0	106.79	3,733.10	21.2	--
128.02									
Note: Replacement well, drilled April 2009.									
MW-5	3,819.15	06/16/09	--	90.84	0	90.84	3,728.31	24.2	--
115.00									
Note: Replacement well, drilled April 2009.									
MW-6	3,838.16	06/18/09	--	106.64	0	106.64	3,731.52	23.1	--
129.74		07/24/09	--	106.92	0	106.92	3,731.24	22.8	-0.28
		09/24/09	--	107.44	0	107.44	3,730.72	22.3	-0.52
		10/27/09	--	107.55	0	107.55	3,730.61	22.2	-0.11
Note: Replacement well, drilled April 2009.									

Appendix C. Water Level Summary, New and Existing Wells, Navajo Refining Company, Lovington Refinery

Monitor Well, Depth Below TOC (feet)	Elevation Top of Casing (TOC, feet)	Measure- ment Date	Depth to Product (feet)	Depth to Water Below TOC (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Saturated Water Thickness (ft)	Change from previous reading (ft)
MW-7	3,838.42	04/30/09	--	106.37	0	106.37	3,732.05	23.2	--
129.52		06/10/09	--	106.48	0	106.48	3,731.94	23.0	-0.11
		06/19/09	--	106.68	0	106.68	3,731.74	22.8	-0.20
		07/02/09	--	106.75	0	106.75	3,731.67	22.8	-0.07
		07/24/09	--	106.84	0	106.84	3,731.58	22.7	-0.09
		09/24/09	--	107.33	0	107.33	3,731.09	22.2	-0.49
		10/27/09	--	107.46	0	107.46	3,730.96	22.1	-0.13
Note: Replacement well, drilled April 2009.									
MW-8	3,839.98	06/18/09	--	109.37	0	109.37	3,730.61	22.9	--
132.30									
Note: Replacement well, drilled April 2009.									
MW-9	3,835.22	06/16/09	--	104.58	0	104.58	3,730.64	24.6	--
129.18									
Note: Replacement well, drilled April 2009.									
MW-10	3,833.66	06/18/09	--	102.57	0	102.57	3,731.09	26.6	--
129.14									
Note: Replacement well, drilled April 2009.									
MW-11	3,839.56	06/20/02	--	99.93	0	99.93	3,739.63	17.6	--
117.51		09/17/02	--	100.63	0	100.63	3,738.93	16.9	-0.70
		12/19/02	--	100.50	0	100.50	3,739.06	17.0	0.13
		03/28/03	--	99.74	0	99.74	3,739.82	17.8	0.76
		06/20/03	--	100.76	0	100.76	3,738.80	16.8	-1.02
		09/15/03	--	101.51	0	101.51	3,738.05	16.0	-0.75
		04/30/04	--	102.31	0	102.31	3,737.25	15.2	-0.80
		02/21/05	--	103.80	0	103.80	3,735.76	13.7	-1.49
		06/28/05	--	104.33	0	104.33	3,735.23	13.2	-0.53
		09/30/05	--	104.60	0	104.60	3,734.96	12.9	-0.27
		12/29/05	--	104.81	0	104.81	3,734.75	12.7	-0.21

Appendix C. Water Level Summary, New and Existing Wells, Navajo Refining Company, Lovington Refinery

Monitor Well, Depth Below TOC (feet)	Elevation Top of Casing (TOC, feet)	Measure- ment Date	Depth to Product (feet)	Depth to Water Below TOC (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Saturated Water Thickness (ft)	Change from previous reading (ft)
MW-11		04/10/06	--	105.12	0	105.12	3,734.44	12.4	-0.31
		07/06/06	--	105.61	0	105.61	3,733.95	11.9	-0.49
		01/26/07	--	106.63	0	106.63	3,732.93	10.9	-1.02
		03/27/07	--	106.80	0	106.80	3,732.76	10.7	-0.17
		07/13/07	--	106.94	0	106.94	3,732.62	10.6	-0.14
		09/12/07	--	107.22	0	107.22	3,732.34	10.3	-0.28
		12/31/07	--	106.74	0	106.74	3,732.82	10.8	0.48
		03/26/08	--	106.81	0	106.81	3,732.75	10.7	-0.07
		06/13/08	--	107.40	0	107.40	3,732.16	10.1	-0.59
		09/24/08	--	108.76	0	108.76	3,730.80	8.8	-1.36
		12/29/08	--	108.57	0	108.57	3,730.99	8.9	0.19
		03/17/09	--	107.91	0	107.91	3,731.65	9.6	0.66
		06/18/09	--	108.65	0	108.65	3,730.91	8.9	-0.74
MW-12	3,822.73	06/20/02	--	84.20	0	84.20	3,738.53	16.3	--
100.51		12/21/02	--	85.21	0	85.21	3,737.52	15.3	-1.01
		03/28/03	--	85.35	0	85.35	3,737.38	15.2	-0.14
		06/20/03	--	85.51	0	85.51	3,737.22	15.0	-0.16
		09/15/03	--	86.13	0	86.13	3,736.60	14.4	-0.62
		11/02/03	--	86.57	0	86.57	3,736.16	13.9	-0.44
		04/30/04	--	87.40	0	87.40	3,735.33	13.1	-0.83
		02/21/05	--	88.42	0	88.42	3,734.31	12.1	-1.02
		06/28/05	--	88.76	0	88.76	3,733.97	11.8	-0.34
		09/30/05	--	89.12	0	89.12	3,733.61	11.4	-0.36
		12/29/05	--	89.31	0	89.31	3,733.42	11.2	-0.19
		04/10/06	--	89.55	0	89.55	3,733.18	11.0	-0.24
		07/06/06	--	90.03	0	90.03	3,732.70	10.5	-0.48
		01/26/07	--	90.06	0	90.06	3,732.67	10.5	-0.03
		03/27/07	--	90.10	0	90.10	3,732.63	10.4	-0.04
		07/13/07	--	91.66	0	91.66	3,731.07	8.9	-1.56
		09/12/07	--	92.01	0	92.01	3,730.72	8.5	-0.35
		12/31/07	--	92.17	0	92.17	3,730.56	8.3	-0.16

Appendix C. Water Level Summary, New and Existing Wells, Navajo Refining Company, Lovington Refinery

Monitor Well, Depth Below TOC (feet)	Elevation Top of Casing (TOC, feet)	Measure- ment Date	Depth to Product (feet)	Depth to Water Below TOC (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Saturated Water Thickness (ft)	Change from previous reading (ft)
MW-12		03/26/08	--	92.39	0	92.39	3,730.34	8.1	-0.22
		06/13/08	--	92.59	0	92.59	3,730.14	7.9	-0.20
		09/24/08	--	93.21	0	93.21	3,729.52	7.3	-0.62
		12/29/08	--	93.59	0	93.59	3,729.14	6.9	-0.38
		03/17/09	--	93.75	0	93.75	3,728.98	6.8	-0.16
		06/16/09	--	93.83	0	93.83	3,728.90	6.7	-0.08
MW-13	3,837.06	04/30/04	--	101.41	0	101.41	3,735.65	18.3	--
119.70		02/21/05	--	103.09	0	103.09	3,733.97	16.6	-1.68
		06/28/05	--	103.48	0	103.48	3,733.58	16.2	-0.39
		09/30/05	--	103.80	0	103.80	3,733.26	15.9	-0.32
		12/29/05	--	104.41	0	104.41	3,732.65	15.3	-0.61
		04/10/06	--	104.59	0	104.59	3,732.47	15.1	-0.18
		07/06/06	--	104.94	0	104.94	3,732.12	14.8	-0.35
		01/26/07	--	106.41	0	106.41	3,730.65	13.3	-1.47
		03/27/07	--	106.47	0	106.47	3,730.59	13.2	-0.06
		07/13/07	--	106.93	0	106.93	3,730.13	12.8	-0.46
		09/12/07	--	107.19	0	107.19	3,729.87	12.5	-0.26
		12/31/07	--	106.71	0	106.71	3,730.35	13.0	0.48
		03/26/08	--	107.02	0	107.02	3,730.04	12.7	-0.31
		06/13/08	--	107.19	0	107.19	3,729.87	12.5	-0.17
		09/24/08	--	108.56	0	108.56	3,728.50	11.1	-1.37
		12/29/08	--	108.71	0	108.71	3,728.35	11.0	-0.15
		03/17/09	--	108.36	0	108.36	3,728.70	11.3	0.35
		06/16/09	--	108.58	0	108.58	3,728.48	11.1	-0.22
MW-14	3,823.03	04/30/04	--	87.46	0	87.46	3,735.57	17.6	--
105.04		02/21/05	--	88.48	0	88.48	3,734.55	16.6	-1.02
		06/28/05	--	88.80	0	88.80	3,734.23	16.2	-0.32
		09/30/05	--	89.14	0	89.14	3,733.89	15.9	-0.34
		12/29/05	--	89.34	0	89.34	3,733.69	15.7	-0.20
		04/10/06	--	89.63	0	89.63	3,733.40	15.4	-0.29

Appendix C. Water Level Summary, New and Existing Wells, Navajo Refining Company, Lovington Refinery

Monitor Well, Depth Below TOC (feet)	Elevation Top of Casing (TOC, feet)	Measure- ment Date	Depth to Product (feet)	Depth to Water Below TOC (feet)	Product Thickness (feet)	Corrected Depth to Water (feet)	Corrected Water Level Elev. (feet)	Saturated Water Thickness (ft)	Change from previous reading (ft)
MW-14		07/06/06	--	90.08	0	90.08	3,732.95	15.0	-0.45
		01/26/07	--	91.02	0	91.02	3,732.01	14.0	-0.94
		03/27/07	--	91.18	0	91.18	3,731.85	13.9	-0.16
		07/13/07	--	91.68	0	91.68	3,731.35	13.4	-0.50
		09/12/07	--	92.02	0	92.02	3,731.01	13.0	-0.34
		12/31/07	--	92.25	0	92.25	3,730.78	12.8	-0.23
		03/26/08	--	92.43	0	92.43	3,730.60	12.6	-0.18
		06/13/08	--	92.64	0	92.64	3,730.39	12.4	-0.21
		12/29/08	--	93.60	0	93.60	3,729.43	11.4	-0.96
		03/17/09	--	93.84	0	93.84	3,729.19	11.2	-0.24
		06/16/09	--	93.92	0	93.92	3,729.11	11.1	-0.08
RW-1	3,838.48	04/30/09	--	106.45	0	106.45	3,732.03	22.9	--
129.31		06/10/09	--	106.59	0	106.59	3,731.89	22.7	-0.14
		06/19/09	--	106.61	0	106.61	3,731.87	22.7	-0.02
		07/02/09	--	106.82	0	106.82	3,731.66	22.5	-0.21
		07/24/09	--	106.92	0	106.92	3,731.56	22.4	-0.10
		09/24/09	--	107.42	0	107.42	3,731.06	21.9	-0.50
		10/27/09	--	107.53	0	107.53	3,730.95	21.8	-0.11
Note: Replacement well, drilled April 2009.									
Notes:									
1. Monitoring wells MW-1 through MW-7 installed September 1995; plugged and redrilled April 2009.									
2. Monitoring wells MW-8 through MW-10 installed March and April 1996; plugged and redrilled April 2009.									
3. Monitoring wells MW-6R, MW-11, MW-12 installed April and May 2002; MW-6R plugged April 2009.									
4. Monitoring wells MW-13 and MW-14 installed January 2004.									
5. Elevation survey of new and existing wells August 7, 2009. Earlier water level information corrected to current survey.									

Appendix D

Injection Well Information and Likely Drilling Mud Pit Location

30-025-03800 LOVINGTON SAN ANDRES UNIT #009 [302771]**General Well Information****Status: Plugged, Site Released**

Well Type: Injection
Work Type: New
Surface Location: H-36-16S-36E 1980 FNL 660 FEL
Lat/Long: 32.8803593937456 -103.301499528195
GL Elevation: 99999

Direction:
Lease Type: State

Sing/Mult Compl: Single
Potash Waiver:

Proposed Formation and/or Notes

07/20/07 PA-LOCATION RELEASED

Depths

Proposed: 5100

Measured: 5100
Plugback Measured:

Formation Tops

Formation	Top	Method Obtained
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Event Dates

Initial APD Approval: 1/1/1900
Most Recent APD Approval: 1/1/1900
APD Cancellation:
APD Extension Approval:
Spud: 12/31/9999
Approved Temporary Abandonment:
Shut In Waiting For Pipeline:
Plug and Abandoned Intent Received:
Well Plugged: 7/20/2007
Site Release:
Last Inspection: 5/21/2008

Current APD Expiration:

Expiration:

Plugged, Not Released
Expiration:
Intention To Plug:
Last MIT:

History

Effective Date	Property	Operator	C-101 Work Type
4/1/2006	[302771] LOVINGTON SAN ANDRES UNIT	[241333] CHEVRON MIDCONTINENT, L.P.	N
5/26/2000	[26748] LOVINGTON SAN ANDRES UNIT	[150628] PURE RESOURCES, LP	N
12/1/1997	[23221] LOVINGTON SAN ANDRES UNIT	[150661] TITAN RESOURCES I INC	N
1/1/1900	[4804] LOVINGTON SAN ANDRES UNIT	[9374] GREENHILL PETROLEUM CORP	N

Comments

Date/Time	User Id	Comment
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Operator

Company: [241333] CHEVRON MIDCONTINENT, L.P.
Address: 11111 S. WILCREST

Country: HOUSTON, TX 77099
 Main Phone: U.S.A.
 281-561-4749

Central Contact Person

Name: Bruce Isabel Title: Regulatory
 Phone: 281-561-4927 Fax: 281-561-38
 Cell: 713-562-4927
 E-Mail Address: beis@chevron.com

Hobbs Contacts

Name: Nathan Mouser Title:
 Phone: 505-394-1247 Fax: 505-394-12
 Cell: 505-390-7192
 E-Mail Address: nvmo@chevron.com

Artesia Contacts

Name: Wayne Minchew Title:
 Phone: 505-396-4414 Fax: 505-396-69
 Cell: 505-631-9119
 E-Mail Address: pminchew@chevron.com

Aztec Contacts

Name: Terry Strickland Title:
 Phone: 505-326-2657 Fax: 505-334-71
 Cell: 505-947-3912
 E-Mail Address: TStrickland@chevron.com

Pits

No Pits Found

Casing

			Boreholes, Strings and Equipment Specifications			Specifications for Strings and Tubing			Strings Cemented Intervals	
String/Hole Type	Taper	Date Set	Diameter	Top	Bottom (Depth)	Grade	Length	Weight	Bot of Cem	Top of Cem

Well Completions

[40580] LOVINGTON;GRAYBURG-SAN ANDRES Status: Zone Permanently Plugged Last Produced

Bottom hole
 Location: H-36-16S-36E 1980 FNL 660 FEL
 Lat/Long: 0 0
 Acreage:
 DHC: No

Consolidation Code:
 Production Method: Pumping

Test

Hours: 00:00

Oil Volume: 0.0 bbls
 Gas Volume: 0.0 mcf
 Water Volume: 0.0 bbls

Depths

Measured Depth:

Plugback Md:

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	
------	---	--

Notes**Event Dates**

Initial Effective/Approval: 1/1/1900
 Most Recent Approval: 7/20/2007
 Test Allowable Approval:
 Production Test:
 TD Reached:
 Deviation Report Received:
 Directional Survey Received:
 First Oil Production: 1/1/1900
 Ready to Produce:
 C-104 Approval:
 Plug Back:

Confidential Until:

Test Allowable End:

Rig Released:

Logs Received:

Closure Pit Plat Received:

First Gas Production:

Completion Report Received:

Revoked Until:

Authorization Revoked Start: Not Implemented

Well Completion History

Effective Date	Property	Operator	Cor
7/20/2007	[302771] LOVINGTON SAN ANDRES UNIT	[241333] CHEVRON MIDCONTINENT, L.P.	Zone P
4/1/2006	[302771] LOVINGTON SAN ANDRES UNIT	[241333] CHEVRON MIDCONTINENT, L.P.	Tempc
11/18/2005	[26748] LOVINGTON SAN ANDRES UNIT	[150628] PURE RESOURCES, LP	Tempc
5/26/2000	[26748] LOVINGTON SAN ANDRES UNIT	[150628] PURE RESOURCES, LP	
12/1/1997	[23221] LOVINGTON SAN ANDRES UNIT	[150661] TITAN RESOURCES I INC	
1/1/1900	[4804] LOVINGTON SAN ANDRES UNIT	[9374] GREENHILL PETROLEUM CORP	

Financial Assurance

Bond Id	Bond Type	Amount	Issuer	Cash/Surety	Issuer Bon
250004	Blanket	50000	[178793] RLI INSURANCE COMPANY	Surety	RLB001

Requests to release bonds must be submitted in writing. You may send an e-mail to Dorothy.Phillips@state.nm.us or fax a letter to (505)

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assu](#)

Also note that some compliance issues are addressed at the operator level so not listed under each well.

Complaints, Incidents and Spills

No Incidents Found

Please note that incidents that impact ground water are recorded along with "facilities" which may not be wells, so although the initial r related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

Orders**Waterflood Expansion WFX-615-0**

Applicant: [9374] GREENHILL PETROLEUM CORP
 Reviewer:
 BLM Office:

Contact:
 Approved By:
 Issuing Office: Santa Fe

Processing Dates

Received:
 Suspended:
 Ordered: 11/15/1991
 Cancelled:

Expiration:

Comments**Notes****Hearing Order 2592 R-2278-0**

Primary Pool: LOVINGTON-SAN ANDRES
 Applicant: SKELLY OIL COMPANY
 Examiner: Utz
 Approved: Yes
 Denied:
 Comments: ALSO TOWNSHIP 17 SOUTH, RANGE 37 EAST

Nomenclature:
 Dismissed:
 Contested:

Order Pools

Pool	Gas I
[40850] LOVINGTON SAN ANDRES (ABANDONED)	

Injection Orders

Injection			Pressure			
Formation	Top	Bottom	Packer Depth	Tubing Size	Gradient	Injection Limit
	4481	4775	4381	2	0	2193
	4515	5075	4480	2	0	2039
	4520	5129	4480	2	0	1600
	4570	5032	4500	2	0	914
	4590	4980	4520	2	0	2200
	4592	4903	4520	2	0	2072
	4645	5065	4530	2	0	1730

Production / Injection

Earliest Production in OCD Records: 12/1992					Last 11/2005				
	Production				Injection				
Time Frame	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days P/I	Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	F
1992 Cumulative	0	0	0	0	16637	0	0	0	
1993	0	0	0	0	31294	0	0	0	
1994	0	0	0	0	23782	0	0	0	
1995	0	0	0	0	18945	0	0	0	
1996	0	0	0	0	16033	0	0	0	
1997	0	0	0	0	12651	0	0	0	
1998	0	0	0	0	5195	0	0	0	
1999	0	0	0	0	0	0	0	0	
2000	0	0	0	0	1776	0	0	0	
2001	0	0	0	0	1	0	0	0	
2002	0	0	0	0	18	0	0	0	
2003	0	0	0	0	1	0	0	0	
2004	0	0	0	0	0	0	0	0	
2005	0	0	0	0	1	0	0	0	
2006	0	0	0	0	0	0	0	0	
2007	0	0	0	0	0	0	0	0	
Grand Total:	0	0	0	0	126334	0	0	0	

Transporters

Transporter	Product
[15694] NAVAJO REFINING CO. PIPELINE DIVISION	Oil
[36785] DCP MIDSTREAM, LP	Gas

30-025-03801 LOVINGTON PADDOCK UNIT #022 [302770]**General Well Information****Status:** Plugged, Site Released**History****Comments****Operator**

Company: [241333] CHEVRON MIDCONTINENT, L.P.
Address: 11111 S. WILCREST
HOUSTON, TX 77099
Country: U.S.A.
Main Phone: 281-561-4749

Central Contact Person**Hobbs Contacts****Artesia Contacts****Aztec Contacts****Pits****Casing****Well Completions****[40660] LOVINGTON;PADDOCK****Status:** Zone Permanently Plugged **Last Produced****Financial Assurance****Compliance**

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assu](#))
Also note that some compliance issues are addressed at the operator level so not listed under each well.

Complaints, Incidents and Spills

No Incidents Found

Please note that incidents that impact ground water are recorded along with "facilities" which may not be wells, so although the initial r related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

Orders

Waterflood Expansion WFX-605-0

Production / Injection

Earliest Production in OCD Records: 12/1992					Last 3/2007				
Time Frame	Production				Injection				
	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days P/I	Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	F
1992 Cumulative	0	0	0	0	75792	0	0	0	
1993	0	0	0	0	57281	0	0	0	
1994	0	0	0	0	55926	0	0	0	
1995	0	0	0	0	61361	0	0	0	
1996	0	0	0	0	58407	0	0	0	
1997	0	0	0	0	55351	0	0	0	
1998	0	0	0	0	55262	0	0	0	
1999	0	0	0	0	41811	0	0	0	
2000	0	0	0	0	28328	0	0	0	
2001	0	0	0	0	44675	0	0	0	
2002	0	0	0	0	41223	0	0	0	
2003	0	0	0	0	44983	0	0	0	
2004	0	0	0	0	45340	0	0	0	
2005	0	0	0	0	46812	0	0	0	
2006	0	0	0	275	46910	0	0	0	
2007	0	0	0	66	8350	0	0	0	
2008	0	0	0	0	0	0	0	0	
Grand Total:	0	0	0	341	767812	0	0	0	

Transporters

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL APL NO.
30-025-03801

5. Indicate Type of Lease

STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
B2894

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO KEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"
(FORM C-101) FOR SUCH PROPOSALS)

7. Lease Name or Unit Agreement Name
Lovington Paddock Unit

1. Type of Well:
Oil Well ☐ Gas Well ☐ Other Injection ☐

2. Name of Operator
Greenhill Petroleum Corporation

8. Well No.
22

3. Address of Operator
11490 Westheimer, Suite 300, Houston, TX 77077-6841

9. Pool name or Wildcat
Lovington Paddock

4. Well Location
Unit Letter H : 2080 Feet From The North Line and 660 Feet From The East Line
Section 36 Township 16S Range 36E NMPH Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
3852 DF

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐ REMEDIAL WORK ☐ ALTERING CASING ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐ COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐ CASING TEST AND CEMENT JOB ☐
OTHER: ☐ OTHER: Repair tbg/pkr leak ☐

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

4/17/97 - 4/21/97

1. POOH w/ 5 1/2" AD-1 pkr on 2 3/8" IPC J-55 tbg. Exch pkr & tst 183 jts tbg. Found hole in 78th jt. Replaced 2 other jts outside pits. RD tester
2. RU pump trk to csg & circulate 195 bbls fresh wtr mixed w/ 40 g. CRW 132F pkr fld. Set 5 1/2" AD-1 pkr on 183 jts 2 3/3' IPC tbg @ 6011'.
3. Pressured up on csg to 495 psi & ran 30 minute chart. Ending pressure 510 psi - OK. Released pressure & RD pump trk.
4. Returned well to injection.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Lori A. Hodge TITLE Landman DATE Apr 25, 1997

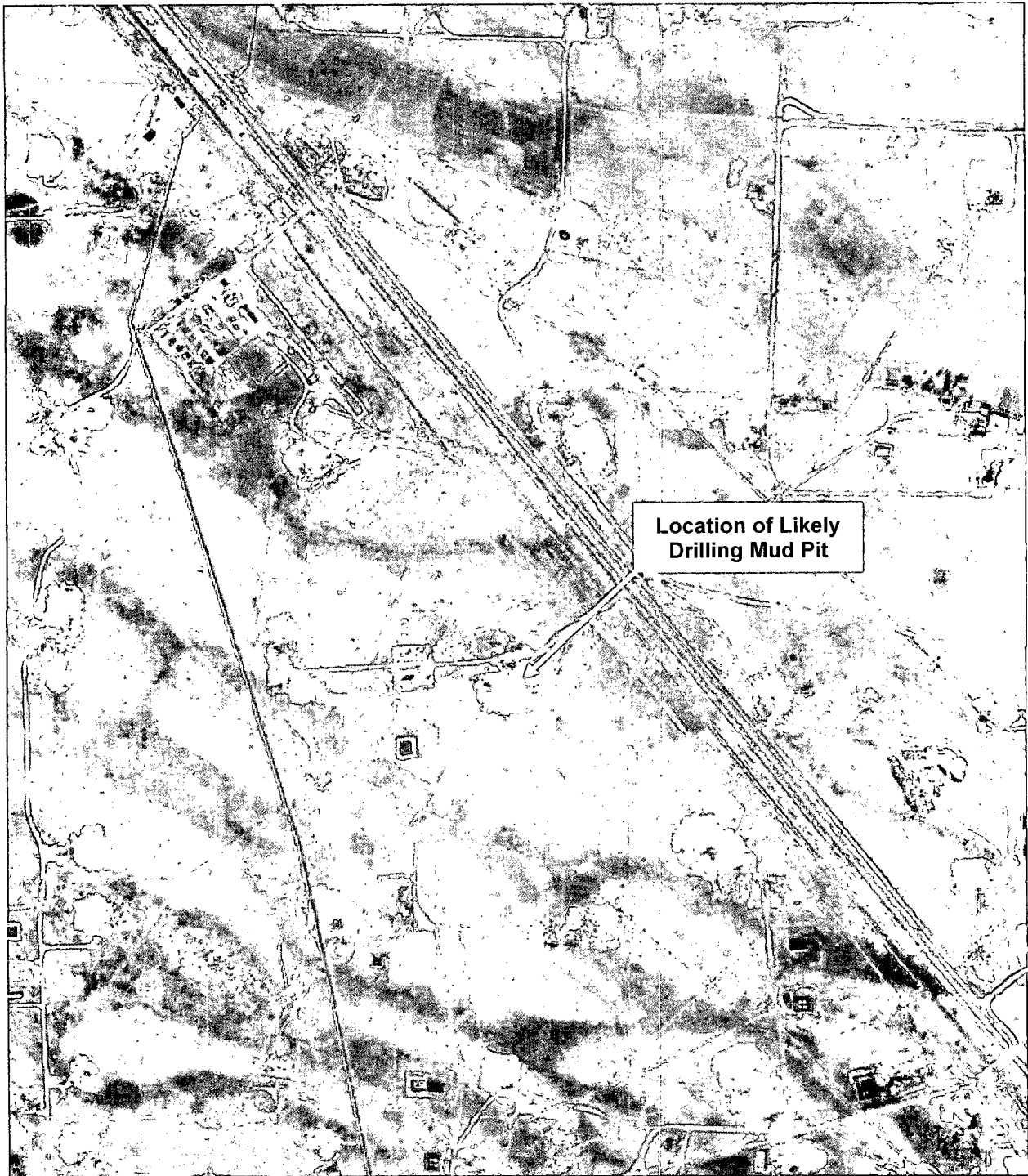
TYPE OR PRINT NAME Lori A. Hodge TELEPHONE NO. (713) 589-8484

(This space for State Use)

Orig. Signed by
Paul Kautz
Geologist

APPROVED BY Paul Kautz TITLE Geologist DATE Apr 25, 1997

CONDITIONS OF APPROVAL IF ANY:



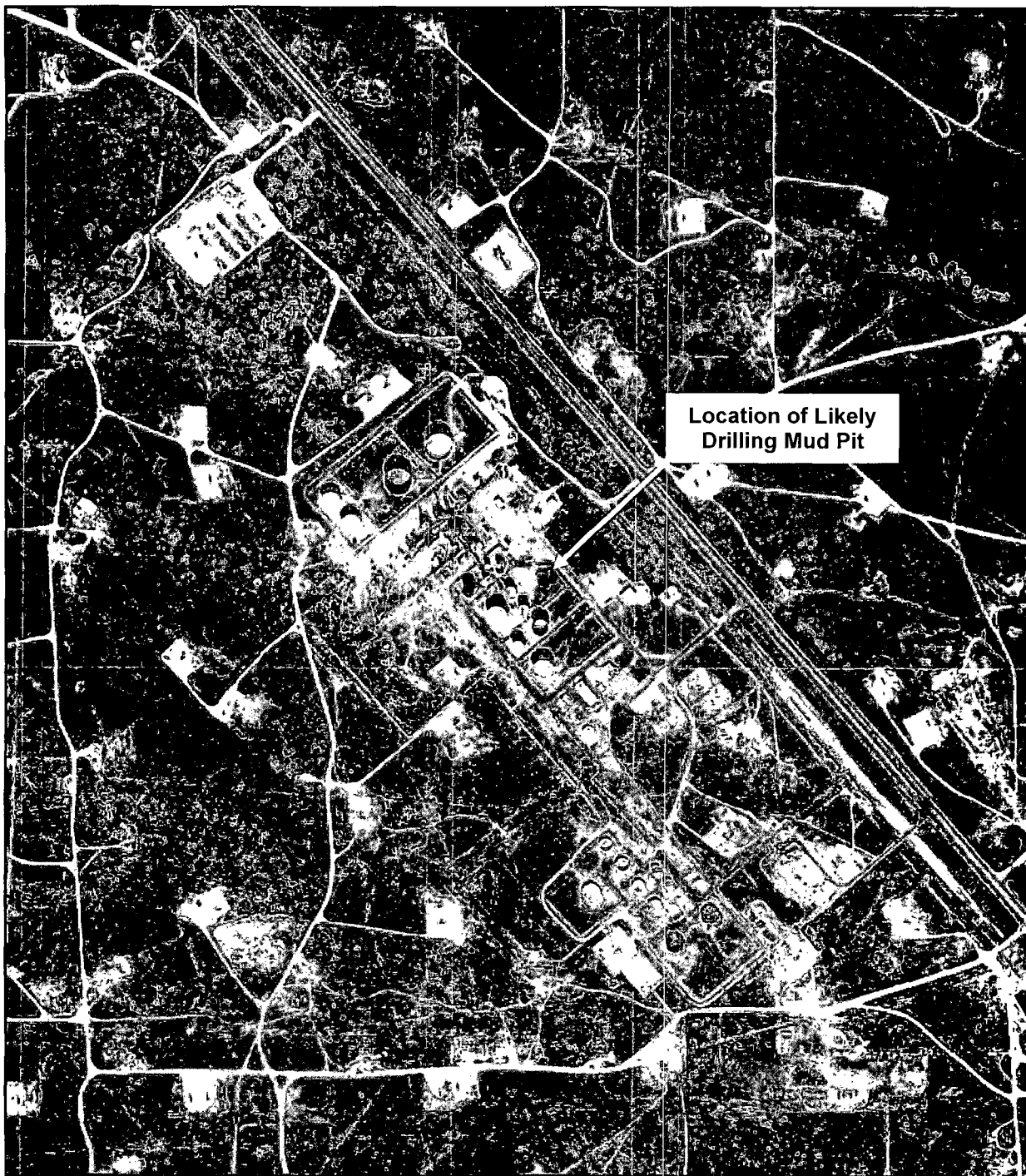
Site: LOVINGTON REFINERY
Source: ASCS
Date: 11-21-1966
County: LEA, NM

GeoSearch



Site: LOVINGTON REFINERY
Source: USGS
Date: 6-10-1986
County: LEA, NM

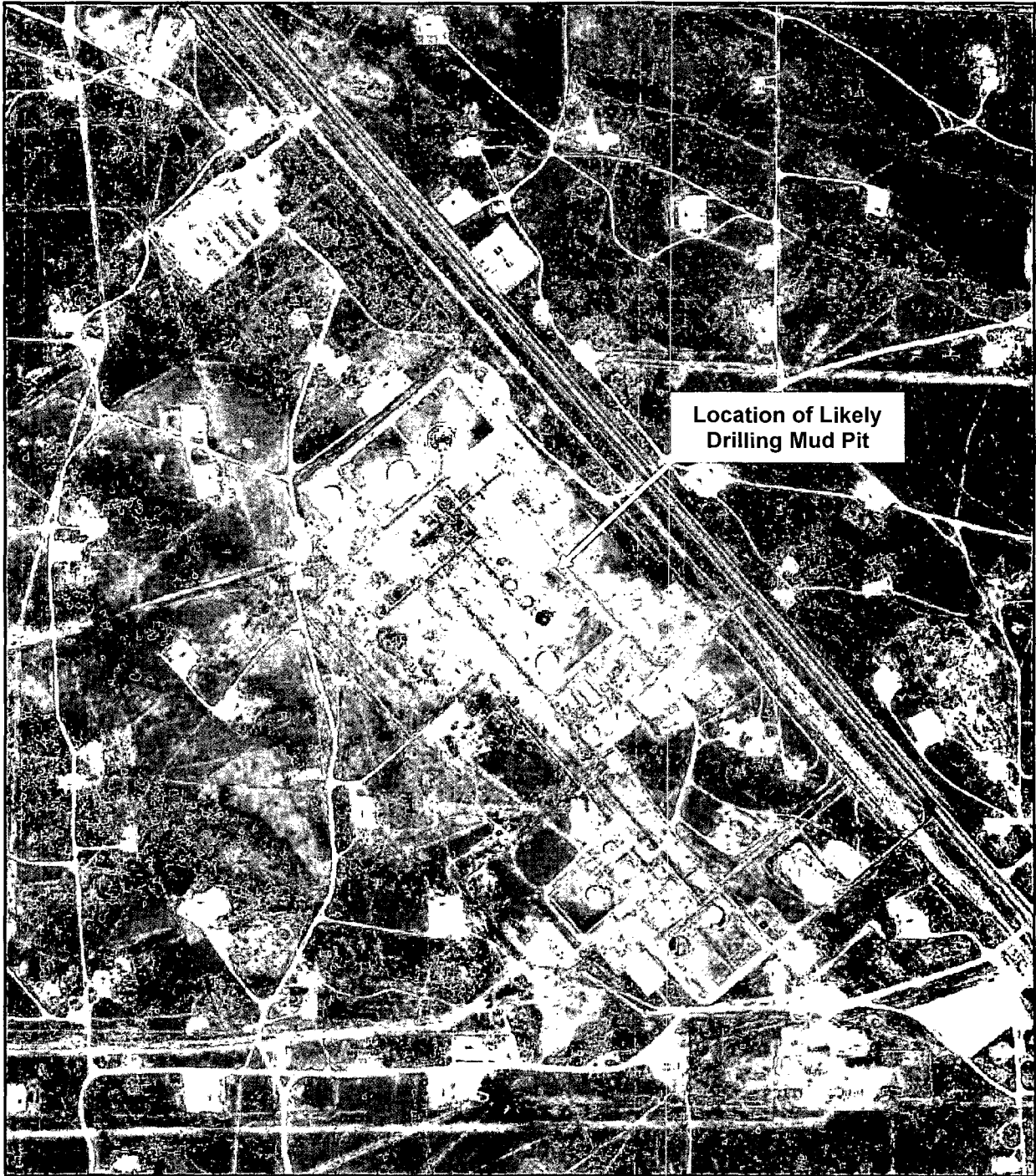
GeoSearch



408 R 11562 - 10/30/2009

SITE: LOVINGTON REFINERY
SOURCE: USGS
DATE: 11-1-1997
COUNTY: LEA, NM

GeoSearch



JOB #: 11362 - 11/03/2009

SITE: LOVINGTON REFINERY
SOURCE: DIGITAL GLOBE
DATE: 5-13-2009
COUNTY: LEA, NM

GeoSearch

Appendix E

Copies of June 2009 Water Quality Sampling Analytical Reports

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

30-Jun-2009

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Navajo Lea Refinery Semi-Annual

Work Order: **0906452**

Dear Darrell,

ALS Laboratory Group received 10 samples on 17-Jun-2009 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 88.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-08-TX

ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

Phone: (281) 530-5656 Fax: (281) 530-5887

www.alsglobal.com www.elabi.com

A Campbell Brothers Limited Company

Client: Navajo Refining Company
Project: Navajo Refinery Semi-Annual
Work Order: 0906452

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0906452-01	MW#5	Water		6/16/2009 09:20	6/17/2009 09:15	☐
0906452-02	MW#12	Water		6/16/2009 10:25	6/17/2009 09:15	☐
0906452-03	MW#14	Water		6/16/2009 11:15	6/17/2009 09:15	☐
0906452-04	MW#13	Water		6/16/2009 12:30	6/17/2009 09:15	☐
0906452-05	MW#4	Water		6/16/2009 13:20	6/17/2009 09:15	☐
0906452-06	MW#3	Water		6/16/2009 13:50	6/17/2009 09:15	☐
0906452-07	MW#9	Water		6/16/2009 14:20	6/17/2009 09:15	☐
0906452-08	MW#10	Water		6/16/2009 15:00	6/17/2009 09:15	☐
0906452-09	Trip Blank 2515	Water		6/16/2009 16:50	6/17/2009 09:15	☐
0906452-10	Trip Blank 2497	Water		6/16/2009 16:50	6/17/2009 09:15	☐

ALS Laboratory Group

Date: 30-Jun-09

Client: Navajo Refining Company
Project: Navajo Refinery Semi-Annual
Work Order: 0906452

Case Narrative

Batch 36701 Metals MS/MSD is an unrelated sample.

Batch 36777 Mercury MS/MSD is an unrelated sample.

Batch R78404 Volatiles MS/MSD is an unrelated sample.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#5

Lab ID: 0906452-01

Collection Date: 6/16/2009 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	Prep Date: 6/24/2009 Analyst: JCJ 6/24/2009 05:54 PM
DISSOLVED METALS			SW6020			
Aluminum	0.796		0.0200	mg/L	1	Prep Date: 6/19/2009 Analyst: SKS 6/23/2009 06:55 AM
Arsenic	0.0233		0.00500	mg/L	1	6/23/2009 06:55 AM
Barium	0.0639		0.00500	mg/L	1	6/23/2009 06:55 AM
Boron	0.116		0.0200	mg/L	1	6/23/2009 06:55 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 06:55 AM
Calcium	16.0		0.500	mg/L	1	6/23/2009 06:55 AM
Chromium	ND		0.00500	mg/L	1	6/23/2009 06:55 AM
Cobalt	ND		0.00500	mg/L	1	6/23/2009 06:55 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 06:55 AM
Iron	0.399		0.200	mg/L	1	6/23/2009 06:55 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 06:55 AM
Magnesium	3.11		0.200	mg/L	1	6/23/2009 06:55 AM
Manganese	0.00670		0.00500	mg/L	1	6/23/2009 06:55 AM
Molybdenum	0.0103		0.00500	mg/L	1	6/23/2009 06:55 AM
Nickel	ND		0.00500	mg/L	1	6/23/2009 06:55 AM
Potassium	3.05		0.200	mg/L	1	6/23/2009 06:55 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 06:55 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 06:55 AM
Sodium	302		2.00	mg/L	10	6/23/2009 05:19 PM
Zinc	ND		0.0100	mg/L	1	6/23/2009 06:55 AM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	Prep Date: 6/18/2009 Analyst: ACN 6/29/2009 09:05 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/29/2009 09:05 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2-Chlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2-Methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2-Nitroaniline	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
2-Nitrophenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#5

Lab ID: 0906452-01

Collection Date: 6/16/2009 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
3-Nitroaniline	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
4-Chloroaniline	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
4-Nitroaniline	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
4-Nitrophenol	ND		0.0010	mg/L	1	6/29/2009 09:05 PM
Acenaphthene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Acenaphthylene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Acetophenone	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Anthracene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Atrazine	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Benzaldehyde	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Bis(2-ethylhexyl)phthalate	0.00027		0.00020	mg/L	1	6/29/2009 09:05 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Caprolactam	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Carbazole	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Chrysene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Di-n-butyl phthalate	0.00045		0.00020	mg/L	1	6/29/2009 09:05 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Dibenzofuran	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Diethyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Fluoranthene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Fluorene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Hexachloroethane	ND		0.00020	mg/L	1	6/29/2009 09:05 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW#5
Collection Date: 6/16/2009 09:20 AM

Work Order: 0906452
Lab ID: 0906452-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Isophorone	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Naphthalene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Nitrobenzene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Pentachlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Phenanthrene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Phenol	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Pyrene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
Surr: 2,4,6-Tribromophenol	57.4		34-129	%REC	1	6/29/2009 09:05 PM
Surr: 2-Fluorobiphenyl	64.7		40-125	%REC	1	6/29/2009 09:05 PM
Surr: 2-Fluorophenol	56.2		20-120	%REC	1	6/29/2009 09:05 PM
Surr: 4-Terphenyl-d14	61.9		40-135	%REC	1	6/29/2009 09:05 PM
Surr: Nitrobenzene-d5	54.3		41-120	%REC	1	6/29/2009 09:05 PM
Surr: Phenol-d6	58.9		20-120	%REC	1	6/29/2009 09:05 PM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/29/2009 09:05 PM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
2-Butanone	ND		0.010	mg/L	1	6/23/2009 09:21 PM
2-Hexanone	ND		0.010	mg/L	1	6/23/2009 09:21 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/23/2009 09:21 PM
Acetone	ND		0.010	mg/L	1	6/23/2009 09:21 PM
Benzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Bromoform	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Bromomethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Carbon disulfide	ND		0.010	mg/L	1	6/23/2009 09:21 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#5

Lab ID: 0906452-01

Collection Date: 6/16/2009 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Chloroethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Chloroform	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Chloromethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
m,p-Xylene	ND		0.010	mg/L	1	6/23/2009 09:21 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Methylene chloride	ND		0.010	mg/L	1	6/23/2009 09:21 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Naphthalene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
o-Xylene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Styrene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Toluene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Trichloroethene	ND		0.0050	mg/L	1	6/23/2009 09:21 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/23/2009 09:21 PM
Xylenes, Total	ND		0.015	mg/L	1	6/23/2009 09:21 PM
Surr: 1,2-Dichloroethane-d4	106		70-125	%REC	1	6/23/2009 09:21 PM
Surr: 4-Bromofluorobenzene	115		72-125	%REC	1	6/23/2009 09:21 PM
Surr: Dibromofluoromethane	99.3		71-125	%REC	1	6/23/2009 09:21 PM
Surr: Toluene-d8	101		75-125	%REC	1	6/23/2009 09:21 PM

ANIONS

E300

Analyst: IGF

Chloride	186	5.00	mg/L	10	6/22/2009 06:42 PM
Fluoride	1.39	0.100	mg/L	1	6/22/2009 12:07 PM
Sulfate	131	5.00	mg/L	10	6/22/2009 06:42 PM
Nitrate/Nitrite (as N)	3.31	0.500	mg/L	5	6/19/2009 05:48 PM
Surr: Selenate (surr)	95.3	85-115	%REC	10	6/22/2009 06:42 PM
Surr: Selenate (surr)	93.9	85-115	%REC	1	6/22/2009 12:07 PM
Surr: Selenate (surr)	102	85-115	%REC	5	6/19/2009 05:48 PM

ALKALINITY

SM2320B

Analyst: TDW

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#5

Lab ID: 0906452-01

Collection Date: 6/16/2009 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO3)	323		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO3)	323		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B		Analyst: TDW	
Specific Conductivity	1,820		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B		Analyst: TDW	
pH	7.82	H	0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C		Analyst: TDW	
Total Dissolved Solids (Residue, Filterable)	952		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#12

Lab ID: 0906452-02

Collection Date: 6/16/2009 10:25 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	6/24/2009 05:56 PM
DISSOLVED METALS			SW6020			
Aluminum	ND		0.0200	mg/L	1	6/23/2009 07:02 AM
Arsenic	0.00516		0.00500	mg/L	1	6/23/2009 07:02 AM
Barium	0.0775		0.00500	mg/L	1	6/23/2009 07:02 AM
Boron	0.200		0.0200	mg/L	1	6/23/2009 07:02 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 07:02 AM
Calcium	62.4		0.500	mg/L	1	6/23/2009 07:02 AM
Chromium	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Cobalt	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Iron	ND		0.200	mg/L	1	6/23/2009 07:02 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Magnesium	5.90		0.200	mg/L	1	6/23/2009 07:02 AM
Manganese	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Molybdenum	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Nickel	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Potassium	1.96		0.200	mg/L	1	6/23/2009 07:02 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 07:02 AM
Sodium	40.2		0.200	mg/L	1	6/23/2009 07:02 AM
Zinc	ND		0.0100	mg/L	1	6/23/2009 07:02 AM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/29/2009 09:26 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2-Chlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2-Methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2-Nitroaniline	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
2-Nitrophenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#12

Lab ID: 0906452-02

Collection Date: 6/16/2009 10:25 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
3-Nitroaniline	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
4-Chloroaniline	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
4-Nitroaniline	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
4-Nitrophenol	ND		0.0010	mg/L	1	6/29/2009 09:26 PM
Acenaphthene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Acenaphthylene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Acetophenone	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Anthracene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Atrazine	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Benzaldehyde	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Bis(2-ethylhexyl)phthalate	0.0027		0.00020	mg/L	1	6/29/2009 09:26 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Caprolactam	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Carbazole	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Chrysene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Dibenzofuran	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Diethyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Fluoranthene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Fluorene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Hexachloroethane	ND		0.00020	mg/L	1	6/29/2009 09:26 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#12

Lab ID: 0906452-02

Collection Date: 6/16/2009 10:25 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Isophorone	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Naphthalene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Nitrobenzene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Pentachlorophenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Phenanthrene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Phenol	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Pyrene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
Surr: 2,4,6-Tribromophenol	68.7		34-129	%REC	1	6/29/2009 09:26 PM
Surr: 2-Fluorobiphenyl	68.6		40-125	%REC	1	6/29/2009 09:26 PM
Surr: 2-Fluorophenol	60.4		20-120	%REC	1	6/29/2009 09:26 PM
Surr: 4-Terphenyl-d14	64.2		40-135	%REC	1	6/29/2009 09:26 PM
Surr: Nitrobenzene-d5	54.7		41-120	%REC	1	6/29/2009 09:26 PM
Surr: Phenol-d6	60.1		20-120	%REC	1	6/29/2009 09:26 PM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/29/2009 09:26 PM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 11:49 AM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 11:49 AM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 11:49 AM
Acetone	ND		0.010	mg/L	1	6/24/2009 11:49 AM
Benzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 11:49 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#12

Lab ID: 0906452-02

Collection Date: 6/16/2009 10:25 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 11:49 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 11:49 AM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Styrene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Toluene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 11:49 AM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 11:49 AM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 11:49 AM
Surr: 1,2-Dichloroethane-d4	109		70-125	%REC	1	6/24/2009 11:49 AM
Surr: 4-Bromofluorobenzene	109		72-125	%REC	1	6/24/2009 11:49 AM
Surr: Dibromofluoromethane	105		71-125	%REC	1	6/24/2009 11:49 AM
Surr: Toluene-d8	107		75-125	%REC	1	6/24/2009 11:49 AM
ANIONS			E300		Analyst: IGF	
Chloride	23.0		0.500	mg/L	1	6/22/2009 12:31 PM
Fluoride	1.16		0.100	mg/L	1	6/22/2009 12:31 PM
Sulfate	49.6		0.500	mg/L	1	6/22/2009 12:31 PM
Nitrate/Nitrite (as N)	1.98		0.500	mg/L	5	6/19/2009 06:58 PM
Surr: Selenate (surr)	97.7		85-115	%REC	5	6/19/2009 06:58 PM
Surr: Selenate (surr)	93.5		85-115	%REC	1	6/22/2009 12:31 PM
ALKALINITY			SM2320B		Analyst: TDW	
Alkalinity, Bicarbonate (As CaCO3)	165		5.00	mg/L	1	6/24/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#12

Lab ID: 0906452-02

Collection Date: 6/16/2009 10:25 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO ₃)	165		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	663		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B			Analyst: TDW
pH	6.69	H	0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	354		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#14

Lab ID: 0906452-03

Collection Date: 6/16/2009 11:15 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY						
Mercury	ND		SW7470 0.000200	mg/L	Prep Date: 6/24/2009 1	Analyst: JCJ 6/24/2009 05:58 PM
DISSOLVED METALS						
Aluminum	ND		SW6020 0.0200	mg/L	Prep Date: 6/19/2009 1	Analyst: SKS 6/23/2009 07:08 AM
Arsenic	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Barium	0.0770		0.00500	mg/L	1	6/23/2009 07:08 AM
Boron	0.132		0.0200	mg/L	1	6/23/2009 07:08 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 07:08 AM
Calcium	89.8		0.500	mg/L	1	6/23/2009 07:08 AM
Chromium	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Cobalt	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Iron	ND		0.200	mg/L	1	6/23/2009 07:08 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Magnesium	11.3		0.200	mg/L	1	6/23/2009 07:08 AM
Manganese	0.0199		0.00500	mg/L	1	6/23/2009 07:08 AM
Molybdenum	0.0215		0.00500	mg/L	1	6/23/2009 07:08 AM
Nickel	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Potassium	3.09		0.200	mg/L	1	6/23/2009 07:08 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 07:08 AM
Sodium	25.7		0.200	mg/L	1	6/23/2009 07:08 AM
Zinc	0.0255		0.0100	mg/L	1	6/23/2009 07:08 AM
LOW-LEVEL SEMIVOLATILES						
1,1'-Biphenyl	ND		SW8270 0.00020	mg/L	Prep Date: 6/18/2009 1	Analyst: ACN 6/30/2009 02:33 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 02:33 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Sample ID: MW#14

Collection Date: 6/16/2009 11:15 AM

Work Order: 0906452

Lab ID: 0906452-03

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 02:33 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Bis(2-ethylhexyl)phthalate	0.0071		0.00020	mg/L	1	6/30/2009 02:33 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 02:33 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#14

Lab ID: 0906452-03

Collection Date: 6/16/2009 11:15 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
Surr: 2,4,6-Tribromophenol	68.1		34-129	%REC	1	6/30/2009 02:33 AM
Surr: 2-Fluorobiphenyl	65.7		40-125	%REC	1	6/30/2009 02:33 AM
Surr: 2-Fluorophenol	56.9		20-120	%REC	1	6/30/2009 02:33 AM
Surr: 4-Terphenyl-d14	62.4		40-135	%REC	1	6/30/2009 02:33 AM
Surr: Nitrobenzene-d5	53.7		41-120	%REC	1	6/30/2009 02:33 AM
Surr: Phenol-d6	58.2		20-120	%REC	1	6/30/2009 02:33 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:33 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 04:29 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 04:29 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 04:29 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 04:29 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 04:29 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#14

Lab ID: 0906452-03

Collection Date: 6/16/2009 11:15 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 04:29 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 04:29 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:29 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 04:29 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 04:29 PM
Surr: 1,2-Dichloroethane-d4	113		70-125	%REC	1	6/24/2009 04:29 PM
Surr: 4-Bromofluorobenzene	92.4		72-125	%REC	1	6/24/2009 04:29 PM
Surr: Dibromofluoromethane	112		71-125	%REC	1	6/24/2009 04:29 PM
Surr: Toluene-d8	102		75-125	%REC	1	6/24/2009 04:29 PM

ANIONS

E300

Analyst: IGF

Chloride	93.0	5.00	mg/L	10	6/22/2009 08:39 PM
Fluoride	0.851	0.100	mg/L	1	6/22/2009 12:54 PM
Sulfate	60.9	5.00	mg/L	10	6/22/2009 08:39 PM
Nitrate/Nitrite (as N)	5.16	0.500	mg/L	5	6/19/2009 07:21 PM
Surr: Selenate (surr)	94.8	85-115	%REC	10	6/22/2009 08:39 PM
Surr: Selenate (surr)	94.0	85-115	%REC	1	6/22/2009 12:54 PM
Surr: Selenate (surr)	103	85-115	%REC	5	6/19/2009 07:21 PM

ALKALINITY

SM2320B

Analyst: TDW

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#14

Lab ID: 0906452-03

Collection Date: 6/16/2009 11:15 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO ₃)	162		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO ₃)	162		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	888		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B			Analyst: TDW
pH	6.89	H	0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	540		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#13

Lab ID: 0906452-04

Collection Date: 6/16/2009 12:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY						
Mercury	ND		SW7470 0.000200	mg/L	1	Prep Date: 6/24/2009 Analyst: JCJ 6/24/2009 06:00 PM
DISSOLVED METALS						
Aluminum	ND		SW6020 0.0200	mg/L	1	Prep Date: 6/19/2009 Analyst: SKS 6/23/2009 07:14 AM
Arsenic	ND		0.00500	mg/L	1	6/23/2009 07:14 AM
Barium	0.0692		0.00500	mg/L	1	6/23/2009 07:14 AM
Boron	0.253		0.0200	mg/L	1	6/23/2009 07:14 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 07:14 AM
Calcium	297		5.00	mg/L	10	6/23/2009 05:25 PM
Chromium	0.0106		0.00500	mg/L	1	6/23/2009 07:14 AM
Cobalt	0.0285		0.00500	mg/L	1	6/23/2009 07:14 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 07:14 AM
Iron	ND		0.200	mg/L	1	6/23/2009 07:14 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 07:14 AM
Magnesium	34.9		0.200	mg/L	1	6/23/2009 07:14 AM
Manganese	0.0176		0.00500	mg/L	1	6/23/2009 07:14 AM
Molybdenum	ND		0.00500	mg/L	1	6/23/2009 07:14 AM
Nickel	0.0126		0.00500	mg/L	1	6/23/2009 07:14 AM
Potassium	4.48		0.200	mg/L	1	6/23/2009 07:14 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 07:14 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 07:14 AM
Sodium	95.0		0.200	mg/L	1	6/23/2009 07:14 AM
Zinc	0.0269		0.0100	mg/L	1	6/23/2009 07:14 AM
LOW-LEVEL SEMIVOLATILES						
1,1'-Biphenyl	ND		SW8270 0.00020	mg/L	1	Prep Date: 6/18/2009 Analyst: ACN 6/30/2009 02:55 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 02:55 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW#13
Collection Date: 6/16/2009 12:30 PM

Work Order: 0906452
Lab ID: 0906452-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 02:55 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Bis(2-ethylhexyl)phthalate	0.0031		0.00020	mg/L	1	6/30/2009 02:55 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 02:55 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#13

Lab ID: 0906452-04

Collection Date: 6/16/2009 12:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
Surr: 2,4,6-Tribromophenol	58.3		34-129	%REC	1	6/30/2009 02:55 AM
Surr: 2-Fluorobiphenyl	65.8		40-125	%REC	1	6/30/2009 02:55 AM
Surr: 2-Fluorophenol	49.3		20-120	%REC	1	6/30/2009 02:55 AM
Surr: 4-Terphenyl-d14	57.6		40-135	%REC	1	6/30/2009 02:55 AM
Surr: Nitrobenzene-d5	52.0		41-120	%REC	1	6/30/2009 02:55 AM
Surr: Phenol-d6	52.6		20-120	%REC	1	6/30/2009 02:55 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:55 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 05:46 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 05:46 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 05:46 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 05:46 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 05:46 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#13

Lab ID: 0906452-04

Collection Date: 6/16/2009 12:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 05:46 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 05:46 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:46 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 05:46 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 05:46 PM
Surr: 1,2-Dichloroethane-d4	110		70-125	%REC	1	6/24/2009 05:46 PM
Surr: 4-Bromofluorobenzene	98.5		72-125	%REC	1	6/24/2009 05:46 PM
Surr: Dibromofluoromethane	107		71-125	%REC	1	6/24/2009 05:46 PM
Surr: Toluene-d8	101		75-125	%REC	1	6/24/2009 05:46 PM
ANIONS			E300			Analyst: IGF
Chloride	425		10.0	mg/L	20	6/22/2009 09:02 PM
Fluoride	0.220		0.100	mg/L	1	6/22/2009 01:17 PM
Sulfate	138		10.0	mg/L	20	6/22/2009 09:02 PM
Nitrate/Nitrite (as N)	2.65		0.500	mg/L	5	6/19/2009 07:44 PM
Surr: Selenate (surr)	95.3		85-115	%REC	20	6/22/2009 09:02 PM
Surr: Selenate (surr)	95.5		85-115	%REC	1	6/22/2009 01:17 PM
Surr: Selenate (surr)	103		85-115	%REC	5	6/19/2009 07:44 PM
ALKALINITY			SM2320B			Analyst: TDW

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#13

Lab ID: 0906452-04

Collection Date: 6/16/2009 12:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO ₃)	334		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO ₃)	334		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B		Analyst: TDW	
Specific Conductivity	2,520		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B		Analyst: TDW	
pH	6.44	H	0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C		Analyst: TDW	
Total Dissolved Solids (Residue, Filterable)	1,790		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#4

Lab ID: 0906452-05

Collection Date: 6/16/2009 01:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	Prep Date: 6/24/2009 Analyst: JCJ 6/24/2009 06:02 PM
DISSOLVED METALS			SW6020			
Aluminum	0.180		0.0200	mg/L	1	Prep Date: 6/19/2009 Analyst: SKS 6/23/2009 07:20 AM
Arsenic	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Barium	0.174		0.00500	mg/L	1	6/23/2009 07:20 AM
Boron	0.160		0.0200	mg/L	1	6/23/2009 07:20 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 07:20 AM
Calcium	46.3		0.500	mg/L	1	6/23/2009 07:20 AM
Chromium	0.00534		0.00500	mg/L	1	6/23/2009 07:20 AM
Cobalt	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Iron	ND		0.200	mg/L	1	6/23/2009 07:20 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Magnesium	7.48		0.200	mg/L	1	6/23/2009 07:20 AM
Manganese	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Molybdenum	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Nickel	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Potassium	2.47		0.200	mg/L	1	6/23/2009 07:20 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 07:20 AM
Sodium	64.1		0.200	mg/L	1	6/23/2009 07:20 AM
Zinc	0.0120		0.0100	mg/L	1	6/23/2009 07:20 AM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	Prep Date: 6/18/2009 Analyst: ACN 6/30/2009 03:16 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 03:16 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#4

Lab ID: 0906452-05

Collection Date: 6/16/2009 01:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 03:16 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Bis(2-ethylhexyl)phthalate	0.0020		0.00020	mg/L	1	6/30/2009 03:16 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 03:16 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#4

Lab ID: 0906452-05

Collection Date: 6/16/2009 01:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
Surr: 2,4,6-Tribromophenol	63.3		34-129	%REC	1	6/30/2009 03:16 AM
Surr: 2-Fluorobiphenyl	70.6		40-125	%REC	1	6/30/2009 03:16 AM
Surr: 2-Fluorophenol	59.3		20-120	%REC	1	6/30/2009 03:16 AM
Surr: 4-Terphenyl-d14	61.3		40-135	%REC	1	6/30/2009 03:16 AM
Surr: Nitrobenzene-d5	57.5		41-120	%REC	1	6/30/2009 03:16 AM
Surr: Phenol-d6	60.9		20-120	%REC	1	6/30/2009 03:16 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:16 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 06:11 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 06:11 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 06:11 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 06:11 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 06:11 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#4

Lab ID: 0906452-05

Collection Date: 6/16/2009 01:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 06:11 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 06:11 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:11 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 06:11 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 06:11 PM
Surr: 1,2-Dichloroethane-d4	108		70-125	%REC	1	6/24/2009 06:11 PM
Surr: 4-Bromofluorobenzene	96.6		72-125	%REC	1	6/24/2009 06:11 PM
Surr: Dibromofluoromethane	104		71-125	%REC	1	6/24/2009 06:11 PM
Surr: Toluene-d8	104		75-125	%REC	1	6/24/2009 06:11 PM
ANIONS			E300			Analyst: IGF
Chloride	28.9		0.500	mg/L	1	6/22/2009 01:40 PM
Fluoride	0.841		0.100	mg/L	1	6/22/2009 01:40 PM
Sulfate	61.5		2.50	mg/L	5	6/22/2009 09:25 PM
Nitrate/Nitrite (as N)	1.84		0.500	mg/L	5	6/19/2009 08:07 PM
Surr: Selenate (surr)	95.8		85-115	%REC	5	6/22/2009 09:25 PM
Surr: Selenate (surr)	95.1		85-115	%REC	1	6/22/2009 01:40 PM
Surr: Selenate (surr)	103		85-115	%REC	5	6/19/2009 08:07 PM
ALKALINITY			SM2320B			Analyst: TDW

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#4

Lab ID: 0906452-05

Collection Date: 6/16/2009 01:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO3)	170		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO3)	170		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B		Analyst: TDW	
Specific Conductivity	704		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B		Analyst: TDW	
pH	7.30	H	0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C		Analyst: TDW	
Total Dissolved Solids (Residue, Filterable)	422		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Sample ID: MW#3

Collection Date: 6/16/2009 01:50 PM

Work Order: 0906452

Lab ID: 0906452-06

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	6/24/2009 06:04 PM
DISSOLVED METALS			SW6020			
Aluminum	0.308		0.0200	mg/L	1	6/23/2009 07:44 AM
Arsenic	0.00815		0.00500	mg/L	1	6/23/2009 07:44 AM
Barium	0.115		0.00500	mg/L	1	6/23/2009 07:44 AM
Boron	0.160		0.0200	mg/L	1	6/23/2009 07:44 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 07:44 AM
Calcium	19.9		0.500	mg/L	1	6/23/2009 07:44 AM
Chromium	0.00709		0.00500	mg/L	1	6/23/2009 07:44 AM
Cobalt	ND		0.00500	mg/L	1	6/23/2009 07:44 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 07:44 AM
Iron	ND		0.200	mg/L	1	6/23/2009 07:44 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 07:44 AM
Magnesium	3.09		0.200	mg/L	1	6/23/2009 07:44 AM
Manganese	ND		0.00500	mg/L	1	6/23/2009 07:44 AM
Molybdenum	0.0151		0.00500	mg/L	1	6/23/2009 07:44 AM
Nickel	ND		0.00500	mg/L	1	6/23/2009 07:44 AM
Potassium	2.69		0.200	mg/L	1	6/23/2009 07:44 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 07:44 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 07:44 AM
Sodium	141		0.200	mg/L	1	6/23/2009 07:44 AM
Zinc	ND		0.0100	mg/L	1	6/23/2009 07:44 AM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 03:38 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#3

Lab ID: 0906452-06

Collection Date: 6/16/2009 01:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 03:38 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Bis(2-ethylhexyl)phthalate	0.0022		0.00020	mg/L	1	6/30/2009 03:38 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 03:38 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#3

Lab ID: 0906452-06

Collection Date: 6/16/2009 01:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
Surr: 2,4,6-Tribromophenol	69.0		34-129	%REC	1	6/30/2009 03:38 AM
Surr: 2-Fluorobiphenyl	66.1		40-125	%REC	1	6/30/2009 03:38 AM
Surr: 2-Fluorophenol	55.8		20-120	%REC	1	6/30/2009 03:38 AM
Surr: 4-Terphenyl-d14	63.7		40-135	%REC	1	6/30/2009 03:38 AM
Surr: Nitrobenzene-d5	55.2		41-120	%REC	1	6/30/2009 03:38 AM
Surr: Phenol-d6	60.2		20-120	%REC	1	6/30/2009 03:38 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:38 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 06:37 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 06:37 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 06:37 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 06:37 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 06:37 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW#3
Collection Date: 6/16/2009 01:50 PM

Work Order: 0906452
Lab ID: 0906452-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 06:37 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 06:37 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 06:37 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 06:37 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 06:37 PM
Surr: 1,2-Dichloroethane-d4	114		70-125	%REC	1	6/24/2009 06:37 PM
Surr: 4-Bromofluorobenzene	109		72-125	%REC	1	6/24/2009 06:37 PM
Surr: Dibromofluoromethane	109		71-125	%REC	1	6/24/2009 06:37 PM
Surr: Toluene-d8	108		75-125	%REC	1	6/24/2009 06:37 PM
ANIONS			E300			Analyst: IGF
Chloride	29.1		0.500	mg/L	1	6/22/2009 02:03 PM
Fluoride	3.38		0.100	mg/L	1	6/22/2009 02:03 PM
Sulfate	64.6		2.50	mg/L	5	6/22/2009 09:48 PM
Nitrate/Nitrite (as N)	2.19		0.500	mg/L	5	6/19/2009 08:31 PM
Surr: Selenate (surr)	95.9		85-115	%REC	5	6/22/2009 09:48 PM
Surr: Selenate (surr)	95.3		85-115	%REC	1	6/22/2009 02:03 PM
Surr: Selenate (surr)	104		85-115	%REC	5	6/19/2009 08:31 PM
ALKALINITY			SM2320B			Analyst: TDW

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#3

Lab ID: 0906452-06

Collection Date: 6/16/2009 01:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO3)	223		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO3)	223		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	867		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B			Analyst: TDW
pH	7.54	H	0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	504		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#9

Lab ID: 0906452-07

Collection Date: 6/16/2009 02:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470		Prep Date: 6/24/2009	Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	6/24/2009 06:06 PM
DISSOLVED METALS			SW6020		Prep Date: 6/19/2009	Analyst: SKS
Aluminum	0.0468		0.0200	mg/L	1	6/23/2009 07:50 AM
Arsenic	0.0373		0.00500	mg/L	1	6/23/2009 07:50 AM
Barium	0.0911		0.00500	mg/L	1	6/23/2009 07:50 AM
Boron	0.122		0.0200	mg/L	1	6/23/2009 07:50 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 07:50 AM
Calcium	10.9		0.500	mg/L	1	6/23/2009 07:50 AM
Chromium	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Cobalt	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Iron	ND		0.200	mg/L	1	6/23/2009 07:50 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Magnesium	1.56		0.200	mg/L	1	6/23/2009 07:50 AM
Manganese	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Molybdenum	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Nickel	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Potassium	2.20		0.200	mg/L	1	6/23/2009 07:50 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 07:50 AM
Sodium	117		0.200	mg/L	1	6/23/2009 07:50 AM
Zinc	ND		0.0100	mg/L	1	6/23/2009 07:50 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1,1'-Biphenyl	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 03:59 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2-Methylnaphthalene	0.00030		0.00020	mg/L	1	6/30/2009 03:59 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#9

Lab ID: 0906452-07

Collection Date: 6/16/2009 02:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 03:59 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Bis(2-ethylhexyl)phthalate	0.0030		0.00020	mg/L	1	6/30/2009 03:59 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 03:59 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW#9
Collection Date: 6/16/2009 02:20 PM

Work Order: 0906452
Lab ID: 0906452-07
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Naphthalene	0.00057		0.00020	mg/L	1	6/30/2009 03:59 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
Surr: 2,4,6-Tribromophenol	63.7		34-129	%REC	1	6/30/2009 03:59 AM
Surr: 2-Fluorobiphenyl	66.7		40-125	%REC	1	6/30/2009 03:59 AM
Surr: 2-Fluorophenol	58.7		20-120	%REC	1	6/30/2009 03:59 AM
Surr: 4-Terphenyl-d14	63.1		40-135	%REC	1	6/30/2009 03:59 AM
Surr: Nitrobenzene-d5	57.0		41-120	%REC	1	6/30/2009 03:59 AM
Surr: Phenol-d6	62.5		20-120	%REC	1	6/30/2009 03:59 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 03:59 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 07:02 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 07:02 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 07:02 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 07:02 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 07:02 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#9

Lab ID: 0906452-07

Collection Date: 6/16/2009 02:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 07:02 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 07:02 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:02 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 07:02 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 07:02 PM
Surr: 1,2-Dichloroethane-d4	117		70-125	%REC	1	6/24/2009 07:02 PM
Surr: 4-Bromofluorobenzene	109		72-125	%REC	1	6/24/2009 07:02 PM
Surr: Dibromofluoromethane	111		71-125	%REC	1	6/24/2009 07:02 PM
Surr: Toluene-d8	104		75-125	%REC	1	6/24/2009 07:02 PM
ANIONS			E300			Analyst: IGF
Chloride	23.0		0.500	mg/L	1	6/22/2009 02:27 PM
Fluoride	1.69		0.100	mg/L	1	6/22/2009 02:27 PM
Sulfate	73.2		2.50	mg/L	5	6/22/2009 10:12 PM
Nitrate/Nitrite (as N)	0.748		0.500	mg/L	5	6/19/2009 10:04 PM
Surr: Selenate (surr)	95.9		85-115	%REC	5	6/22/2009 10:12 PM
Surr: Selenate (surr)	95.6		85-115	%REC	1	6/22/2009 02:27 PM
Surr: Selenate (surr)	103		85-115	%REC	5	6/19/2009 10:04 PM

ALKALINITY

SM2320B

Analyst: TDW

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#9

Lab ID: 0906452-07

Collection Date: 6/16/2009 02:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO ₃)	184		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO ₃)	184		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	715		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B			Analyst: TDW
pH	7.80	H	0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	380		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#10

Lab ID: 0906452-08

Collection Date: 6/16/2009 03:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470		Prep Date: 6/24/2009	Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	6/24/2009 06:12 PM
DISSOLVED METALS			SW6020		Prep Date: 6/19/2009	Analyst: SKS
Aluminum	ND		0.0200	mg/L	1	6/23/2009 07:56 AM
Arsenic	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Barium	0.113		0.00500	mg/L	1	6/23/2009 07:56 AM
Boron	0.138		0.0200	mg/L	1	6/23/2009 07:56 AM
Cadmium	ND		0.00200	mg/L	1	6/23/2009 07:56 AM
Calcium	59.7		0.500	mg/L	1	6/23/2009 07:56 AM
Chromium	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Cobalt	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Copper	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Iron	ND		0.200	mg/L	1	6/23/2009 07:56 AM
Lead	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Magnesium	8.86		0.200	mg/L	1	6/23/2009 07:56 AM
Manganese	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Molybdenum	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Nickel	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Potassium	1.93		0.200	mg/L	1	6/23/2009 07:56 AM
Selenium	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Silver	ND		0.00500	mg/L	1	6/23/2009 07:56 AM
Sodium	43.3		0.200	mg/L	1	6/23/2009 07:56 AM
Zinc	0.0127		0.0100	mg/L	1	6/23/2009 07:56 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1,1'-Biphenyl	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 04:21 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#10

Lab ID: 0906452-08

Collection Date: 6/16/2009 03:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 04:21 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Bis(2-ethylhexyl)phthalate	0.00044		0.00020	mg/L	1	6/30/2009 04:21 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 04:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#10

Lab ID: 0906452-08

Collection Date: 6/16/2009 03:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
Surr: 2,4,6-Tribromophenol	63.5		34-129	%REC	1	6/30/2009 04:21 AM
Surr: 2-Fluorobiphenyl	68.5		40-125	%REC	1	6/30/2009 04:21 AM
Surr: 2-Fluorophenol	59.2		20-120	%REC	1	6/30/2009 04:21 AM
Surr: 4-Terphenyl-d14	59.5		40-135	%REC	1	6/30/2009 04:21 AM
Surr: Nitrobenzene-d5	56.7		41-120	%REC	1	6/30/2009 04:21 AM
Surr: Phenol-d6	61.2		20-120	%REC	1	6/30/2009 04:21 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/18/2009	Analyst: ACN
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 04:21 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 07:28 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 07:28 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 07:28 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 07:28 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 07:28 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#10

Lab ID: 0906452-08

Collection Date: 6/16/2009 03:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 07:28 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 07:28 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:28 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 07:28 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 07:28 PM
Surr: 1,2-Dichloroethane-d4	111		70-125	%REC	1	6/24/2009 07:28 PM
Surr: 4-Bromofluorobenzene	103		72-125	%REC	1	6/24/2009 07:28 PM
Surr: Dibromofluoromethane	110		71-125	%REC	1	6/24/2009 07:28 PM
Surr: Toluene-d8	103		75-125	%REC	1	6/24/2009 07:28 PM
ANIONS			E300			Analyst: IGF
Chloride	32.2		0.500	mg/L	1	6/22/2009 02:50 PM
Fluoride	0.878		0.100	mg/L	1	6/22/2009 02:50 PM
Sulfate	76.5		2.50	mg/L	5	6/22/2009 10:35 PM
Nitrate/Nitrite (as N)	1.83		0.500	mg/L	5	6/19/2009 10:27 PM
Surr: Selenate (surr)	98.0		85-115	%REC	5	6/22/2009 10:35 PM
Surr: Selenate (surr)	95.6		85-115	%REC	1	6/22/2009 02:50 PM
Surr: Selenate (surr)	102		85-115	%REC	5	6/19/2009 10:27 PM
ALKALINITY			SM2320B			Analyst: TDW

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: MW#10

Lab ID: 0906452-08

Collection Date: 6/16/2009 03:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO3)	165		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/24/2009 03:00 PM
Alkalinity, Total (As CaCO3)	165		5.00	mg/L	1	6/24/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	676		1.00	µmhos/cm	1	6/17/2009 05:00 PM
PH			SM4500H+ B			Analyst: TDW
pH	7.15		0.100	pH units	1	6/17/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	378		10.0	mg/L	1	6/19/2009 11:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: Trip Blank 2515

Lab ID: 0906452-09

Collection Date: 6/16/2009 04:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 04:54 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 04:54 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 04:54 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 04:54 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 04:54 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 04:54 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 04:54 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: Trip Blank 2515

Lab ID: 0906452-09

Collection Date: 6/16/2009 04:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 04:54 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 04:54 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 04:54 PM
Surr: 1,2-Dichloroethane-d4	110		70-125	%REC	1	6/24/2009 04:54 PM
Surr: 4-Bromofluorobenzene	104		72-125	%REC	1	6/24/2009 04:54 PM
Surr: Dibromofluoromethane	107		71-125	%REC	1	6/24/2009 04:54 PM
Surr: Toluene-d8	105		75-125	%REC	1	6/24/2009 04:54 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: Trip Blank 2497

Lab ID: 0906452-10

Collection Date: 6/16/2009 04:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 05:20 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 05:20 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 05:20 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 05:20 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 05:20 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 05:20 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 05:20 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906452

Sample ID: Trip Blank 2497

Lab ID: 0906452-10

Collection Date: 6/16/2009 04:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 05:20 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 05:20 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 05:20 PM
Surr: 1,2-Dichloroethane-d4	109		70-125	%REC	1	6/24/2009 05:20 PM
Surr: 4-Bromofluorobenzene	104		72-125	%REC	1	6/24/2009 05:20 PM
Surr: Dibromofluoromethane	108		71-125	%REC	1	6/24/2009 05:20 PM
Surr: Toluene-d8	102		75-125	%REC	1	6/24/2009 05:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 28-Sep-09

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36701 Instrument ID ICP7500 Method: SW6020 (Dissolve)

MBLK Sample ID: MBLKW4-061909-36701 Units: mg/L Analysis Date: 6/23/2009 05:06 AM
 Client ID: Run ID: ICP7500_090622A SeqNo: 1701927 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.01649	0.010								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Boron	0.01767	0.020								J
Cadmium	ND	0.0020								
Calcium	0.06794	0.50								J
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	0.0009685	0.0050								J
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	0.001872	0.0050								J
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	0.001123	0.0050								J
Sodium	ND	0.20								
Zinc	0.008763	0.010								J

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36701 Instrument ID ICP7500 Method: SW6020 (Dissolve)

LCS Sample ID: MLCSW4-061909-36701 Units: mg/L Analysis Date: 6/23/2009 05:12 AM
 Client ID: Run ID: ICP7500_090622A SeqNo: 1701928 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1031	0.020	0.1	0	103	80-120	0			
Arsenic	0.05311	0.0050	0.05	0	106	80-120	0			
Barium	0.0499	0.0050	0.05	0	99.8	80-120	0			
Boron	0.4794	0.020	0.5	0	95.9	80-120	0			
Cadmium	0.04907	0.0020	0.05	0	98.1	80-120	0			
Calcium	4.89	0.50	5	0	97.8	80-120	0			
Chromium	0.04775	0.0050	0.05	0	95.5	80-120	0			
Cobalt	0.04938	0.0050	0.05	0	98.8	80-120	0			
Copper	0.04724	0.0050	0.05	0	94.5	80-120	0			
Iron	4.713	0.20	5	0	94.3	80-120	0			
Lead	0.04548	0.0050	0.05	0	91	80-120	0			
Magnesium	4.682	0.20	5	0	93.6	80-120	0			
Manganese	0.04879	0.0050	0.05	0	97.6	80-120	0			
Molybdenum	0.04838	0.0050	0.05	0	96.8	80-120	0			
Nickel	0.04873	0.0050	0.05	0	97.5	80-120	0			
Potassium	4.843	0.20	5	0	96.9	80-120	0			
Selenium	0.05017	0.0050	0.05	0	100	80-120	0			
Sodium	4.714	0.20	5	0	94.3	80-120	0			

LCS Sample ID: MLCSW4-061909-36701 Units: mg/L Analysis Date: 6/23/2009 04:49 PM
 Client ID: Run ID: ICP7500_090623A SeqNo: 1702697 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	0.05214	0.0050	0.05	0	104	80-120	0			
Zinc	0.06169	0.0050	0.05	0	123	80-120	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36701 Instrument ID ICP7500 Method: SW6020 (Dissolve)

MS Sample ID: 0906440-14BMS Units: mg/L Analysis Date: 6/23/2009 06:31 AM
 Client ID: Run ID: ICP7500_090622A SeqNo: 1701940 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1117	0.020	0.1	0	112	75-125	0			
Arsenic	0.0538	0.0050	0.05	0	108	75-125	0			
Barium	0.5978	0.0050	0.05	0.5336	128	75-125	0			SO
Boron	0.7304	0.020	0.5	0.2239	101	75-125	0			
Cadmium	0.05094	0.0020	0.05	0	102	75-125	0			
Calcium	66.01	0.50	5	58.31	154	75-125	0			SO
Chromium	0.04972	0.0050	0.05	0.001153	97.1	75-125	0			
Cobalt	0.05174	0.0050	0.05	0.001271	101	75-125	0			
Copper	0.04863	0.0050	0.05	0.001329	94.6	75-125	0			
Iron	4.876	0.20	5	0	97.5	75-125	0			
Lead	0.04986	0.0050	0.05	0	99.7	75-125	0			
Magnesium	27.6	0.20	5	22.21	108	75-125	0			O
Manganese	0.134	0.0050	0.05	0.08061	107	75-125	0			
Molybdenum	0.05436	0.0050	0.05	0.002976	103	75-125	0			
Nickel	0.07937	0.0050	0.05	0.02877	101	75-125	0			
Potassium	5.526	0.20	5	0.5315	99.9	75-125	0			
Selenium	0.05272	0.0050	0.05	0	105	75-125	0			
Sodium	145	0.20	5	138.8	124	75-125	0			O

MS Sample ID: 0906440-14BMS Units: mg/L Analysis Date: 6/23/2009 05:01 PM
 Client ID: Run ID: ICP7500_090623A SeqNo: 1702699 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	0.04909	0.0050	0.05	0	98.2	75-125	0			
Zinc	0.0714	0.010	0.05	0.003373	136	75-125	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36701 Instrument ID ICP7500 Method: SW6020 (Dissolve)

MSD Sample ID: 0906440-14BMSD Units: mg/L Analysis Date: 6/23/2009 06:37 AM
 Client ID: Run ID: ICP7500_090622A SeqNo: 1701941 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1053	0.020	0.1	0	105	75-125	0.1117	5.9	25	
Arsenic	0.05105	0.0050	0.05	0	102	75-125	0.0538	5.25	25	
Barium	0.5913	0.0050	0.05	0.5336	115	75-125	0.5978	1.09	25	O
Boron	0.7198	0.020	0.5	0.2239	99.2	75-125	0.7304	1.46	25	
Cadmium	0.04743	0.0020	0.05	0	94.9	75-125	0.05094	7.14	25	
Calcium	64.23	0.50	5	58.31	118	75-125	66.01	2.73	25	O
Chromium	0.04738	0.0050	0.05	0.001153	92.5	75-125	0.04972	4.82	25	
Cobalt	0.0494	0.0050	0.05	0.001271	96.3	75-125	0.05174	4.63	25	
Copper	0.04677	0.0050	0.05	0.001329	90.9	75-125	0.04863	3.9	25	
Iron	4.765	0.20	5	0	95.3	75-125	4.876	2.3	25	
Lead	0.04744	0.0050	0.05	0	94.9	75-125	0.04986	4.97	25	
Magnesium	27.27	0.20	5	22.21	101	75-125	27.6	1.2	25	O
Manganese	0.1286	0.0050	0.05	0.08061	96	75-125	0.134	4.11	25	
Molybdenum	0.05313	0.0050	0.05	0.002976	100	75-125	0.05436	2.29	25	
Nickel	0.07626	0.0050	0.05	0.02877	95	75-125	0.07937	4	25	
Potassium	5.37	0.20	5	0.5315	96.8	75-125	5.526	2.86	25	
Selenium	0.05072	0.0050	0.05	0	101	75-125	0.05272	3.87	25	
Sodium	143.3	0.20	5	138.8	90	75-125	145	1.18	25	O

MSD Sample ID: 0906440-14BMSD Units: mg/L Analysis Date: 6/23/2009 05:07 PM
 Client ID: Run ID: ICP7500_090623A SeqNo: 1702700 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	0.04854	0.0050	0.05	0	97.1	75-125	0.04909	1.13	25	
Zinc	0.05082	0.010	0.05	0.003373	94.9	75-125	0.0714	33.7	25	R

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36701 Instrument ID ICP7500 Method: SW6020 (Dissolve)

DUP Sample ID: 0906440-14BDUP Units: mg/L Analysis Date: 6/23/2009 06:25 AM

Client ID: Run ID: ICP7500_090622A SeqNo: 1701939 Prep Date: 6/19/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.020	0	0	0	0-0	0	0	25	
Arsenic	0.0009755	0.0050	0	0	0	0-0	0	0	25	J
Barium	0.5373	0.0050	0	0	0	0-0	0.5336	0.691	25	
Boron	0.2381	0.020	0	0	0	0-0	0.2239	6.15	25	
Cadmium	ND	0.0020	0	0	0	0-0	0	0	25	
Calcium	59.7	0.50	0	0	0	0-0	58.31	2.36	25	
Chromium	ND	0.0050	0	0	0	0-0	0.001153	0	25	
Cobalt	0.001338	0.0050	0	0	0	0-0	0.001271	0	25	J
Copper	0.001335	0.0050	0	0	0	0-0	0.001329	0	25	J
Iron	ND	0.20	0	0	0	0-0	0	0	25	
Lead	ND	0.0050	0	0	0	0-0	0	0	25	
Magnesium	22.51	0.20	0	0	0	0-0	22.21	1.34	25	
Manganese	0.08177	0.0050	0	0	0	0-0	0.08061	1.43	25	
Molybdenum	0.004534	0.0050	0	0	0	0-0	0.002976	0	25	J
Nickel	0.02862	0.0050	0	0	0	0-0	0.02877	0.523	25	
Potassium	0.5414	0.20	0	0	0	0-0	0.5315	1.85	25	
Selenium	ND	0.0050	0	0	0	0-0	0	0	25	
Silver	ND	0.0050	0	0	0	0-0	0	0	25	
Sodium	139	0.20	0	0	0	0-0	138.8	0.144	25	
Zinc	0.004958	0.010	0	0	0	0-0	0.003373	0	25	J

The following samples were analyzed in this batch:

0906452-01C	0906452-02C	0906452-03C
0906452-04C	0906452-05C	0906452-06C
0906452-07C	0906452-08C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36777 Instrument ID Mercury Method: SW7470

MBLK Sample ID: GBLKW3-062409-36777 Units: mg/L Analysis Date: 6/24/2009 05:23 PM
Client ID: Run ID: MERCURY_090624A SeqNo: 1704245 Prep Date: 6/24/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020								

LCS Sample ID: GLCSW3-062409-36777 Units: mg/L Analysis Date: 6/24/2009 05:25 PM
Client ID: Run ID: MERCURY_090624A SeqNo: 1704246 Prep Date: 6/24/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00556	0.00020	0.005	0	111	85-115	0			

MS Sample ID: 0906467-01EMS Units: mg/L Analysis Date: 6/24/2009 05:31 PM
Client ID: Run ID: MERCURY_090624A SeqNo: 1704249 Prep Date: 6/24/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00577	0.00020	0.005	-0.000059	117	85-115	0			S

MSD Sample ID: 0906467-01EMSD Units: mg/L Analysis Date: 6/24/2009 05:34 PM
Client ID: Run ID: MERCURY_090624A SeqNo: 1704250 Prep Date: 6/24/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00568	0.00020	0.005	-0.000059	115	85-115	0.00577	1.57	20	

DUP Sample ID: 0906467-01EDUP Units: mg/L Analysis Date: 6/24/2009 05:29 PM
Client ID: Run ID: MERCURY_090624A SeqNo: 1704248 Prep Date: 6/24/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000059	0	20	

The following samples were analyzed in this batch:

0906452-01D	0906452-02D	0906452-03D
0906452-04D	0906452-05D	0906452-06D
0906452-07D	0906452-08D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36663 Instrument ID SV-4 Method: SW8270

MBLK Sample ID: SBLKW2-090618-36663 Units: µg/L Analysis Date: 6/24/2009 02:20 AM

Client ID: Run ID: SV-4_090623C SeqNo: 1704338 Prep Date: 6/18/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3'-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								
Carbazole	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906452

QC BATCH REPORT

Project: Navajo Refinery Semi-Annual

Batch ID: 36663 Instrument ID SV-4 Method: SW8270

Chrysene ND 0.20

Di-n-butyl phthalate ND 0.20

Di-n-octyl phthalate ND 0.20

Dibenz(a,h)anthracene ND 0.20

Dibenzofuran ND 0.20

Diethyl phthalate ND 0.20

Dimethyl phthalate ND 0.20

Fluoranthene ND 0.20

Fluorene ND 0.20

Hexachlorobenzene ND 0.20

Hexachlorobutadiene ND 0.20

Hexachlorocyclopentadiene ND 0.20

Hexachloroethane ND 0.20

Indeno(1,2,3-cd)pyrene ND 0.20

Isophorone ND 0.20

N-Nitrosodi-n-propylamine ND 0.20

N-Nitrosodiphenylamine ND 0.20

Naphthalene ND 0.20

Nitrobenzene ND 0.20

Pentachlorophenol ND 0.20

Phenanthrene ND 0.20

Phenol ND 0.20

Pyrene ND 0.20

Surr: 2,4,6-Tribromophenol 3.019 0.20 5 0 60.4 34-129 0

Surr: 2-Fluorobiphenyl 3.745 0.20 5 0 74.9 40-125 0

Surr: 2-Fluorophenol 3.478 0.20 5 0 69.6 20-120 0

Surr: 4-Terphenyl-d14 3.524 0.20 5 0 70.5 40-135 0

Surr: Nitrobenzene-d5 3.678 0.20 5 0 73.6 41-120 0

Surr: Phenol-d6 3.207 0.20 5 0 64.1 20-120 0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36663 Instrument ID SV-4 Method: SW8270

LCS Sample ID: SLCSW2-090618-36663 Units: µg/L Analysis Date: 6/24/2009 02:37 AM
 Client ID: Run ID: SV-4_090623C SeqNo: 1704339 Prep Date: 6/18/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	3.947	0.20	5	0	78.9	45-125	0			
2,4,5-Trichlorophenol	3.981	0.20	5	0	79.6	46-120	0			
2,4,6-Trichlorophenol	4.015	0.20	5	0	80.3	42-120	0			
2,4-Dichlorophenol	3.774	0.20	5	0	75.5	49-120	0			
2,4-Dimethylphenol	3.004	0.20	5	0	60.1	35-120	0			
2,4-Dinitrophenol	2.516	1.0	5	0	50.3	15-120	0			
2,4-Dinitrotoluene	4.363	0.20	5	0	87.3	50-122	0			
2,6-Dinitrotoluene	4.288	0.20	5	0	85.8	50-120	0			
2-Chloronaphthalene	4.529	0.20	5	0	90.6	50-120	0			
2-Chlorophenol	3.889	0.20	5	0	77.8	40-120	0			
2-Methylnaphthalene	4.163	0.20	5	0	83.3	50-120	0			
2-Methylphenol	3.87	0.20	5	0	77.4	45-120	0			
2-Nitroaniline	4.628	0.20	5	0	92.6	28-139	0			
2-Nitrophenol	4.047	0.20	5	0	80.9	40-120	0			
3&4-Methylphenol	3.645	0.20	5	0	72.9	35-120	0			
3,3'-Dichlorobenzidine	3.291	0.20	5	0	65.8	15-120	0			
3-Nitroaniline	3.497	0.20	5	0	69.9	30-120	0			
4,6-Dinitro-2-methylphenol	3.257	0.20	5	0	65.1	25-121	0			
4-Bromophenyl phenyl ether	3.397	0.20	5	0	67.9	45-120	0			
4-Chloro-3-methylphenol	4.064	0.20	5	0	81.3	47-120	0			
4-Chloroaniline	2.847	0.20	5	0	56.9	20-120	0			
4-Chlorophenyl phenyl ether	4.611	0.20	5	0	92.2	50-120	0			
4-Nitroaniline	3.627	0.20	5	0	72.5	30-133	0			
4-Nitrophenol	3.857	1.0	5	0	77.1	30-130	0			
Acenaphthene	3.979	0.20	5	0	79.6	45-120	0			
Acenaphthylene	4.053	0.20	5	0	81.1	47-120	0			
Acetophenone	3.763	0.20	5	0	75.3	40-120	0			
Anthracene	4.301	0.20	5	0	86	45-120	0			
Atrazine	3.618	0.20	5	0	72.4	40-130	0			
Benz(a)anthracene	4.333	0.20	5	0	86.7	40-120	0			
Benzaldehyde	3.173	0.20	5	0	63.5	35-130	0			
Benzo(a)pyrene	4.117	0.20	5	0	82.3	45-120	0			
Benzo(b)fluoranthene	4.516	0.20	5	0	90.3	50-120	0			
Benzo(g,h,i)perylene	3.988	0.20	5	0	79.8	42-127	0			
Benzo(k)fluoranthene	4.072	0.20	5	0	81.4	45-127	0			
Bis(2-chloroethoxy)methane	3.947	0.20	5	0	78.9	45-120	0			
Bis(2-chloroethyl)ether	4.791	0.20	5	0	95.8	37-121	0			
Bis(2-chloroisopropyl)ether	4.082	0.20	5	0	81.6	40-120	0			
Bis(2-ethylhexyl)phthalate	4.428	0.20	5	0	88.6	40-139	0			
Butyl benzyl phthalate	4.426	0.20	5	0	88.5	47-123	0			
Caprolactam	4.639	0.20	5	0	92.8	35-134	0			
Carbazole	4.142	0.20	5	0	82.8	42-128	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **36663** Instrument ID **SV-4** Method: **SW8270**

Chrysene	4.356	0.20	5	0	87.1	43-120	0
Di-n-butyl phthalate	3.498	0.20	5	0	70	45-123	0
Di-n-octyl phthalate	4.606	0.20	5	0	92.1	45-129	0
Dibenz(a,h)anthracene	4.426	0.20	5	0	88.5	45-125	0
Dibenzofuran	4.22	0.20	5	0	84.4	50-120	0
Diethyl phthalate	4.11	0.20	5	0	82.2	41-120	0
Dimethyl phthalate	4.381	0.20	5	0	87.6	40-122	0
Fluoranthene	3.34	0.20	5	0	66.8	45-125	0
Fluorene	4.454	0.20	5	0	89.1	49-120	0
Hexachlorobenzene	3.545	0.20	5	0	70.9	48-120	0
Hexachlorobutadiene	4.01	0.20	5	0	80.2	40-120	0
Hexachlorocyclopentadiene	3.523	0.20	5	0	70.5	34-136	0
Hexachloroethane	4.037	0.20	5	0	80.7	40-120	0
Indeno(1,2,3-cd)pyrene	4.885	0.20	5	0	97.7	41-128	0
Isophorone	4.072	0.20	5	0	81.4	40-121	0
N-Nitrosodi-n-propylamine	3.439	0.20	5	0	68.8	40-120	0
N-Nitrosodiphenylamine	3.461	0.20	5	0	69.2	40-125	0
Naphthalene	4.162	0.20	5	0	83.2	45-120	0
Nitrobenzene	3.717	0.20	5	0	74.3	44-120	0
Pentachlorophenol	1.232	0.20	5	0	24.6	19-121	0
Phenanthrene	4.353	0.20	5	0	87.1	45-121	0
Phenol	4.197	0.20	5	0	83.9	20-124	0
Pyrene	4.724	0.20	5	0	94.5	40-130	0
Surr: 2,4,6-Tribromophenol	3.689	0.20	5	0	73.8	34-129	0
Surr: 2-Fluorobiphenyl	4.049	0.20	5	0	81	40-125	0
Surr: 2-Fluorophenol	3.007	0.20	5	0	60.1	20-120	0
Surr: 4-Terphenyl-d14	4.02	0.20	5	0	80.4	40-135	0
Surr: Nitrobenzene-d5	3.723	0.20	5	0	74.5	41-120	0
Surr: Phenol-d6	3.573	0.20	5	0	71.5	20-120	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36663 Instrument ID SV-4 Method: SW8270

LCSD Sample ID: SLCS DW2-090618-36663 Units: µg/L Analysis Date: 6/24/2009 03:05 AM
 Client ID: Run ID: SV-4_090623C SeqNo: 1704340 Prep Date: 6/18/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	3.942	0.20	5	0	78.8	45-125	3.947	0.127	20	
2,4,5-Trichlorophenol	4.131	0.20	5	0	82.6	46-120	3.981	3.7	20	
2,4,6-Trichlorophenol	4.029	0.20	5	0	80.6	42-120	4.015	0.34	20	
2,4-Dichlorophenol	4.129	0.20	5	0	82.6	49-120	3.774	8.98	20	
2,4-Dimethylphenol	3.103	0.20	5	0	62.1	35-120	3.004	3.25	20	
2,4-Dinitrophenol	2.155	1.0	5	0	43.1	15-120	2.516	15.5	20	
2,4-Dinitrotoluene	4.427	0.20	5	0	88.5	50-122	4.363	1.47	20	
2,6-Dinitrotoluene	4.3	0.20	5	0	86	50-120	4.288	0.294	20	
2-Chloronaphthalene	5.042	0.20	5	0	101	50-120	4.529	10.7	20	
2-Chlorophenol	4.194	0.20	5	0	83.9	40-120	3.889	7.55	20	
2-Methylnaphthalene	4.233	0.20	5	0	84.7	50-120	4.163	1.67	20	
2-Methylphenol	3.912	0.20	5	0	78.2	45-120	3.87	1.1	20	
2-Nitroaniline	4.73	0.20	5	0	94.6	28-139	4.628	2.17	20	
2-Nitrophenol	4.178	0.20	5	0	83.6	40-120	4.047	3.19	20	
3&4-Methylphenol	3.882	0.20	5	0	77.6	35-120	3.645	6.3	20	
3,3'-Dichlorobenzidine	3.428	0.20	5	0	68.6	15-120	3.291	4.09	20	
3-Nitroaniline	3.3	0.20	5	0	66	30-120	3.497	5.82	20	
4,6-Dinitro-2-methylphenol	3.026	0.20	5	0	60.5	25-121	3.257	7.36	20	
4-Bromophenyl phenyl ether	3.442	0.20	5	0	68.8	45-120	3.397	1.31	20	
4-Chloro-3-methylphenol	4.183	0.20	5	0	83.7	47-120	4.064	2.89	20	
4-Chloroaniline	2.755	0.20	5	0	55.1	20-120	2.847	3.3	20	
4-Chlorophenyl phenyl ether	4.596	0.20	5	0	91.9	50-120	4.611	0.33	20	
4-Nitroaniline	3.452	0.20	5	0	69	30-133	3.627	4.94	20	
4-Nitrophenol	3.841	1.0	5	0	76.8	30-130	3.857	0.43	20	
Acenaphthene	3.964	0.20	5	0	79.3	45-120	3.979	0.384	20	
Acenaphthylene	4.157	0.20	5	0	83.1	47-120	4.053	2.55	20	
Acetophenone	3.984	0.20	5	0	79.7	40-120	3.763	5.71	20	
Anthracene	4.414	0.20	5	0	88.3	45-120	4.301	2.58	20	
Atrazine	3.527	0.20	5	0	70.5	40-130	3.618	2.55	20	
Benz(a)anthracene	4.485	0.20	5	0	89.7	40-120	4.333	3.46	20	
Benzaldehyde	3.292	0.20	5	0	65.8	35-130	3.173	3.69	20	
Benzo(a)pyrene	4.534	0.20	5	0	90.7	45-120	4.117	9.64	20	
Benzo(b)fluoranthene	4.441	0.20	5	0	88.8	50-120	4.516	1.69	20	
Benzo(g,h,i)perylene	4.415	0.20	5	0	88.3	42-127	3.988	10.2	20	
Benzo(k)fluoranthene	4.104	0.20	5	0	82.1	45-127	4.072	0.767	20	
Bis(2-chloroethoxy)methane	4.142	0.20	5	0	82.8	45-120	3.947	4.83	20	
Bis(2-chloroethyl)ether	4.842	0.20	5	0	96.8	37-121	4.791	1.07	20	
Bis(2-chloroisopropyl)ether	4.353	0.20	5	0	87.1	40-120	4.082	6.43	20	
Bis(2-ethylhexyl)phthalate	4.646	0.20	5	0	92.9	40-139	4.428	4.8	20	
Butyl benzyl phthalate	4.531	0.20	5	0	90.6	47-123	4.426	2.33	20	
Caprolactam	4.494	0.20	5	0	89.9	35-134	4.639	3.18	20	
Carbazole	4.302	0.20	5	0	86	42-128	4.142	3.78	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36663	Instrument ID SV-4		Method: SW8270							
Chrysene	4.36	0.20	5	0	87.2	43-120	4.356	0.0936	20	
Di-n-butyl phthalate	3.73	0.20	5	0	74.6	45-123	3.498	6.43	20	
Di-n-octyl phthalate	4.835	0.20	5	0	96.7	45-129	4.606	4.84	20	
Dibenz(a,h)anthracene	4.335	0.20	5	0	86.7	45-125	4.426	2.08	20	
Dibenzofuran	4.261	0.20	5	0	85.2	50-120	4.22	0.959	20	
Diethyl phthalate	4.044	0.20	5	0	80.9	41-120	4.11	1.63	20	
Dimethyl phthalate	4.392	0.20	5	0	87.8	40-122	4.381	0.245	20	
Fluoranthene	3.638	0.20	5	0	72.8	45-125	3.34	8.54	20	
Fluorene	4.423	0.20	5	0	88.5	49-120	4.454	0.713	20	
Hexachlorobenzene	3.621	0.20	5	0	72.4	48-120	3.545	2.11	20	
Hexachlorobutadiene	4.259	0.20	5	0	85.2	40-120	4.01	6.02	20	
Hexachlorocyclopentadiene	3.648	0.20	5	0	73	34-136	3.523	3.49	20	
Hexachloroethane	4.116	0.20	5	0	82.3	40-120	4.037	1.93	20	
Indeno(1,2,3-cd)pyrene	5.302	0.20	5	0	106	41-128	4.885	8.19	20	
Isophorone	4.317	0.20	5	0	86.3	40-121	4.072	5.83	20	
N-Nitrosodi-n-propylamine	3.761	0.20	5	0	75.2	40-120	3.439	8.94	20	
N-Nitrosodiphenylamine	3.489	0.20	5	0	69.8	40-125	3.461	0.815	20	
Naphthalene	4.393	0.20	5	0	87.9	45-120	4.162	5.4	20	
Nitrobenzene	3.913	0.20	5	0	78.3	44-120	3.717	5.13	20	
Pentachlorophenol	1.295	0.20	5	0	25.9	19-121	1.232	4.97	20	
Phenanthrene	4.35	0.20	5	0	87	45-121	4.353	0.0514	20	
Phenol	4.448	0.20	5	0	89	20-124	4.197	5.83	20	
Pyrene	4.704	0.20	5	0	94.1	40-130	4.724	0.428	20	
Surr: 2,4,6-Tribromophenol	3.683	0.20	5	0	73.7	34-129	3.689	0.174	20	
Surr: 2-Fluorobiphenyl	4.12	0.20	5	0	82.4	40-125	4.049	1.74	20	
Surr: 2-Fluorophenol	3.186	0.20	5	0	63.7	20-120	3.007	5.79	20	
Surr: 4-Terphenyl-d14	3.89	0.20	5	0	77.8	40-135	4.02	3.3	20	
Surr: Nitrobenzene-d5	4.03	0.20	5	0	80.6	41-120	3.723	7.93	20	
Surr: Phenol-d6	3.787	0.20	5	0	75.7	20-120	3.573	5.82	20	

The following samples were analyzed in this batch:

0906452-01E	0906452-02E	0906452-03E
0906452-04E	0906452-05E	0906452-06E
0906452-07E	0906452-08E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78404 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-062309-R78404 Units: µg/L Analysis Date: 6/23/2009 11:09 AM

Client ID: Run ID: VOA1_090623A SeqNo: 1703520 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
Naphthalene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78404** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0						
Trichloroethene	ND	5.0						
Vinyl chloride	ND	2.0						
Xylenes, Total	ND	15						
Surr: 1,2-Dichloroethane-d4	46.47	5.0	50	0	92.9	70-125	0	
Surr: 4-Bromofluorobenzene	52.2	5.0	50	0	104	72-125	0	
Surr: Dibromofluoromethane	49.28	5.0	50	0	98.6	71-125	0	
Surr: Toluene-d8	52.97	5.0	50	0	106	75-125	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78404 Instrument ID VOA1 Method: SW8260

LCS Sample ID: VLCSW-062309-R78404 Units: µg/L Analysis Date: 6/23/2009 10:18 AM

Client ID: Run ID: VOA1_090623A SeqNo: 1703519 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.28	5.0	50	0	94.6	80-120	0			
1,1,2,2-Tetrachloroethane	46.85	5.0	50	0	93.7	72-120	0			
1,1,2-Trichloroethane	49.81	5.0	50	0	99.6	80-120	0			
1,1-Dichloroethane	51.35	5.0	50	0	103	76-120	0			
1,1-Dichloroethene	52.34	5.0	50	0	105	73-124	0			
1,2,4-Trimethylbenzene	54.3	5.0	50	0	109	68-123	0			
1,2-Dibromoethane	51.49	5.0	50	0	103	80-120	0			
1,2-Dichloroethane	52.46	5.0	50	0	105	78-120	0			
1,2-Dichloropropane	54.13	5.0	50	0	108	80-120	0			
1,3,5-Trimethylbenzene	52.25	5.0	50	0	105	80-120	0			
2-Butanone	101.3	10	100	0	101	58-132	0			
2-Hexanone	103.6	10	100	0	104	61-130	0			
4-Isopropyltoluene	50.09	5.0	50	0	100	79-120	0			
4-Methyl-2-pentanone	104.5	10	100	0	104	65-127	0			
Acetone	90.49	10	100	0	90.5	59-137	0			
Benzene	52.52	5.0	50	0	105	73-121	0			
Bromodichloromethane	50.55	5.0	50	0	101	80-120	0			
Bromoform	53.35	5.0	50	0	107	79-120	0			
Bromomethane	51.12	5.0	50	0	102	66-137	0			
Carbon disulfide	99.87	10	100	0	99.9	68-141	0			
Carbon tetrachloride	53.8	5.0	50	0	108	75-124	0			
Chlorobenzene	53.61	5.0	50	0	107	80-120	0			
Chloroethane	50.1	5.0	50	0	100	76-121	0			
Chloroform	48.97	5.0	50	0	97.9	80-120	0			
Chloromethane	49.92	5.0	50	0	99.8	67-123	0			
cis-1,2-Dichloroethene	51.59	5.0	50	0	103	78-120	0			
cis-1,3-Dichloropropene	55.93	5.0	50	0	112	80-120	0			
Dibromochloromethane	53.07	5.0	50	0	106	80-120	0			
Ethylbenzene	52.65	5.0	50	0	105	80-120	0			
Isopropylbenzene	50.26	5.0	50	0	101	80-120	0			
m,p-Xylene	109.6	10	100	0	110	78-121	0			
Methyl tert-butyl ether	51.32	5.0	50	0	103	73-121	0			
Methylene chloride	47.48	10	50	0	95	65-133	0			
n-Butylbenzene	49.98	5.0	50	0	100	77-120	0			
n-Propylbenzene	51.74	5.0	50	0	103	78-120	0			
Naphthalene	47.64	5.0	50	0	95.3	65-127	0			
o-Xylene	53.34	5.0	50	0	107	80-120	0			
sec-Butylbenzene	53.07	5.0	50	0	106	78-120	0			
Styrene	51.73	5.0	50	0	103	80-120	0			
Tetrachloroethene	51.06	5.0	50	0	102	79-120	0			
Toluene	51.73	5.0	50	0	103	80-120	0			
trans-1,2-Dichloroethene	48.45	5.0	50	0	96.9	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906452

QC BATCH REPORT

Project: Navajo Refinery Semi-Annual

Batch ID: R78404		Instrument ID VOA1		Method: SW8260			
trans-1,3-Dichloropropene	54.14	5.0	50	0	108	80-120	0
Trichloroethene	53.52	5.0	50	0	107	80-120	0
Vinyl chloride	47.42	2.0	50	0	94.8	70-127	0
Xylenes, Total	163	15	150	0	109	80-120	0
Surr: 1,2-Dichloroethane-d4	51.69	5.0	50	0	103	70-125	0
Surr: 4-Bromofluorobenzene	57.5	5.0	50	0	115	72-125	0
Surr: Dibromofluoromethane	47.43	5.0	50	0	94.9	71-125	0
Surr: Toluene-d8	54.67	5.0	50	0	109	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78404 Instrument ID VOA1 Method: SW8260

MS Sample ID: 0906487-01AMS Units: µg/L Analysis Date: 6/23/2009 02:06 PM

Client ID: Run ID: VOA1_090623A SeqNo: 1703523 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	479.7	50	500	0	95.9	80-120	0			
1,1,2,2-Tetrachloroethane	494.1	50	500	0	98.8	72-120	0			
1,1,2-Trichloroethane	462.4	50	500	0	92.5	80-120	0			
1,1-Dichloroethane	641.5	50	500	202.4	87.8	76-120	0			
1,1-Dichloroethene	1662	50	500	1341	64.1	73-124	0			S
1,2,4-Trimethylbenzene	456.7	50	500	0	91.3	68-123	0			
1,2-Dibromoethane	483.6	50	500	0	96.7	80-120	0			
1,2-Dichloroethane	522.9	50	500	5.53	103	78-120	0			
1,2-Dichloropropane	494.9	50	500	0	99	80-120	0			
1,3,5-Trimethylbenzene	450.8	50	500	0	90.2	80-120	0			
2-Butanone	1171	100	1000	0	117	58-132	0			
2-Hexanone	1039	100	1000	0	104	61-130	0			
4-Isopropyltoluene	429.1	50	500	0	85.8	79-120	0			
4-Methyl-2-pentanone	1036	100	1000	0	104	65-127	0			
Acetone	1079	100	1000	0	108	59-137	0			
Benzene	483.8	50	500	0	96.8	73-121	0			
Bromodichloromethane	488.5	50	500	0	97.7	80-120	0			
Bromoform	485.7	50	500	0	97.1	79-120	0			
Bromomethane	484.3	50	500	0	96.9	66-137	0			
Carbon disulfide	920.1	100	1000	0	92	68-141	0			
Carbon tetrachloride	438.1	50	500	0	87.6	75-124	0			
Chlorobenzene	449.4	50	500	0	89.9	80-120	0			
Chloroethane	421.1	50	500	0	84.2	76-121	0			
Chloroform	492.4	50	500	0	98.5	80-120	0			
Chloromethane	436.5	50	500	0	87.3	67-123	0			
cis-1,2-Dichloroethene	521.5	50	500	0	104	78-120	0			
cis-1,3-Dichloropropene	522.2	50	500	0	104	80-120	0			
Dibromochloromethane	505.1	50	500	0	101	80-120	0			
Ethylbenzene	446.9	50	500	0	89.4	80-120	0			
Isopropylbenzene	432.7	50	500	0	86.5	80-120	0			
m,p-Xylene	878.4	100	1000	0	87.8	78-121	0			
Methyl tert-butyl ether	555.5	50	500	0	111	73-121	0			
Methylene chloride	462.4	100	500	3.365	91.8	65-133	0			
n-Butylbenzene	420.9	50	500	0	84.2	77-120	0			
n-Propylbenzene	418	50	500	0	83.6	78-120	0			
Naphthalene	478.3	50	500	0	95.7	65-127	0			
o-Xylene	463.8	50	500	0	92.8	80-120	0			
sec-Butylbenzene	453.8	50	500	0	90.8	78-120	0			
Styrene	471.3	50	500	0	94.3	80-120	0			
Tetrachloroethene	418.8	50	500	5.649	82.6	79-120	0			
Toluene	446.2	50	500	0	89.2	80-120	0			
trans-1,2-Dichloroethene	443.4	50	500	0	88.7	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906452

QC BATCH REPORT

Project: Navajo Refinery Semi-Annual

Batch ID: R78404

Instrument ID VOA1

Method: SW8260

trans-1,3-Dichloropropene	530.9	50	500	0	106	80-120	0
Trichloroethene	501.4	50	500	3.157	99.7	80-120	0
Vinyl chloride	446.9	20	500	29.01	83.6	70-127	0
Xylenes, Total	1342	150	1500	0	89.5	80-120	0
Surr: 1,2-Dichloroethane-d4	498.4	50	500	0	99.7	70-125	0
Surr: 4-Bromofluorobenzene	480.2	50	500	0	96	72-125	0
Surr: Dibromofluoromethane	532.9	50	500	0	107	71-125	0
Surr: Toluene-d8	491	50	500	0	98.2	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78404 Instrument ID VOA1 Method: SW8260

MSD Sample ID: 0906487-01AMSD Units: µg/L Analysis Date: 6/23/2009 02:32 PM

Client ID: Run ID: VOA1_090623A SeqNo: 1703524 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	443.8	50	500	0	88.8	80-120	479.7	7.75	20	
1,1,2,2-Tetrachloroethane	483.3	50	500	0	96.7	72-120	494.1	2.21	20	
1,1,2-Trichloroethane	475.5	50	500	0	95.1	80-120	462.4	2.79	20	
1,1-Dichloroethane	665.1	50	500	202.4	92.6	76-120	641.5	3.62	20	
1,1-Dichloroethene	1556	50	500	1341	42.9	73-124	1662	6.6	20	S
1,2,4-Trimethylbenzene	474.3	50	500	0	94.9	68-123	456.7	3.78	20	
1,2-Dibromoethane	502.4	50	500	0	100	80-120	483.6	3.81	20	
1,2-Dichloroethane	526.5	50	500	5.53	104	78-120	522.9	0.67	20	
1,2-Dichloropropane	507.7	50	500	0	102	80-120	494.9	2.54	20	
1,3,5-Trimethylbenzene	454	50	500	0	90.8	80-120	450.8	0.687	20	
2-Butanone	1187	100	1000	0	119	58-132	1171	1.41	20	
2-Hexanone	1065	100	1000	0	106	61-130	1039	2.41	20	
4-Isopropyltoluene	442.7	50	500	0	88.5	79-120	429.1	3.13	20	
4-Methyl-2-pentanone	1132	100	1000	0	113	65-127	1036	8.85	20	
Acetone	1014	100	1000	0	101	59-137	1079	6.25	20	
Benzene	472.9	50	500	0	94.6	73-121	483.8	2.28	20	
Bromodichloromethane	495.7	50	500	0	99.1	80-120	488.5	1.46	20	
Bromofom	529.1	50	500	0	106	79-120	485.7	8.55	20	
Bromomethane	450	50	500	0	90	66-137	484.3	7.34	20	
Carbon disulfide	884.2	100	1000	0	88.4	68-141	920.1	3.98	20	
Carbon tetrachloride	443.3	50	500	0	88.7	75-124	438.1	1.17	20	
Chlorobenzene	460.7	50	500	0	92.1	80-120	449.4	2.49	20	
Chloroethane	391.3	50	500	0	78.3	76-121	421.1	7.34	20	
Chloroform	463.4	50	500	0	92.7	80-120	492.4	6.06	20	
Chloromethane	427.1	50	500	0	85.4	67-123	436.5	2.19	20	
cis-1,2-Dichloroethene	507.4	50	500	0	101	78-120	521.5	2.73	20	
cis-1,3-Dichloropropene	543.2	50	500	0	109	80-120	522.2	3.93	20	
Dibromochloromethane	515.3	50	500	0	103	80-120	505.1	2.01	20	
Ethylbenzene	442.9	50	500	0	88.6	80-120	446.9	0.908	20	
Isopropylbenzene	458.4	50	500	0	91.7	80-120	432.7	5.77	20	
m,p-Xylene	829.5	100	1000	0	83	78-121	878.4	5.72	20	
Methyl tert-butyl ether	559.8	50	500	0	112	73-121	555.5	0.764	20	
Methylene chloride	463.4	100	500	3.365	92	65-133	462.4	0.205	20	
n-Butylbenzene	419.7	50	500	0	83.9	77-120	420.9	0.282	20	
n-Propylbenzene	438.6	50	500	0	87.7	78-120	418	4.81	20	
Naphthalene	507	50	500	0	101	65-127	478.3	5.82	20	
o-Xylene	464.2	50	500	0	92.8	80-120	463.8	0.0875	20	
sec-Butylbenzene	441.3	50	500	0	88.3	78-120	453.8	2.78	20	
Styrene	489.4	50	500	0	97.9	80-120	471.3	3.77	20	
Tetrachloroethene	443.5	50	500	5.649	87.6	79-120	418.8	5.74	20	
Toluene	443.9	50	500	0	88.8	80-120	446.2	0.524	20	
trans-1,2-Dichloroethene	447.2	50	500	0	89.4	78-120	443.4	0.858	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906452

QC BATCH REPORT

Project: Navajo Refinery Semi-Annual

Batch ID: R78404		Instrument ID VOA1		Method: SW8260					
trans-1,3-Dichloropropene	538.5	50	500	0	108	80-120	530.9	1.41	20
Trichloroethene	501.8	50	500	3.157	99.7	80-120	501.4	0.0686	20
Vinyl chloride	426.5	20	500	29.01	79.5	70-127	446.9	4.68	20
Xylenes, Total	1294	150	1500	0	86.3	80-120	1342	3.68	20
Surr: 1,2-Dichloroethane-d4	502	50	500	0	100	70-125	498.4	0.712	20
Surr: 4-Bromofluorobenzene	531.4	50	500	0	106	72-125	480.2	10.1	20
Surr: Dibromofluoromethane	493.3	50	500	0	98.7	71-125	532.9	7.72	20
Surr: Toluene-d8	525	50	500	0	105	75-125	491	6.69	20

The following samples were analyzed in this batch:

0906452-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-062409-R78455 Units: µg/L Analysis Date: 6/24/2009 10:32 AM
 Client ID: Run ID: VOA1_090624B SeqNo: 1704552 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	0.9263	5.0								J
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
Naphthalene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906452

QC BATCH REPORT

Project: Navajo Refinery Semi-Annual

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	51	5.0	50	0	102	70-125	0
Surr: 4-Bromofluorobenzene	50.51	5.0	50	0	101	72-125	0
Surr: Dibromofluoromethane	52.86	5.0	50	0	106	71-125	0
Surr: Toluene-d8	47.37	5.0	50	0	94.7	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

LCS Sample ID: VLCSW-062409-R78455 Units: µg/L Analysis Date: 6/24/2009 09:41 AM

Client ID: Run ID: VOA1_090624B SeqNo: 1704551 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	53.79	5.0	50	0	108	80-120	0			
1,1,2,2-Tetrachloroethane	44.98	5.0	50	0	90	72-120	0			
1,1,2-Trichloroethane	45.42	5.0	50	0	90.8	80-120	0			
1,1-Dichloroethane	50.55	5.0	50	0	101	76-120	0			
1,1-Dichloroethene	49.01	5.0	50	0	98	73-124	0			
1,2,4-Trimethylbenzene	50.51	5.0	50	0	101	68-123	0			
1,2-Dibromoethane	44.29	5.0	50	0	88.6	80-120	0			
1,2-Dichloroethane	49.11	5.0	50	0	98.2	78-120	0			
1,2-Dichloropropane	48.3	5.0	50	0	96.6	80-120	0			
1,3,5-Trimethylbenzene	47.98	5.0	50	0	96	80-120	0			
2-Butanone	99.09	10	100	0	99.1	58-132	0			
2-Hexanone	90.94	10	100	0	90.9	61-130	0			
4-Isopropyltoluene	49.2	5.0	50	0	98.4	79-120	0			
4-Methyl-2-pentanone	96.85	10	100	0	96.8	65-127	0			
Acetone	86.75	10	100	0	86.7	59-137	0			
Benzene	48.16	5.0	50	0	96.3	73-121	0			
Bromodichloromethane	48.07	5.0	50	0	96.1	80-120	0			
Bromoform	48.75	5.0	50	0	97.5	79-120	0			
Bromomethane	49.49	5.0	50	0	99	66-137	0			
Carbon disulfide	99.86	10	100	0	99.9	68-141	0			
Carbon tetrachloride	50.62	5.0	50	0	101	75-124	0			
Chlorobenzene	48.1	5.0	50	0	96.2	80-120	0			
Chloroethane	43.53	5.0	50	0	87.1	76-121	0			
Chloroform	48.32	5.0	50	0	96.6	80-120	0			
Chloromethane	47.53	5.0	50	0	95.1	67-123	0			
cis-1,2-Dichloroethene	50.56	5.0	50	0	101	78-120	0			
cis-1,3-Dichloropropene	49.95	5.0	50	0	99.9	80-120	0			
Dibromochloromethane	50.32	5.0	50	0	101	80-120	0			
Ethylbenzene	47.96	5.0	50	0	95.9	80-120	0			
Isopropylbenzene	49.8	5.0	50	0	99.6	80-120	0			
m,p-Xylene	92.82	10	100	0	92.8	78-121	0			
Methyl tert-butyl ether	48.35	5.0	50	0	96.7	73-121	0			
Methylene chloride	48.3	10	50	0	96.6	65-133	0			
n-Butylbenzene	47.06	5.0	50	0	94.1	77-120	0			
n-Propylbenzene	47.6	5.0	50	0	95.2	78-120	0			
Naphthalene	46.79	5.0	50	0	93.6	65-127	0			
o-Xylene	47.66	5.0	50	0	95.3	80-120	0			
sec-Butylbenzene	49.83	5.0	50	0	99.7	78-120	0			
Styrene	48.16	5.0	50	0	96.3	80-120	0			
Tetrachloroethene	48.22	5.0	50	0	96.4	79-120	0			
Toluene	47.27	5.0	50	0	94.5	80-120	0			
trans-1,2-Dichloroethene	48.64	5.0	50	0	97.3	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906452

QC BATCH REPORT

Project: Navajo Refinery Semi-Annual

Batch ID: **R78455** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	52.18	5.0	50	0	104	80-120	0
Trichloroethene	53.01	5.0	50	0	106	80-120	0
Vinyl chloride	44.95	2.0	50	0	89.9	70-127	0
Xylenes, Total	140.5	15	150	0	93.7	80-120	0
Surr: 1,2-Dichloroethane-d4	49.32	5.0	50	0	98.6	70-125	0
Surr: 4-Bromofluorobenzene	53.42	5.0	50	0	107	72-125	0
Surr: Dibromofluoromethane	51.97	5.0	50	0	104	71-125	0
Surr: Toluene-d8	50.86	5.0	50	0	102	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

MS Sample ID: 0906452-02AMS Units: µg/L Analysis Date: 6/24/2009 01:55 PM

Client ID: MW#12 Run ID: VOA1_090624B SeqNo: 1704556 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.79	5.0	50	0	102	80-120	0			
1,1,2,2-Tetrachloroethane	53.12	5.0	50	0	106	72-120	0			
1,1,2-Trichloroethane	46.4	5.0	50	0	92.8	80-120	0			
1,1-Dichloroethane	52.92	5.0	50	0	106	76-120	0			
1,1-Dichloroethene	50.45	5.0	50	0	101	73-124	0			
1,2,4-Trimethylbenzene	45.76	5.0	50	0	91.5	68-123	0			
1,2-Dibromoethane	48.09	5.0	50	0	96.2	80-120	0			
1,2-Dichloroethane	49.59	5.0	50	0	99.2	78-120	0			
1,2-Dichloropropane	48.63	5.0	50	0	97.3	80-120	0			
1,3,5-Trimethylbenzene	51.45	5.0	50	0	103	80-120	0			
2-Butanone	116.3	10	100	0	116	58-132	0			
2-Hexanone	104.2	10	100	0	104	61-130	0			
4-Isopropyltoluene	44.81	5.0	50	0	89.6	79-120	0			
4-Methyl-2-pentanone	103.7	10	100	0	104	65-127	0			
Acetone	101.1	10	100	0	101	59-137	0			
Benzene	46.36	5.0	50	0	92.7	73-121	0			
Bromodichloromethane	50.39	5.0	50	0	101	80-120	0			
Bromoform	48.67	5.0	50	0	97.3	79-120	0			
Bromomethane	59.01	5.0	50	0	118	66-137	0			
Carbon disulfide	99.31	10	100	0	99.3	68-141	0			
Carbon tetrachloride	47.94	5.0	50	0	95.9	75-124	0			
Chlorobenzene	47.11	5.0	50	0	94.2	80-120	0			
Chloroethane	45.18	5.0	50	0	90.4	76-121	0			
Chloroform	51.79	5.0	50	0	104	80-120	0			
Chloromethane	42.55	5.0	50	0	85.1	67-123	0			
cis-1,2-Dichloroethene	52.17	5.0	50	0	104	78-120	0			
cis-1,3-Dichloropropene	47.43	5.0	50	0	94.9	80-120	0			
Dibromochloromethane	49.37	5.0	50	0	98.7	80-120	0			
Ethylbenzene	46.69	5.0	50	0	93.4	80-120	0			
Isopropylbenzene	45.98	5.0	50	0.6308	90.7	80-120	0			
m,p-Xylene	90.16	10	100	0	90.2	78-121	0			
Methyl tert-butyl ether	58.38	5.0	50	0	117	73-121	0			
Methylene chloride	49.61	10	50	0	99.2	65-133	0			
n-Butylbenzene	48.24	5.0	50	0	96.5	77-120	0			
n-Propylbenzene	48.14	5.0	50	0	96.3	78-120	0			
Naphthalene	49.66	5.0	50	0	99.3	65-127	0			
o-Xylene	47.94	5.0	50	0	95.9	80-120	0			
sec-Butylbenzene	50.01	5.0	50	0	100	78-120	0			
Styrene	46.05	5.0	50	0	92.1	80-120	0			
Tetrachloroethene	45	5.0	50	0	90	79-120	0			
Toluene	45.29	5.0	50	0	90.6	80-120	0			
trans-1,2-Dichloroethene	52.19	5.0	50	0	104	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906452

QC BATCH REPORT

Project: Navajo Refinery Semi-Annual

Batch ID: **R78455**

Instrument ID **VOA1**

Method: **SW8260**

trans-1,3-Dichloropropene	54.28	5.0	50	0	109	80-120	0
Trichloroethene	50.51	5.0	50	0	101	80-120	0
Vinyl chloride	47.05	2.0	50	0	94.1	70-127	0
Xylenes, Total	138.1	15	150	0	92.1	80-120	0
Surr: 1,2-Dichloroethane-d4	54.41	5.0	50	0	109	70-125	0
Surr: 4-Bromofluorobenzene	49.09	5.0	50	0	98.2	72-125	0
Surr: Dibromofluoromethane	53.22	5.0	50	0	106	71-125	0
Surr: Toluene-d8	48.87	5.0	50	0	97.7	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

MSD Sample ID: 0906452-02AMSD Units: µg/L Analysis Date: 6/24/2009 02:21 PM
 Client ID: MW#12 Run ID: VOA1_090624B SeqNo: 1704557 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.34	5.0	50	0	96.7	80-120	50.79	4.94	20	
1,1,2,2-Tetrachloroethane	51.09	5.0	50	0	102	72-120	53.12	3.89	20	
1,1,2-Trichloroethane	46.2	5.0	50	0	92.4	80-120	46.4	0.427	20	
1,1-Dichloroethane	49.05	5.0	50	0	98.1	76-120	52.92	7.58	20	
1,1-Dichloroethene	45.05	5.0	50	0	90.1	73-124	50.45	11.3	20	
1,2,4-Trimethylbenzene	49.83	5.0	50	0	99.7	68-123	45.76	8.5	20	
1,2-Dibromoethane	50.02	5.0	50	0	100	80-120	48.09	3.94	20	
1,2-Dichloroethane	46.78	5.0	50	0	93.6	78-120	49.59	5.84	20	
1,2-Dichloropropane	46.95	5.0	50	0	93.9	80-120	48.63	3.52	20	
1,3,5-Trimethylbenzene	49.63	5.0	50	0	99.3	80-120	51.45	3.59	20	
2-Butanone	116.2	10	100	0	116	58-132	116.3	0.0744	20	
2-Hexanone	104.7	10	100	0	105	61-130	104.2	0.433	20	
4-Isopropyltoluene	44.08	5.0	50	0	88.2	79-120	44.81	1.64	20	
4-Methyl-2-pentanone	109.2	10	100	0	109	65-127	103.7	5.23	20	
Acetone	97.66	10	100	0	97.7	59-137	101.1	3.44	20	
Benzene	44.38	5.0	50	0	88.8	73-121	46.36	4.36	20	
Bromodichloromethane	46.94	5.0	50	0	93.9	80-120	50.39	7.08	20	
Bromoform	48.71	5.0	50	0	97.4	79-120	48.67	0.0827	20	
Bromomethane	50.26	5.0	50	0	101	66-137	59.01	16	20	
Carbon disulfide	93.76	10	100	0	93.8	68-141	99.31	5.75	20	
Carbon tetrachloride	43.14	5.0	50	0	86.3	75-124	47.94	10.5	20	
Chlorobenzene	46.77	5.0	50	0	93.5	80-120	47.11	0.733	20	
Chloroethane	42.27	5.0	50	0	84.5	76-121	45.18	6.65	20	
Chloroform	49.11	5.0	50	0	98.2	80-120	51.79	5.32	20	
Chloromethane	45.41	5.0	50	0	90.8	67-123	42.55	6.51	20	
cis-1,2-Dichloroethene	51.31	5.0	50	0	103	78-120	52.17	1.67	20	
cis-1,3-Dichloropropene	48.71	5.0	50	0	97.4	80-120	47.43	2.67	20	
Dibromochloromethane	50.31	5.0	50	0	101	80-120	49.37	1.87	20	
Ethylbenzene	47.52	5.0	50	0	95	80-120	46.69	1.78	20	
Isopropylbenzene	45.46	5.0	50	0.6308	89.7	80-120	45.98	1.15	20	
m,p-Xylene	93.71	10	100	0	93.7	78-121	90.16	3.86	20	
Methyl tert-butyl ether	58.99	5.0	50	0	118	73-121	58.38	1.04	20	
Methylene chloride	47.42	10	50	0	94.8	65-133	49.61	4.51	20	
n-Butylbenzene	44.25	5.0	50	0	88.5	77-120	48.24	8.63	20	
n-Propylbenzene	49.59	5.0	50	0	99.2	78-120	48.14	2.96	20	
Naphthalene	51.68	5.0	50	0	103	65-127	49.66	4	20	
o-Xylene	49.28	5.0	50	0	98.6	80-120	47.94	2.75	20	
sec-Butylbenzene	48.14	5.0	50	0	96.3	78-120	50.01	3.81	20	
Styrene	48.2	5.0	50	0	96.4	80-120	46.05	4.56	20	
Tetrachloroethene	42.51	5.0	50	0	85	79-120	45	5.68	20	
Toluene	43.63	5.0	50	0	87.3	80-120	45.29	3.74	20	
trans-1,2-Dichloroethene	49.77	5.0	50	0	99.5	78-120	52.19	4.74	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78455** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	50.81	5.0	50	0	102	80-120	54.28	6.59	20
Trichloroethene	45.27	5.0	50	0	90.5	80-120	50.51	10.9	20
Vinyl chloride	42.07	2.0	50	0	84.1	70-127	47.05	11.2	20
Xylenes, Total	143	15	150	0	95.3	80-120	138.1	3.48	20
Surr: 1,2-Dichloroethane-d4	51.8	5.0	50	0	104	70-125	54.41	4.92	20
Surr: 4-Bromofluorobenzene	50.34	5.0	50	0	101	72-125	49.09	2.5	20
Surr: Dibromofluoromethane	52.44	5.0	50	0	105	71-125	53.22	1.47	20
Surr: Toluene-d8	49.47	5.0	50	0	98.9	75-125	48.87	1.23	20

The following samples were analyzed in this batch:

0906452-02A	0906452-03A	0906452-04A
0906452-05A	0906452-06A	0906452-07A
0906452-08A	0906452-09A	0906452-10A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78139 Instrument ID WetChem Method: SM4500H+ B

LCS Sample ID: WLCSW1-061709-R78139 Units: pH units Analysis Date: 6/17/2009 03:00 PM

Client ID: Run ID: WETCHEM_090617J SeqNo: 1697759 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.01	0.10	6	0	100	90-110	0			

DUP Sample ID: 0906452-01ddup Units: pH units Analysis Date: 6/17/2009 03:00 PM

Client ID: MW#5 Run ID: WETCHEM_090617J SeqNo: 1697771 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.83	0.10	0	0	0	0-0	7.82	0.128	20	H

The following samples were analyzed in this batch:

0906452-01D	0906452-02D	0906452-03D
0906452-04D	0906452-05D	0906452-06D
0906452-07D	0906452-08D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78140** Instrument ID **WetChem** Method: **M2510 B**

MBLK Sample ID: **WBLKW1-061709-R78140** Units: **µmhos/cm** Analysis Date: **6/17/2009 05:00 PM**
Client ID: Run ID: **WETCHEM_090617K** SeqNo: **1697775** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLC SW1-061709-R78140** Units: **µmhos/cm** Analysis Date: **6/17/2009 05:00 PM**
Client ID: Run ID: **WETCHEM_090617K** SeqNo: **1697776** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1440	1.0	1412	0	102	80-120	0			

DUP Sample ID: **0906452-01ddup** Units: **µmhos/cm** Analysis Date: **6/17/2009 05:00 PM**
Client ID: **MW#5** Run ID: **WETCHEM_090617K** SeqNo: **1697794** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1850	1.0	0	0	0		1820	1.63	20	

The following samples were analyzed in this batch:

0906452-01D	0906452-02D	0906452-03D
0906452-04D	0906452-05D	0906452-06D
0906452-07D	0906452-08D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78277 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R78277 Units: mg/L Analysis Date: 6/19/2009 11:00 AM

Client ID: Run ID: BALANCE1_090619C SeqNo: 1701166 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	ND	10								

LCS Sample ID: LCS-R78277 Units: mg/L Analysis Date: 6/19/2009 11:00 AM

Client ID: Run ID: BALANCE1_090619C SeqNo: 1701167 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	958	10	1000	0	95.8	85-115	0			

DUP Sample ID: 0906433-02ADUP Units: mg/L Analysis Date: 6/19/2009 11:00 AM

Client ID: Run ID: BALANCE1_090619C SeqNo: 1701154 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	1372	10	0	0	0	0-0	1336	2.66	20	

The following samples were analyzed in this batch:

0906452-01D	0906452-02D	0906452-03D
0906452-04D	0906452-05D	0906452-06D
0906452-07D	0906452-08D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78284 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW4+-061909-R78284 Units: mg/L Analysis Date: 6/19/2009 05:02 PM
 Client ID: Run ID: ICS3000_090619B SeqNo: 1701230 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	0.04	0.10								J
Surr: Selenate (surr)	5.084	0.10	5	0	102	85-115	0			

LCS Sample ID: WLCSW4+-061909-R78284 Units: mg/L Analysis Date: 6/19/2009 05:25 PM
 Client ID: Run ID: ICS3000_090619B SeqNo: 1701231 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.699	0.10	8	0	96.2	90-110	0			
Surr: Selenate (surr)	4.996	0.10	5	0	99.9	85-115	0			

MS Sample ID: 0906452-01BMS Units: mg/L Analysis Date: 6/19/2009 06:11 PM
 Client ID: MW#5 Run ID: ICS3000_090619B SeqNo: 1701235 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	23.12	0.50	20	3.314	99	80-120	0			
Surr: Selenate (surr)	25.62	0.50	25	0	102	85-115	0			

MS Sample ID: 0906467-05BMS Units: mg/L Analysis Date: 6/20/2009 12:46 AM
 Client ID: Run ID: ICS3000_090619B SeqNo: 1701269 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	3.672	0.10	4	0.045	90.7	80-120	0			
Surr: Selenate (surr)	4.994	0.10	5	0	99.9	85-115	0			

MSD Sample ID: 0906452-01BMSD Units: mg/L Analysis Date: 6/19/2009 06:35 PM
 Client ID: MW#5 Run ID: ICS3000_090619B SeqNo: 1701237 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	23.13	0.50	20	3.314	99.1	80-120	23.12	0.013	20	
Surr: Selenate (surr)	25.55	0.50	25	0	102	85-115	25.62	0.27	20	

MSD Sample ID: 0906467-05BMSD Units: mg/L Analysis Date: 6/20/2009 01:10 AM
 Client ID: Run ID: ICS3000_090619B SeqNo: 1701270 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	3.642	0.10	4	0.045	89.9	80-120	3.672	0.82	20	
Surr: Selenate (surr)	5.01	0.10	5	0	100	85-115	4.994	0.32	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78284** Instrument ID **ICS3000** Method: **E300**

The following samples were analyzed in this batch:

0906452-01B	0906452-02B	0906452-03B
0906452-04B	0906452-05B	0906452-06B
0906452-07B	0906452-08B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906452
 Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78313 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW1-062209-R78313 Units: mg/L Analysis Date: 6/22/2009 10:58 AM
 Client ID: Run ID: ICS3000_090622A SeqNo: 1701597 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	4.573	0.10	5	0	91.5	85-115	0			

LCS Sample ID: WLC SW1-062209-R78313 Units: mg/L Analysis Date: 6/22/2009 11:44 AM
 Client ID: Run ID: ICS3000_090622A SeqNo: 1701598 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.48	0.50	20	0	97.4	90-110	0			
Fluoride	3.968	0.10	4	0	99.2	90-110	0			
Sulfate	18.94	0.50	20	0	94.7	90-110	0			
Surr: Selenate (surr)	4.486	0.10	5	0	89.7	85-115	0			

MS Sample ID: 0906467-05DMS Units: mg/L Analysis Date: 6/22/2009 05:56 PM
 Client ID: Run ID: ICS3000_090622A SeqNo: 1701614 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.56	0.50	10	11.98	95.8	80-120	0			
Fluoride	2.001	0.10	2	-0.076	104	80-120	0			
Sulfate	9.337	0.50	10	0.127	92.1	80-120	0			
Surr: Selenate (surr)	4.717	0.10	5	0	94.3	85-115	0			

MS Sample ID: 0906452-01DMS Units: mg/L Analysis Date: 6/22/2009 07:06 PM
 Client ID: MW#5 Run ID: ICS3000_090622A SeqNo: 1701617 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	278.7	5.0	100	186.3	92.5	80-120	0			
Fluoride	21.47	1.0	20	0.523	105	80-120	0			
Sulfate	223.1	5.0	100	130.8	92.3	80-120	0			
Surr: Selenate (surr)	47.96	1.0	50	0	95.9	85-115	0			

MSD Sample ID: 0906467-05DMSD Units: mg/L Analysis Date: 6/22/2009 06:19 PM
 Client ID: Run ID: ICS3000_090622A SeqNo: 1701615 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.55	0.50	10	11.98	95.8	80-120	21.56	0.0232	20	
Fluoride	2.024	0.10	2	-0.076	105	80-120	2.001	1.14	20	
Sulfate	9.417	0.50	10	0.127	92.9	80-120	9.337	0.853	20	
Surr: Selenate (surr)	4.733	0.10	5	0	94.7	85-115	4.717	0.339	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78313** Instrument ID **ICS3000** Method: **E300**

MSD Sample ID: **0906452-01DMSD** Units: **mg/L** Analysis Date: **6/22/2009 07:29 PM**

Client ID: **MW#5** Run ID: **ICS3000_090622A** SeqNo: **1701618** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	278.7	5.0	100	186.3	92.5	80-120	278.7	0.00753	20	
Fluoride	21.48	1.0	20	0.523	105	80-120	21.47	0.0279	20	
Sulfate	223.4	5.0	100	130.8	92.6	80-120	223.1	0.137	20	
Surr: Selenate (surr)	48.03	1.0	50	0	96.1	85-115	47.96	0.144	20	

The following samples were analyzed in this batch:

0906452-01D	0906452-02D	0906452-03D
0906452-04D	0906452-05D	0906452-06D
0906452-07D	0906452-08D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906452
Project: Navajo Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78439** Instrument ID **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-062409-R78439** Units: **mg/L** Analysis Date: **6/24/2009 03:00 PM**
Client ID: Run ID: **WETCHEM_090624H** SeqNo: **1704280** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLC5W1-062409-R78439** Units: **mg/L** Analysis Date: **6/24/2009 03:00 PM**
Client ID: Run ID: **WETCHEM_090624H** SeqNo: **1704281** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	1043	5.0	1000	0	104	80-120	0			
Alkalinity, Total (As CaCO3)	1043	5.0	1000	0	104	80-120	0			

DUP Sample ID: **0906510-01cdup** Units: **mg/L** Analysis Date: **6/24/2009 03:00 PM**
Client ID: Run ID: **WETCHEM_090624H** SeqNo: **1704292** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	170	5.0	0	0	0	0-0	170	0	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	170	5.0	0	0	0	0-0	170	0	20	

The following samples were analyzed in this batch:

0906452-01D	0906452-02D	0906452-03D
0906452-04D	0906452-05D	0906452-06D
0906452-07D	0906452-08D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Navajo Refinery Semi-Annual
WorkOrder: 0906452

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
µmhos/cm	
mg/L	Milligrams per Liter
pH units	

10450 Stanciliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
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Page 7 of 7

ALS Project Manager:

ALS Work Order #: 000652

[illegible]

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

11. Any changes must be made in writing once samples and COC form have been submitted to ALS Laboratory Group.
12. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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[illegible]

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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Sample Receipt Checklist

Client Name: **NAVAJO REFINING**

Date/Time Received: **17-Jun-09 09:15**

Work Order: **0906452**

Received by: **RDH**

Checklist completed by Laymond N Gambia 17-Jun-09
eSignature Date

Reviewed by: Jay Lynn F Thibault 17-Jun-09
eSignature Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☒ No ☐ Not Present ☐

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☐ No ☒

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s): 2.7c, 3.2c, 3.6c 002

Cooler(s)/Kit(s): 2512, 2497, 2515

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☒ N/A ☐

pH adjusted by:

Login Notes: Logged in samples with the date of collection being 6/17/09, not 6/2/09 as indicated on the COC. Received only two sets of trip blanks, not three as indicated on the COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

MO. # 1906452

This portion can be removed for recipient's records.

06-02-09 FedEx Tracking Number 869790880538

Sender's Name: Boyer, Dave Phone: 575 397-0510

Company: Safety & Environmental Solutions

Address: 703 E Clinton

City: HOBBS State: NM ZIP: 88240

Our Internal Billing Reference

 **ALS Laboratory Group**
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CU

Date: 06-02-09
Name: SS32
Company: SE

CUSTODY SEAL 2512

Time: 1650
Name: SS32
Company: SE

Seal Broken By: RNH
Date: 6/17/09

This portion can be removed for recipient's records.

06-02-09 FedEx Tracking Number 869790880549

Sender's Name: Boyer, Dave Phone: 575 397-0510

Company: Safety & Environmental Solutions

Address: 703 E Clinton

City: HOBBS State: NM ZIP: 88240

Our Internal Billing Reference

CUSTODY SEAL

DATE: 06-02-09

SIGNATURE: SS32

 **QEC** 2497
Quality Environmental Control
800-255-3950 • (304) 744-7400

This portion can be removed for recipient's records.

06-02-09 FedEx Tracking Number 869790880550

Sender's Name: Boyer, Dave Phone: 575 397-0510

Company: Safety & Environmental Solutions

Address: 703 E Clinton

City: HOBBS State: NM ZIP: 88240

 **ALS Laboratory Group**
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Date: 06-02-09
Name: SS32
Company: SE

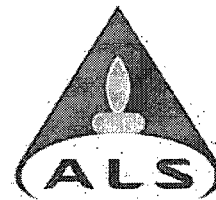
CUSTODY SEAL 2515

Time: 1650
Name: SS32
Company: SE

Seal Broken By: RNH
Date: 6/17/09

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

06-Jul-2009

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Dear Darrell,

ALS Laboratory Group received 12 samples on 20-Jun-2009 08:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 92.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

JayLynn F Thibault

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-08-TX

ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

Phone: (281) 530-5656 Fax: (281) 530-5887

www.alsglobal.com www.elabi.com

A Campbell Brothers Limited Company

Client: Navajo Refining Company
 Project: Navajo Lea Refinery Semi-Annual
 Work Order: 0906543

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0906543-01	MW-6	Water		6/18/2009 12:40	6/20/2009 08:45	☐
0906543-02	MW #8	Water		6/18/2009 14:30	6/20/2009 08:45	☐
0906543-03	MW #11	Water		6/18/2009 15:15	6/20/2009 08:45	☐
0906543-04	North Well	Water		6/18/2009 16:00	6/20/2009 08:45	☐
0906543-05	East Well	Water		6/18/2009 16:20	6/20/2009 08:45	☐
0906543-06	Duplicate #1	Water			6/20/2009 08:45	☐
0906543-07	MW #1	Water		6/19/2009 14:00	6/20/2009 08:45	☐
0906543-08	MW #7	Water		6/19/2009 15:15	6/20/2009 08:45	☐
0906543-09	RW-1	Water		6/19/2009 16:16	6/20/2009 08:45	☐
0906543-10	Trip Blank 2400	Water		6/19/2009 17:00	6/20/2009 08:45	☐
0906543-11	Trip Blank 1837	Water		6/19/2009 17:00	6/20/2009 08:45	☐
0906543-12	Trip Blank 2354	Water		6/19/2009 17:00	6/20/2009 08:45	☐

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW-6

Lab ID: 0906543-01

Collection Date: 6/18/2009 12:40 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470		Prep Date: 6/30/2009	Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	6/30/2009 04:02 PM
DISSOLVED METALS			SW6020		Prep Date: 6/29/2009	Analyst: ALR
Aluminum	ND		0.0100	mg/L	1	6/30/2009 05:03 AM
Arsenic	0.0201		0.00500	mg/L	1	6/30/2009 05:03 AM
Barium	0.186		0.00500	mg/L	1	6/30/2009 05:03 AM
Boron	0.175		0.0200	mg/L	1	6/30/2009 05:03 AM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 05:03 AM
Calcium	100		0.500	mg/L	1	6/30/2009 05:03 AM
Chromium	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Copper	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Iron	0.418		0.200	mg/L	1	6/30/2009 05:03 AM
Lead	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Magnesium	14.5		0.400	mg/L	2	7/1/2009 11:18 PM
Manganese	2.86		0.0100	mg/L	2	7/1/2009 11:18 PM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Nickel	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Potassium	2.76		0.400	mg/L	2	7/2/2009 01:17 PM
Selenium	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Silver	ND		0.00500	mg/L	1	6/30/2009 05:03 AM
Sodium	105		0.400	mg/L	2	7/1/2009 11:18 PM
Zinc	0.00996		0.00500	mg/L	1	6/30/2009 05:03 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/23/2009	Analyst: LG
1,1'-Biphenyl	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/1/2009 06:02 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2-Methylnaphthalene	0.0017		0.00020	mg/L	1	7/1/2009 06:02 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
3&4-Methylphenol	0.0015		0.00020	mg/L	1	7/1/2009 06:02 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW-6

Lab ID: 0906543-01

Collection Date: 6/18/2009 12:40 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/1/2009 06:02 PM
Acenaphthene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Acetophenone	0.021		0.00080	mg/L	4	7/2/2009 03:32 PM
Anthracene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Atrazine	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Bis(2-ethylhexyl)phthalate	0.0011		0.00020	mg/L	1	7/1/2009 06:02 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Caprolactam	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Carbazole	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Chrysene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Diethyl phthalate	0.0051		0.00020	mg/L	1	7/1/2009 06:02 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Fluorene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/1/2009 06:02 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Sample ID: MW-6

Collection Date: 6/18/2009 12:40 PM

Work Order: 0906543

Lab ID: 0906543-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Isophorone	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Naphthalene	0.0024		0.00020	mg/L	1	7/1/2009 06:02 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Phenanthrene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Phenol	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Pyrene	ND		0.00020	mg/L	1	7/1/2009 06:02 PM
Surr: 2,4,6-Tribromophenol	56.3		34-129	%REC	4	7/2/2009 03:32 PM
Surr: 2,4,6-Tribromophenol	44.1		34-129	%REC	1	7/1/2009 06:02 PM
Surr: 2-Fluorobiphenyl	51.8		40-125	%REC	1	7/1/2009 06:02 PM
Surr: 2-Fluorobiphenyl	70.4		40-125	%REC	4	7/2/2009 03:32 PM
Surr: 2-Fluorophenol	58.7		20-120	%REC	1	7/1/2009 06:02 PM
Surr: 2-Fluorophenol	52.0		20-120	%REC	4	7/2/2009 03:32 PM
Surr: 4-Terphenyl-d14	67.7		40-135	%REC	1	7/1/2009 06:02 PM
Surr: 4-Terphenyl-d14	66.9		40-135	%REC	4	7/2/2009 03:32 PM
Surr: Nitrobenzene-d5	81.6		41-120	%REC	4	7/2/2009 03:32 PM
Surr: Nitrobenzene-d5	51.6		41-120	%REC	1	7/1/2009 06:02 PM
Surr: Phenol-d6	49.9		20-120	%REC	1	7/1/2009 06:02 PM
Surr: Phenol-d6	53.8		20-120	%REC	4	7/2/2009 03:32 PM

LOW-LEVEL SEMIVOLATILES

SW8270

Prep Date: 6/23/2009

Analyst: LG

1-Methylnaphthalene	ND	0.00020	mg/L	1	7/1/2009 06:02 PM
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VOLATILES

SW8260

Analyst: PC

1,1,1-Trichloroethane	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,1,2-Trichloroethane	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,1-Dichloroethane	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,1-Dichloroethene	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,2,4-Trimethylbenzene	0.0058	0.0050	mg/L	1	6/26/2009 05:37 PM
1,2-Dibromoethane	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,2-Dichloroethane	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,2-Dichloropropane	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
1,3,5-Trimethylbenzene	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
2-Butanone	0.30	0.010	mg/L	1	6/26/2009 05:37 PM
2-Hexanone	ND	0.010	mg/L	1	6/26/2009 05:37 PM
4-Isopropyltoluene	ND	0.0050	mg/L	1	6/26/2009 05:37 PM
4-Methyl-2-pentanone	ND	0.010	mg/L	1	6/26/2009 05:37 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW-6
Collection Date: 6/18/2009 12:40 PM

Work Order: 0906543
Lab ID: 0906543-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Acetone	0.059		0.010	mg/L	1	6/26/2009 05:37 PM
Benzene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 05:37 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
m,p-Xylene	ND		0.010	mg/L	1	6/26/2009 05:37 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 05:37 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Naphthalene	0.0075		0.0050	mg/L	1	6/26/2009 05:37 PM
o-Xylene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 05:37 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 05:37 PM
Xylenes, Total	ND		0.015	mg/L	1	6/26/2009 05:37 PM
Surr: 1,2-Dichloroethane-d4	100		70-125	%REC	1	6/26/2009 05:37 PM
Surr: 4-Bromofluorobenzene	97.8		72-125	%REC	1	6/26/2009 05:37 PM
Surr: Dibromofluoromethane	106		71-125	%REC	1	6/26/2009 05:37 PM
Surr: Toluene-d8	98.3		75-125	%REC	1	6/26/2009 05:37 PM
ANIONS			E300			Analyst: IGF
Chloride	188		2.50	mg/L	5	6/24/2009 11:23 AM
Fluoride	0.113		0.100	mg/L	1	6/23/2009 06:38 PM
Sulfate	101		2.50	mg/L	5	6/24/2009 11:23 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW-6

Lab ID: 0906543-01

Collection Date: 6/18/2009 12:40 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Nitrate/Nitrite (as N)	0.678		0.100	mg/L	1	6/24/2009 07:20 PM
Surr: Selenate (surr)	96.9		85-115	%REC	1	6/24/2009 07:20 PM
Surr: Selenate (surr)	101		85-115	%REC	5	6/24/2009 11:23 AM
Surr: Selenate (surr)	96.9		85-115	%REC	1	6/23/2009 06:38 PM
ALKALINITY			SM2320B			Analyst: RPM
Alkalinity, Bicarbonate (As CaCO ₃)	246		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Total (As CaCO ₃)	246		5.00	mg/L	1	6/30/2009 12:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	1,370		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B			Analyst: TDW
pH	6.78	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	844		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW #8
Collection Date: 6/18/2009 02:30 PM

Work Order: 0906543
Lab ID: 0906543-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470		Prep Date: 6/30/2009	Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	6/30/2009 04:11 PM
DISSOLVED METALS			SW6020		Prep Date: 6/29/2009	Analyst: ALR
Aluminum	ND		0.0100	mg/L	1	6/30/2009 05:09 AM
Arsenic	0.00501		0.00500	mg/L	1	6/30/2009 05:09 AM
Barium	0.181		0.00500	mg/L	1	6/30/2009 05:09 AM
Boron	0.228		0.0200	mg/L	1	6/30/2009 05:09 AM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 05:09 AM
Calcium	107		0.500	mg/L	1	6/30/2009 05:09 AM
Chromium	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Copper	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Iron	ND		0.200	mg/L	1	6/30/2009 05:09 AM
Lead	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Magnesium	15.1		0.400	mg/L	2	7/1/2009 11:25 PM
Manganese	0.00919		0.00500	mg/L	1	6/30/2009 05:09 AM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Nickel	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Potassium	4.16		0.400	mg/L	2	7/2/2009 01:41 PM
Selenium	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Silver	ND		0.00500	mg/L	1	6/30/2009 05:09 AM
Sodium	136		0.400	mg/L	2	7/1/2009 11:25 PM
Zinc	0.0458		0.00500	mg/L	1	6/30/2009 05:09 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/23/2009	Analyst: LG
1,1'-Biphenyl	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/1/2009 06:23 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #8

Lab ID: 0906543-02

Collection Date: 6/18/2009 02:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/1/2009 06:23 PM
Acenaphthene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Acetophenone	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Anthracene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Atrazine	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Bis(2-ethylhexyl)phthalate	0.00076		0.00020	mg/L	1	7/1/2009 06:23 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Caprolactam	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Carbazole	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Chrysene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Diethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Fluorene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/1/2009 06:23 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #8

Lab ID: 0906543-02

Collection Date: 6/18/2009 02:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Isophorone	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Naphthalene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Phenanthrene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Phenol	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Pyrene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
Surr: 2,4,6-Tribromophenol	63.2		34-129	%REC	1	7/1/2009 06:23 PM
Surr: 2-Fluorobiphenyl	71.7		40-125	%REC	1	7/1/2009 06:23 PM
Surr: 2-Fluorophenol	56.1		20-120	%REC	1	7/1/2009 06:23 PM
Surr: 4-Terphenyl-d14	69.1		40-135	%REC	1	7/1/2009 06:23 PM
Surr: Nitrobenzene-d5	72.5		41-120	%REC	1	7/1/2009 06:23 PM
Surr: Phenol-d6	73.1		20-120	%REC	1	7/1/2009 06:23 PM

LOW-LEVEL SEMIVOLATILES

SW8270

Prep Date: 6/23/2009

Analyst: LG

1-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 06:23 PM
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VOLATILES

SW8260

Analyst: PC

1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
2-Butanone	ND		0.010	mg/L	1	6/26/2009 06:02 PM
2-Hexanone	ND		0.010	mg/L	1	6/26/2009 06:02 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/26/2009 06:02 PM
Acetone	ND		0.010	mg/L	1	6/26/2009 06:02 PM
Benzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 06:02 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #8

Lab ID: 0906543-02

Collection Date: 6/18/2009 02:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
m,p-Xylene	ND		0.010	mg/L	1	6/26/2009 06:02 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 06:02 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Naphthalene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
o-Xylene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:02 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 06:02 PM
Xylenes, Total	ND		0.015	mg/L	1	6/26/2009 06:02 PM
Surr: 1,2-Dichloroethane-d4	104		70-125	%REC	1	6/26/2009 06:02 PM
Surr: 4-Bromofluorobenzene	94.4		72-125	%REC	1	6/26/2009 06:02 PM
Surr: Dibromofluoromethane	105		71-125	%REC	1	6/26/2009 06:02 PM
Surr: Toluene-d8	96.2		75-125	%REC	1	6/26/2009 06:02 PM
ANIONS			E300			Analyst: IGF
Chloride	219		2.50	mg/L	5	6/24/2009 11:46 AM
Fluoride	0.730		0.100	mg/L	1	6/23/2009 07:01 PM
Sulfate	73.3		2.50	mg/L	5	6/24/2009 11:46 AM
Nitrate/Nitrite (as N)	3.46		0.100	mg/L	1	6/24/2009 07:43 PM
Surr: Selenate (surr)	97.7		85-115	%REC	5	6/24/2009 11:46 AM
Surr: Selenate (surr)	98.2		85-115	%REC	1	6/23/2009 07:01 PM
Surr: Selenate (surr)	99.5		85-115	%REC	1	6/24/2009 07:43 PM
ALKALINITY			SM2320B			Analyst: RPM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #8

Lab ID: 0906543-02

Collection Date: 6/18/2009 02:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO ₃)	284		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Total (As CaCO ₃)	284		5.00	mg/L	1	6/30/2009 12:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	1,470		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B			Analyst: TDW
pH	6.97	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	798		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #11

Lab ID: 0906543-03

Collection Date: 6/18/2009 03:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY						
Mercury	ND		SW7470 0.000200	mg/L	Prep Date: 6/30/2009 1	Analyst: JCJ 6/30/2009 04:13 PM
DISSOLVED METALS						
Aluminum	ND		SW6020 0.0100	mg/L	Prep Date: 6/29/2009 1	Analyst: ALR 6/30/2009 05:16 AM
Arsenic	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Barium	0.194		0.00500	mg/L	1	6/30/2009 05:16 AM
Boron	0.199		0.0200	mg/L	1	6/30/2009 05:16 AM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 05:16 AM
Calcium	176		0.500	mg/L	1	6/30/2009 05:16 AM
Chromium	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Copper	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Iron	0.571		0.200	mg/L	1	6/30/2009 05:16 AM
Lead	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Magnesium	27.0		0.400	mg/L	2	7/1/2009 11:31 PM
Manganese	0.387		0.00500	mg/L	1	6/30/2009 05:16 AM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Nickel	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Potassium	3.51		0.400	mg/L	2	7/2/2009 01:47 PM
Selenium	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Silver	ND		0.00500	mg/L	1	6/30/2009 05:16 AM
Sodium	81.4		0.400	mg/L	2	7/1/2009 11:31 PM
Zinc	0.0212		0.00500	mg/L	1	6/30/2009 05:16 AM
LOW-LEVEL SEMIVOLATILES						
1,1'-Biphenyl	ND		SW8270 0.00020	mg/L	Prep Date: 6/23/2009 1	Analyst: LG 7/1/2009 06:44 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/1/2009 06:44 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #11

Lab ID: 0906543-03

Collection Date: 6/18/2009 03:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/1/2009 06:44 PM
Acenaphthene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Acetophenone	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Anthracene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Atrazine	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Bis(2-ethylhexyl)phthalate	0.00045		0.00020	mg/L	1	7/1/2009 06:44 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Caprolactam	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Carbazole	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Chrysene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Diethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Fluoranthene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Fluorene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/1/2009 06:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW #11
Collection Date: 6/18/2009 03:15 PM

Work Order: 0906543
Lab ID: 0906543-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Isophorone	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Naphthalene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Phenanthrene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Phenol	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Pyrene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
Surr: 2,4,6-Tribromophenol	55.9		34-129	%REC	1	7/1/2009 06:44 PM
Surr: 2-Fluorobiphenyl	70.8		40-125	%REC	1	7/1/2009 06:44 PM
Surr: 2-Fluorophenol	51.5		20-120	%REC	1	7/1/2009 06:44 PM
Surr: 4-Terphenyl-d14	64.1		40-135	%REC	1	7/1/2009 06:44 PM
Surr: Nitrobenzene-d5	69.4		41-120	%REC	1	7/1/2009 06:44 PM
Surr: Phenol-d6	63.1		20-120	%REC	1	7/1/2009 06:44 PM

LOW-LEVEL SEMIVOLATILES

SW8270

Prep Date: 6/23/2009

Analyst: LG

1-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 06:44 PM
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VOLATILES

SW8260

Analyst: PC

1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
2-Butanone	ND		0.010	mg/L	1	6/26/2009 06:28 PM
2-Hexanone	ND		0.010	mg/L	1	6/26/2009 06:28 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/26/2009 06:28 PM
Acetone	ND		0.010	mg/L	1	6/26/2009 06:28 PM
Benzene	0.10		0.0050	mg/L	1	6/26/2009 06:28 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 06:28 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW #11
Collection Date: 6/18/2009 03:15 PM

Work Order: 0906543
Lab ID: 0906543-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
m,p-Xylene	ND		0.010	mg/L	1	6/26/2009 06:28 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 06:28 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Naphthalene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
o-Xylene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:28 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 06:28 PM
Xylenes, Total	ND		0.015	mg/L	1	6/26/2009 06:28 PM
Surr: 1,2-Dichloroethane-d4	111		70-125	%REC	1	6/26/2009 06:28 PM
Surr: 4-Bromofluorobenzene	97.9		72-125	%REC	1	6/26/2009 06:28 PM
Surr: Dibromofluoromethane	107		71-125	%REC	1	6/26/2009 06:28 PM
Surr: Toluene-d8	93.1		75-125	%REC	1	6/26/2009 06:28 PM
ANIONS			E300		Analyst: IGF	
Chloride	204		2.50	mg/L	5	6/24/2009 12:09 PM
Fluoride	0.579		0.100	mg/L	1	6/23/2009 08:34 PM
Sulfate	43.1		0.500	mg/L	1	6/23/2009 08:34 PM
Nitrate/Nitrite (as N)	1.23		0.100	mg/L	1	6/24/2009 08:06 PM
Surr: Selenate (surr)	97.9		85-115	%REC	5	6/24/2009 12:09 PM
Surr: Selenate (surr)	95.4		85-115	%REC	1	6/23/2009 08:34 PM
Surr: Selenate (surr)	101		85-115	%REC	1	6/24/2009 08:06 PM

ALKALINITY

SM2320B

Analyst: RPM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #11

Lab ID: 0906543-03

Collection Date: 6/18/2009 03:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO3)	410		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Total (As CaCO3)	410		5.00	mg/L	1	6/30/2009 12:00 PM
SPECIFIC CONDUCTIVITY			M2510 B		Analyst: TDW	
Specific Conductivity	1,470		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B		Analyst: TDW	
pH	6.95	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C		Analyst: TDW	
Total Dissolved Solids (Residue, Filterable)	994		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: North Well

Lab ID: 0906543-04

Collection Date: 6/18/2009 04:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470		Prep Date: 6/30/2009	Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	6/30/2009 04:15 PM
DISSOLVED METALS			SW6020		Prep Date: 6/29/2009	Analyst: ALR
Aluminum	ND		0.0100	mg/L	1	6/30/2009 05:22 AM
Arsenic	0.00536		0.00500	mg/L	1	6/30/2009 05:22 AM
Barium	0.0997		0.00500	mg/L	1	6/30/2009 05:22 AM
Boron	0.151		0.0200	mg/L	1	6/30/2009 05:22 AM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 05:22 AM
Calcium	94.7		0.500	mg/L	1	6/30/2009 05:22 AM
Chromium	0.0104		0.00500	mg/L	1	6/30/2009 05:22 AM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Copper	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Iron	ND		0.200	mg/L	1	6/30/2009 05:22 AM
Lead	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Magnesium	11.9		0.400	mg/L	2	7/1/2009 11:38 PM
Manganese	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Nickel	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Potassium	2.04		0.400	mg/L	2	7/2/2009 01:53 PM
Selenium	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Silver	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
Sodium	64.4		0.400	mg/L	2	7/1/2009 11:38 PM
Zinc	ND		0.00500	mg/L	1	6/30/2009 05:22 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/23/2009	Analyst: LG
1,1'-Biphenyl	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/1/2009 07:06 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: North Well

Lab ID: 0906543-04

Collection Date: 6/18/2009 04:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/1/2009 07:06 PM
Acenaphthene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Acetophenone	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Anthracene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Atrazine	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Bis(2-ethylhexyl)phthalate	0.0011		0.00020	mg/L	1	7/1/2009 07:06 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Caprolactam	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Carbazole	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Chrysene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Diethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Fluoranthene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Fluorene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/1/2009 07:06 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: North Well

Lab ID: 0906543-04

Collection Date: 6/18/2009 04:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Isophorone	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Naphthalene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Phenanthrene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Phenol	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Pyrene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
Surr: 2,4,6-Tribromophenol	59.7		34-129	%REC	1	7/1/2009 07:06 PM
Surr: 2-Fluorobiphenyl	68.5		40-125	%REC	1	7/1/2009 07:06 PM
Surr: 2-Fluorophenol	49.0		20-120	%REC	1	7/1/2009 07:06 PM
Surr: 4-Terphenyl-d14	62.4		40-135	%REC	1	7/1/2009 07:06 PM
Surr: Nitrobenzene-d5	60.7		41-120	%REC	1	7/1/2009 07:06 PM
Surr: Phenol-d6	59.0		20-120	%REC	1	7/1/2009 07:06 PM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/23/2009	Analyst: LG
1-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 07:06 PM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
2-Butanone	ND		0.010	mg/L	1	6/26/2009 06:53 PM
2-Hexanone	ND		0.010	mg/L	1	6/26/2009 06:53 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/26/2009 06:53 PM
Acetone	ND		0.010	mg/L	1	6/26/2009 06:53 PM
Benzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 06:53 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: North Well
Collection Date: 6/18/2009 04:00 PM

Work Order: 0906543
Lab ID: 0906543-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
m,p-Xylene	ND		0.010	mg/L	1	6/26/2009 06:53 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 06:53 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Naphthalene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
o-Xylene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 06:53 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 06:53 PM
Xylenes, Total	ND		0.015	mg/L	1	6/26/2009 06:53 PM
Surr: 1,2-Dichloroethane-d4	104		70-125	%REC	1	6/26/2009 06:53 PM
Surr: 4-Bromofluorobenzene	98.7		72-125	%REC	1	6/26/2009 06:53 PM
Surr: Dibromofluoromethane	105		71-125	%REC	1	6/26/2009 06:53 PM
Surr: Toluene-d8	96.8		75-125	%REC	1	6/26/2009 06:53 PM
ANIONS			E300		Analyst: IGF	
Chloride	140		2.50	mg/L	5	6/24/2009 12:32 PM
Fluoride	0.933		0.100	mg/L	1	6/23/2009 08:57 PM
Sulfate	80.6		2.50	mg/L	5	6/24/2009 12:32 PM
Nitrate/Nitrite (as N)	2.72		0.100	mg/L	1	6/24/2009 08:29 PM
Surr: Selenate (surr)	98.8		85-115	%REC	5	6/24/2009 12:32 PM
Surr: Selenate (surr)	88.1		85-115	%REC	1	6/23/2009 08:57 PM
Surr: Selenate (surr)	93.6		85-115	%REC	1	6/24/2009 08:29 PM
ALKALINITY			SM2320B		Analyst: RPM	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: North Well

Lab ID: 0906543-04

Collection Date: 6/18/2009 04:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO3)	178		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Total (As CaCO3)	178		5.00	mg/L	1	6/30/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B		Analyst: TDW	
Specific Conductivity	1,020		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B		Analyst: TDW	
pH	7.44	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C		Analyst: TDW	
Total Dissolved Solids (Residue, Filterable)	664		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Sample ID: East Well

Collection Date: 6/18/2009 04:20 PM

Work Order: 0906543

Lab ID: 0906543-05

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	6/30/2009 04:18 PM
DISSOLVED METALS			SW6020			
Aluminum	0.0131		0.0100	mg/L	1	6/30/2009 05:29 AM
Arsenic	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Barium	0.0820		0.00500	mg/L	1	6/30/2009 05:29 AM
Boron	0.143		0.0200	mg/L	1	6/30/2009 05:29 AM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 05:29 AM
Calcium	83.8		0.500	mg/L	1	6/30/2009 05:29 AM
Chromium	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Copper	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Iron	ND		0.200	mg/L	1	6/30/2009 05:29 AM
Lead	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Magnesium	12.0		0.400	mg/L	2	7/1/2009 12:36 AM
Manganese	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Nickel	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Potassium	1.47		0.400	mg/L	2	7/1/2009 12:36 AM
Selenium	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Silver	ND		0.00500	mg/L	1	6/30/2009 05:29 AM
Sodium	40.4		0.400	mg/L	2	7/1/2009 12:36 AM
Zinc	0.0172		0.00500	mg/L	1	6/30/2009 05:29 AM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/2/2009 03:11 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: East Well

Lab ID: 0906543-05

Collection Date: 6/18/2009 04:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/2/2009 03:11 PM
Acenaphthene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Acetophenone	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Anthracene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Atrazine	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Bis(2-ethylhexyl)phthalate	0.00029		0.00020	mg/L	1	7/2/2009 03:11 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Caprolactam	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Carbazole	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Chrysene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Diethyl phthalate	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Fluoranthene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Fluorene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/2/2009 03:11 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: East Well

Lab ID: 0906543-05

Collection Date: 6/18/2009 04:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Isophorone	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Naphthalene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Phenanthrene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Phenol	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Pyrene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
Surr: 2,4,6-Tribromophenol	42.0		34-129	%REC	1	7/2/2009 03:11 PM
Surr: 2-Fluorobiphenyl	66.9		40-125	%REC	1	7/2/2009 03:11 PM
Surr: 2-Fluorophenol	56.8		20-120	%REC	1	7/2/2009 03:11 PM
Surr: 4-Terphenyl-d14	64.9		40-135	%REC	1	7/2/2009 03:11 PM
Surr: Nitrobenzene-d5	66.1		41-120	%REC	1	7/2/2009 03:11 PM
Surr: Phenol-d6	58.5		20-120	%REC	1	7/2/2009 03:11 PM

LOW-LEVEL SEMIVOLATILES

SW8270

Prep Date: 6/23/2009

Analyst: LG

1-Methylnaphthalene	ND		0.00020	mg/L	1	7/2/2009 03:11 PM
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VOLATILES

SW8260

Analyst: PC

1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
2-Butanone	ND		0.010	mg/L	1	6/26/2009 07:19 PM
2-Hexanone	ND		0.010	mg/L	1	6/26/2009 07:19 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/26/2009 07:19 PM
Acetone	ND		0.010	mg/L	1	6/26/2009 07:19 PM
Benzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 07:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: East Well
Collection Date: 6/18/2009 04:20 PM

Work Order: 0906543
Lab ID: 0906543-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
m,p-Xylene	ND		0.010	mg/L	1	6/26/2009 07:19 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 07:19 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Naphthalene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
o-Xylene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:19 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 07:19 PM
Xylenes, Total	ND		0.015	mg/L	1	6/26/2009 07:19 PM
Surr: 1,2-Dichloroethane-d4	110		70-125	%REC	1	6/26/2009 07:19 PM
Surr: 4-Bromofluorobenzene	91.4		72-125	%REC	1	6/26/2009 07:19 PM
Surr: Dibromofluoromethane	105		71-125	%REC	1	6/26/2009 07:19 PM
Surr: Toluene-d8	91.8		75-125	%REC	1	6/26/2009 07:19 PM
ANIONS			E300			Analyst: IGF
Chloride	107		2.50	mg/L	5	6/24/2009 12:56 PM
Fluoride	0.980		0.100	mg/L	1	6/23/2009 09:20 PM
Sulfate	84.0		2.50	mg/L	5	6/24/2009 12:56 PM
Nitrate/Nitrite (as N)	2.59		0.100	mg/L	1	6/24/2009 08:52 PM
Surr: Selenate (surr)	103		85-115	%REC	5	6/24/2009 12:56 PM
Surr: Selenate (surr)	97.7		85-115	%REC	1	6/23/2009 09:20 PM
Surr: Selenate (surr)	99.8		85-115	%REC	1	6/24/2009 08:52 PM
ALKALINITY			SM2320B			Analyst: RPM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: East Well

Lab ID: 0906543-05

Collection Date: 6/18/2009 04:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO3)	167		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Total (As CaCO3)	167		5.00	mg/L	1	6/30/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	881		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B			Analyst: TDW
pH	7.21	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	554		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: Duplicate #1
Collection Date:

Work Order: 0906543
Lab ID: 0906543-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	6/30/2009 04:24 PM
DISSOLVED METALS			SW6020			
Aluminum	ND		0.0100	mg/L	1	6/30/2009 05:35 AM
Arsenic	0.0221		0.00500	mg/L	1	6/30/2009 05:35 AM
Barium	0.200		0.00500	mg/L	1	6/30/2009 05:35 AM
Boron	0.192		0.0200	mg/L	1	6/30/2009 05:35 AM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 05:35 AM
Calcium	105		0.500	mg/L	1	6/30/2009 05:35 AM
Chromium	ND		0.00500	mg/L	1	6/30/2009 05:35 AM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 05:35 AM
Copper	ND		0.00500	mg/L	1	6/30/2009 05:35 AM
Iron	0.219		0.200	mg/L	1	6/30/2009 05:35 AM
Lead	ND		0.00500	mg/L	1	6/30/2009 05:35 AM
Magnesium	15.0		0.400	mg/L	2	7/1/2009 12:43 AM
Manganese	2.76		0.0100	mg/L	2	7/1/2009 12:43 AM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 05:35 AM
Nickel	0.00653		0.00500	mg/L	1	6/30/2009 05:35 AM
Potassium	2.44		0.400	mg/L	2	7/1/2009 12:43 AM
Selenium	ND		0.00500	mg/L	1	6/30/2009 05:35 AM
Silver	ND		0.00500	mg/L	1	6/30/2009 05:35 AM
Sodium	108		0.400	mg/L	2	7/1/2009 12:43 AM
Zinc	0.0141		0.00500	mg/L	1	6/30/2009 05:35 AM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	0.00062		0.00020	mg/L	1	7/1/2009 07:48 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/1/2009 07:48 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2-Methylnaphthalene	0.0016		0.00020	mg/L	1	7/1/2009 07:48 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: Duplicate #1
Collection Date:

Work Order: 0906543
Lab ID: 0906543-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/1/2009 07:48 PM
Acenaphthene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Acetophenone	0.021		0.00080	mg/L	4	7/2/2009 03:53 PM
Anthracene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Atrazine	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Bis(2-ethylhexyl)phthalate	0.00092		0.00020	mg/L	1	7/1/2009 07:48 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Caprolactam	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Carbazole	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Chrysene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Diethyl phthalate	0.0038		0.00020	mg/L	1	7/1/2009 07:48 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Fluoranthene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Fluorene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/1/2009 07:48 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: Duplicate #1
Collection Date:

Work Order: 0906543
Lab ID: 0906543-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Isophorone	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Naphthalene	0.0024		0.00020	mg/L	1	7/1/2009 07:48 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Phenanthrene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Phenol	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Pyrene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
Surr: 2,4,6-Tribromophenol	49.9		34-129	%REC	4	7/2/2009 03:53 PM
Surr: 2,4,6-Tribromophenol	60.2		34-129	%REC	1	7/1/2009 07:48 PM
Surr: 2-Fluorobiphenyl	76.5		40-125	%REC	1	7/1/2009 07:48 PM
Surr: 2-Fluorobiphenyl	57.9		40-125	%REC	4	7/2/2009 03:53 PM
Surr: 2-Fluorophenol	59.6		20-120	%REC	1	7/1/2009 07:48 PM
Surr: 2-Fluorophenol	70.2		20-120	%REC	4	7/2/2009 03:53 PM
Surr: 4-Terphenyl-d14	66.7		40-135	%REC	1	7/1/2009 07:48 PM
Surr: 4-Terphenyl-d14	74.2		40-135	%REC	4	7/2/2009 03:53 PM
Surr: Nitrobenzene-d5	91.4		41-120	%REC	4	7/2/2009 03:53 PM
Surr: Nitrobenzene-d5	57.1		41-120	%REC	1	7/1/2009 07:48 PM
Surr: Phenol-d6	58.4		20-120	%REC	1	7/1/2009 07:48 PM
Surr: Phenol-d6	61.6		20-120	%REC	4	7/2/2009 03:53 PM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/23/2009	Analyst: LG
1-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 07:48 PM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,2,4-Trimethylbenzene	0.0061		0.0050	mg/L	1	6/26/2009 05:11 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
2-Butanone	0.28		0.010	mg/L	1	6/26/2009 05:11 PM
2-Hexanone	ND		0.010	mg/L	1	6/26/2009 05:11 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/26/2009 05:11 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: Duplicate #1

Lab ID: 0906543-06

Collection Date:

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Acetone	0.057		0.010	mg/L	1	6/26/2009 05:11 PM
Benzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 05:11 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
m,p-Xylene	ND		0.010	mg/L	1	6/26/2009 05:11 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 05:11 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Naphthalene	0.0074		0.0050	mg/L	1	6/26/2009 05:11 PM
o-Xylene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 05:11 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 05:11 PM
Xylenes, Total	ND		0.015	mg/L	1	6/26/2009 05:11 PM
Surr: 1,2-Dichloroethane-d4	109		70-125	%REC	1	6/26/2009 05:11 PM
Surr: 4-Bromofluorobenzene	94.4		72-125	%REC	1	6/26/2009 05:11 PM
Surr: Dibromofluoromethane	107		71-125	%REC	1	6/26/2009 05:11 PM
Surr: Toluene-d8	99.2		75-125	%REC	1	6/26/2009 05:11 PM
ANIONS			E300			Analyst: IGF
Chloride	168		2.50	mg/L	5	6/24/2009 01:19 PM
Fluoride	ND		0.100	mg/L	1	6/23/2009 09:44 PM
Sulfate	90.4		2.50	mg/L	5	6/24/2009 01:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
 Project: Navajo Lea Refinery Semi-Annual
 Sample ID: Duplicate #1
 Collection Date:

Work Order: 0906543
 Lab ID: 0906543-06
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Nitrate/Nitrite (as N)	0.682		0.100	mg/L	1	6/24/2009 09:15 PM
Surr: Selenate (surr)	97.9		85-115	%REC	1	6/24/2009 09:15 PM
Surr: Selenate (surr)	101		85-115	%REC	5	6/24/2009 01:19 PM
Surr: Selenate (surr)	97.9		85-115	%REC	1	6/23/2009 09:44 PM
ALKALINITY			SM2320B			Analyst: RPM
Alkalinity, Bicarbonate (As CaCO ₃)	246		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Total (As CaCO ₃)	246		5.00	mg/L	1	6/30/2009 12:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	1,450		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B			Analyst: TDW
pH	6.89		0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	812		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW #1
Collection Date: 6/19/2009 02:00 PM

Work Order: 0906543
Lab ID: 0906543-07
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	Prep Date: 6/30/2009 Analyst: JCJ 6/30/2009 04:26 PM
DISSOLVED METALS			SW6020			
Aluminum	ND		0.0100	mg/L	1	Prep Date: 6/29/2009 Analyst: ALR 7/1/2009 12:49 AM
Arsenic	0.00914		0.00500	mg/L	1	7/1/2009 12:49 AM
Barium	0.147		0.00500	mg/L	1	7/1/2009 12:49 AM
Boron	0.175		0.0200	mg/L	1	7/1/2009 12:49 AM
Cadmium	ND		0.00200	mg/L	1	7/1/2009 12:49 AM
Calcium	103		0.500	mg/L	1	7/1/2009 12:49 AM
Chromium	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Cobalt	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Copper	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Iron	ND		0.200	mg/L	1	7/1/2009 12:49 AM
Lead	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Magnesium	13.8		0.200	mg/L	1	7/1/2009 12:49 AM
Manganese	0.974		0.00500	mg/L	1	7/1/2009 12:49 AM
Molybdenum	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Nickel	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Potassium	2.29		0.200	mg/L	1	7/1/2009 12:49 AM
Selenium	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Silver	ND		0.00500	mg/L	1	7/1/2009 12:49 AM
Sodium	70.4		0.200	mg/L	1	7/1/2009 12:49 AM
Zinc	0.0124		0.00500	mg/L	1	7/1/2009 12:49 AM
VOLATILES			SW8260			
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	Analyst: PC 6/26/2009 07:44 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
1,2,4-Trimethylbenzene	0.0067		0.0050	mg/L	1	6/26/2009 07:44 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
2-Butanone	0.060		0.010	mg/L	1	6/26/2009 07:44 PM
2-Hexanone	ND		0.010	mg/L	1	6/26/2009 07:44 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/26/2009 07:44 PM
Acetone	ND		0.010	mg/L	1	6/26/2009 07:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Sample ID: MW #1

Collection Date: 6/19/2009 02:00 PM

Work Order: 0906543

Lab ID: 0906543-07

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 07:44 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Ethylbenzene	0.012		0.0050	mg/L	1	6/26/2009 07:44 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
m,p-Xylene	0.019		0.010	mg/L	1	6/26/2009 07:44 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 07:44 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Naphthalene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
o-Xylene	0.011		0.0050	mg/L	1	6/26/2009 07:44 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 07:44 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 07:44 PM
Xylenes, Total	0.031		0.015	mg/L	1	6/26/2009 07:44 PM
Surr: 1,2-Dichloroethane-d4	109		70-125	%REC	1	6/26/2009 07:44 PM
Surr: 4-Bromofluorobenzene	106		72-125	%REC	1	6/26/2009 07:44 PM
Surr: Dibromofluoromethane	107		71-125	%REC	1	6/26/2009 07:44 PM
Surr: Toluene-d8	104		75-125	%REC	1	6/26/2009 07:44 PM
ANIONS			E300		Analyst: IGF	
Chloride	131		2.50	mg/L	5	6/24/2009 01:42 PM
Fluoride	0.827		0.100	mg/L	1	6/23/2009 10:07 PM
Sulfate	123		2.50	mg/L	5	6/24/2009 01:42 PM
Nitrate/Nitrite (as N)	3.75		0.100	mg/L	1	6/24/2009 09:37 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #1

Lab ID: 0906543-07

Collection Date: 6/19/2009 02:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Selenate (surr)	93.6		85-115	%REC	5	6/24/2009 01:42 PM
Surr: Selenate (surr)	97.6		85-115	%REC	1	6/23/2009 10:07 PM
Surr: Selenate (surr)	98.7		85-115	%REC	1	6/24/2009 09:37 PM
ALKALINITY			SM2320B			Analyst: RPM
Alkalinity, Bicarbonate (As CaCO3)	207		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Total (As CaCO3)	207		5.00	mg/L	1	6/30/2009 12:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	1,130		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B			Analyst: TDW
pH	7.07	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	694		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Sample ID: MW #7

Collection Date: 6/19/2009 03:15 PM

Work Order: 0906543

Lab ID: 0906543-08

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	Prep Date: 6/30/2009 Analyst: JCJ 6/30/2009 04:28 PM
DISSOLVED METALS			SW6020			
Aluminum	ND		0.0100	mg/L	1	Prep Date: 6/29/2009 Analyst: ALR 7/1/2009 12:56 AM
Arsenic	0.00923		0.00500	mg/L	1	7/1/2009 12:56 AM
Barium	0.169		0.00500	mg/L	1	7/1/2009 12:56 AM
Boron	0.161		0.0200	mg/L	1	7/1/2009 12:56 AM
Cadmium	ND		0.00200	mg/L	1	7/1/2009 12:56 AM
Calcium	52.7		0.500	mg/L	1	7/1/2009 12:56 AM
Chromium	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Cobalt	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Copper	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Iron	ND		0.200	mg/L	1	7/1/2009 12:56 AM
Lead	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Magnesium	6.18		0.200	mg/L	1	7/1/2009 12:56 AM
Manganese	0.127		0.00500	mg/L	1	7/1/2009 12:56 AM
Molybdenum	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Nickel	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Potassium	2.38		0.200	mg/L	1	7/1/2009 12:56 AM
Selenium	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Silver	ND		0.00500	mg/L	1	7/1/2009 12:56 AM
Sodium	54.2		0.200	mg/L	1	7/1/2009 12:56 AM
Zinc	0.0137		0.00500	mg/L	1	7/1/2009 12:56 AM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	Prep Date: 6/23/2009 Analyst: LG 7/1/2009 08:10 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/1/2009 08:10 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #7

Lab ID: 0906543-08

Collection Date: 6/19/2009 03:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/1/2009 08:10 PM
Acenaphthene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Acetophenone	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Anthracene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Atrazine	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Bis(2-ethylhexyl)phthalate	0.0019		0.00020	mg/L	1	7/1/2009 08:10 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Caprolactam	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Carbazole	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Chrysene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Diethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Fluoranthene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Fluorene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/1/2009 08:10 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW #7
Collection Date: 6/19/2009 03:15 PM

Work Order: 0906543
Lab ID: 0906543-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Isophorone	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Naphthalene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Phenanthrene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Phenol	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Pyrene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
Surr: 2,4,6-Tribromophenol	52.8		34-129	%REC	1	7/1/2009 08:10 PM
Surr: 2-Fluorobiphenyl	64.2		40-125	%REC	1	7/1/2009 08:10 PM
Surr: 2-Fluorophenol	53.5		20-120	%REC	1	7/1/2009 08:10 PM
Surr: 4-Terphenyl-d14	65.1		40-135	%REC	1	7/1/2009 08:10 PM
Surr: Nitrobenzene-d5	64.6		41-120	%REC	1	7/1/2009 08:10 PM
Surr: Phenol-d6	60.5		20-120	%REC	1	7/1/2009 08:10 PM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/23/2009	Analyst: LG
1-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 08:10 PM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
2-Butanone	0.030		0.010	mg/L	1	6/26/2009 08:09 PM
2-Hexanone	ND		0.010	mg/L	1	6/26/2009 08:09 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/26/2009 08:09 PM
Acetone	ND		0.010	mg/L	1	6/26/2009 08:09 PM
Benzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Bromoform	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Bromomethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Carbon disulfide	ND		0.010	mg/L	1	6/26/2009 08:09 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: MW #7

Lab ID: 0906543-08

Collection Date: 6/19/2009 03:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Chloroethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Chloroform	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Chloromethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
m,p-Xylene	ND		0.010	mg/L	1	6/26/2009 08:09 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Methylene chloride	ND		0.010	mg/L	1	6/26/2009 08:09 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Naphthalene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
o-Xylene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Styrene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Toluene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Trichloroethene	ND		0.0050	mg/L	1	6/26/2009 08:09 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/26/2009 08:09 PM
Xylenes, Total	ND		0.015	mg/L	1	6/26/2009 08:09 PM
Surr: 1,2-Dichloroethane-d4	104		70-125	%REC	1	6/26/2009 08:09 PM
Surr: 4-Bromofluorobenzene	102		72-125	%REC	1	6/26/2009 08:09 PM
Surr: Dibromofluoromethane	99.8		71-125	%REC	1	6/26/2009 08:09 PM
Surr: Toluene-d8	100		75-125	%REC	1	6/26/2009 08:09 PM
ANIONS			E300			Analyst: IGF
Chloride	30.6		0.500	mg/L	1	6/23/2009 10:30 PM
Fluoride	1.12		0.100	mg/L	1	6/23/2009 10:30 PM
Sulfate	67.2		2.50	mg/L	5	6/24/2009 02:05 PM
Nitrate/Nitrite (as N)	1.66		0.100	mg/L	1	6/24/2009 11:09 PM
Surr: Selenate (surr)	98.1		85-115	%REC	5	6/24/2009 02:05 PM
Surr: Selenate (surr)	97.8		85-115	%REC	1	6/23/2009 10:30 PM
Surr: Selenate (surr)	97.9		85-115	%REC	1	6/24/2009 11:09 PM
ALKALINITY			SM2320B			Analyst: RPM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW #7
Collection Date: 6/19/2009 03:15 PM

Work Order: 0906543
Lab ID: 0906543-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO ₃)	182		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Total (As CaCO ₃)	182		5.00	mg/L	1	6/30/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	646		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B			Analyst: TDW
pH	7.28	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	384		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: RW-1
Collection Date: 6/19/2009 04:16 PM

Work Order: 0906543
Lab ID: 0906543-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY						
Mercury	ND		SW7470 0.000200	mg/L	1	Prep Date: 6/30/2009 Analyst: JCJ 6/30/2009 04:30 PM
DISSOLVED METALS						
Aluminum	ND		SW6020 0.0100	mg/L	1	Prep Date: 6/29/2009 Analyst: ALR 7/1/2009 01:02 AM
Arsenic	0.0100		0.00500	mg/L	1	7/1/2009 01:02 AM
Barium	0.160		0.00500	mg/L	1	7/1/2009 01:02 AM
Boron	0.161		0.0200	mg/L	1	7/1/2009 01:02 AM
Cadmium	ND		0.00200	mg/L	1	7/1/2009 01:02 AM
Calcium	51.3		0.500	mg/L	1	7/1/2009 01:02 AM
Chromium	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Cobalt	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Copper	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Iron	ND		0.200	mg/L	1	7/1/2009 01:02 AM
Lead	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Magnesium	5.99		0.200	mg/L	1	7/1/2009 01:02 AM
Manganese	0.0380		0.00500	mg/L	1	7/1/2009 01:02 AM
Molybdenum	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Nickel	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Potassium	2.40		0.200	mg/L	1	7/1/2009 01:02 AM
Selenium	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Silver	ND		0.00500	mg/L	1	7/1/2009 01:02 AM
Sodium	59.7		0.200	mg/L	1	7/1/2009 01:02 AM
Zinc	0.00548		0.00500	mg/L	1	7/1/2009 01:02 AM
LOW-LEVEL SEMIVOLATILES						
1,1'-Biphenyl	ND		SW8270 0.00020	mg/L	1	Prep Date: 6/23/2009 Analyst: LG 7/1/2009 08:31 PM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2,4-Dimethylphenol	0.00021		0.00020	mg/L	1	7/1/2009 08:31 PM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	7/1/2009 08:31 PM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2-Chloronaphthalene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2-Chlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
2-Nitrophenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
3&4-Methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: RW-1

Lab ID: 0906543-09

Collection Date: 6/19/2009 04:16 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
3-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
4-Chloroaniline	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
4-Nitroaniline	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
4-Nitrophenol	ND		0.0010	mg/L	1	7/1/2009 08:31 PM
Acenaphthene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Acenaphthylene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Acetophenone	0.00021		0.00020	mg/L	1	7/1/2009 08:31 PM
Anthracene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Atrazine	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Benz(a)anthracene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Benzaldehyde	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Benzo(a)pyrene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Bis(2-ethylhexyl)phthalate	0.00076		0.00020	mg/L	1	7/1/2009 08:31 PM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Caprolactam	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Carbazole	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Chrysene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Dibenzofuran	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Diethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Dimethyl phthalate	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Fluoranthene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Fluorene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Hexachlorobenzene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Hexachlorobutadiene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Hexachloroethane	ND		0.00020	mg/L	1	7/1/2009 08:31 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: RW-1

Lab ID: 0906543-09

Collection Date: 6/19/2009 04:16 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Isophorone	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Naphthalene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Nitrobenzene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Pentachlorophenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Phenanthrene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Phenol	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Pyrene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
Surr: 2,4,6-Tribromophenol	48.5		34-129	%REC	1	7/1/2009 08:31 PM
Surr: 2-Fluorobiphenyl	67.9		40-125	%REC	1	7/1/2009 08:31 PM
Surr: 2-Fluorophenol	50.7		20-120	%REC	1	7/1/2009 08:31 PM
Surr: 4-Terphenyl-d14	62.5		40-135	%REC	1	7/1/2009 08:31 PM
Surr: Nitrobenzene-d5	64.1		41-120	%REC	1	7/1/2009 08:31 PM
Surr: Phenol-d6	62.9		20-120	%REC	1	7/1/2009 08:31 PM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/23/2009	Analyst: LG
1-Methylnaphthalene	ND		0.00020	mg/L	1	7/1/2009 08:31 PM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
2-Butanone	0.038		0.010	mg/L	1	6/28/2009 06:35 PM
2-Hexanone	ND		0.010	mg/L	1	6/28/2009 06:35 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/28/2009 06:35 PM
Acetone	ND		0.010	mg/L	1	6/28/2009 06:35 PM
Benzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Bromoform	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Bromomethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Carbon disulfide	ND		0.010	mg/L	1	6/28/2009 06:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: RW-1

Lab ID: 0906543-09

Collection Date: 6/19/2009 04:16 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Chloroethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Chloroform	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Chloromethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
m,p-Xylene	ND		0.010	mg/L	1	6/28/2009 06:35 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Methylene chloride	ND		0.010	mg/L	1	6/28/2009 06:35 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Naphthalene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
o-Xylene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Styrene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Toluene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Trichloroethene	ND		0.0050	mg/L	1	6/28/2009 06:35 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/28/2009 06:35 PM
Xylenes, Total	ND		0.015	mg/L	1	6/28/2009 06:35 PM
Surr: 1,2-Dichloroethane-d4	104		70-125	%REC	1	6/28/2009 06:35 PM
Surr: 4-Bromofluorobenzene	97.3		72-125	%REC	1	6/28/2009 06:35 PM
Surr: Dibromofluoromethane	103		71-125	%REC	1	6/28/2009 06:35 PM
Surr: Toluene-d8	98.0		75-125	%REC	1	6/28/2009 06:35 PM
ANIONS			E300		Analyst: IGF	
Chloride	34.8		0.500	mg/L	1	6/23/2009 10:53 PM
Fluoride	1.21		0.100	mg/L	1	6/23/2009 10:53 PM
Sulfate	70.8		2.50	mg/L	5	6/24/2009 03:15 PM
Surr: Selenate (surr)	97.1		85-115	%REC	1	6/23/2009 10:53 PM
Surr: Selenate (surr)	98.3		85-115	%REC	5	6/24/2009 03:15 PM
ALKALINITY			SM2320B		Analyst: RPM	
Alkalinity, Bicarbonate (As CaCO3)	187		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	6/30/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: RW-1

Lab ID: 0906543-09

Collection Date: 6/19/2009 04:16 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Total (As CaCO ₃)	187		5.00	mg/L	1	6/30/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	682		1.00	µmhos/cm	1	6/22/2009 10:00 AM
PH			SM4500H+ B			Analyst: TDW
pH	7.33	H	0.100	pH units	1	6/22/2009 01:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	398		10.0	mg/L	1	6/23/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners
 Project: Navajo Lea Refinery Semi-Annual
 Sample ID: Trip Blank 2400
 Collection Date: 6/19/2009 05:00 PM

Work Order: 0906543
 Lab ID: 0906543-10
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
2-Butanone	ND		0.010	mg/L	1	6/28/2009 04:08 PM
2-Hexanone	ND		0.010	mg/L	1	6/28/2009 04:08 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/28/2009 04:08 PM
Acetone	ND		0.010	mg/L	1	6/28/2009 04:08 PM
Benzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Bromoform	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Bromomethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Carbon disulfide	ND		0.010	mg/L	1	6/28/2009 04:08 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Chloroethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Chloroform	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Chloromethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
m,p-Xylene	ND		0.010	mg/L	1	6/28/2009 04:08 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Methylene chloride	ND		0.010	mg/L	1	6/28/2009 04:08 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Naphthalene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
o-Xylene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Styrene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: Trip Blank 2400

Lab ID: 0906543-10

Collection Date: 6/19/2009 05:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Toluene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Trichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:08 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/28/2009 04:08 PM
Xylenes, Total	ND		0.015	mg/L	1	6/28/2009 04:08 PM
Surr: 1,2-Dichloroethane-d4	101		70-125	%REC	1	6/28/2009 04:08 PM
Surr: 4-Bromofluorobenzene	95.2		72-125	%REC	1	6/28/2009 04:08 PM
Surr: Dibromofluoromethane	103		71-125	%REC	1	6/28/2009 04:08 PM
Surr: Toluene-d8	97.4		75-125	%REC	1	6/28/2009 04:08 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: Trip Blank 1837

Lab ID: 0906543-11

Collection Date: 6/19/2009 05:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
2-Butanone	ND		0.010	mg/L	1	6/28/2009 04:32 PM
2-Hexanone	ND		0.010	mg/L	1	6/28/2009 04:32 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/28/2009 04:32 PM
Acetone	ND		0.010	mg/L	1	6/28/2009 04:32 PM
Benzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Bromoform	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Bromomethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Carbon disulfide	ND		0.010	mg/L	1	6/28/2009 04:32 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Chloroethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Chloroform	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Chloromethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
m,p-Xylene	ND		0.010	mg/L	1	6/28/2009 04:32 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Methylene chloride	ND		0.010	mg/L	1	6/28/2009 04:32 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Naphthalene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
o-Xylene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Styrene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Sample ID: Trip Blank 1837

Collection Date: 6/19/2009 05:00 PM

Work Order: 0906543

Lab ID: 0906543-11

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Toluene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Trichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:32 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/28/2009 04:32 PM
Xylenes, Total	ND		0.015	mg/L	1	6/28/2009 04:32 PM
Surr: 1,2-Dichloroethane-d4	104		70-125	%REC	1	6/28/2009 04:32 PM
Surr: 4-Bromofluorobenzene	95.7		72-125	%REC	1	6/28/2009 04:32 PM
Surr: Dibromofluoromethane	104		71-125	%REC	1	6/28/2009 04:32 PM
Surr: Toluene-d8	99.0		75-125	%REC	1	6/28/2009 04:32 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: Trip Blank 2354

Lab ID: 0906543-12

Collection Date: 6/19/2009 05:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
2-Butanone	ND		0.010	mg/L	1	6/28/2009 04:57 PM
2-Hexanone	ND		0.010	mg/L	1	6/28/2009 04:57 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/28/2009 04:57 PM
Acetone	ND		0.010	mg/L	1	6/28/2009 04:57 PM
Benzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Bromoform	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Bromomethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Carbon disulfide	ND		0.010	mg/L	1	6/28/2009 04:57 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Chloroethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Chloroform	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Chloromethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
m,p-Xylene	ND		0.010	mg/L	1	6/28/2009 04:57 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Methylene chloride	ND		0.010	mg/L	1	6/28/2009 04:57 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Naphthalene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
o-Xylene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Styrene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 02-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906543

Sample ID: Trip Blank 2354

Lab ID: 0906543-12

Collection Date: 6/19/2009 05:00 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Toluene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Trichloroethene	ND		0.0050	mg/L	1	6/28/2009 04:57 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/28/2009 04:57 PM
Xylenes, Total	ND		0.015	mg/L	1	6/28/2009 04:57 PM
Surr: 1,2-Dichloroethane-d4	103		70-125	%REC	1	6/28/2009 04:57 PM
Surr: 4-Bromofluorobenzene	96.0		72-125	%REC	1	6/28/2009 04:57 PM
Surr: Dibromofluoromethane	104		71-125	%REC	1	6/28/2009 04:57 PM
Surr: Toluene-d8	99.1		75-125	%REC	1	6/28/2009 04:57 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 06-Jul-09

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36852 Instrument ID ICPMS02 Method: SW6020 (Dissolve)

MBLK Sample ID: MBLKW3-062909-36852 Units: mg/L Analysis Date: 6/30/2009 02:59 AM

Client ID: Run ID: ICPMS02_090629A SeqNo: 1707215 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Lead	0.0004722	0.0050								J
Magnesium	ND	0.20								
Potassium	0.1516	0.20								J
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								

LCS Sample ID: MLCSW3-062909-36852 Units: mg/L Analysis Date: 6/30/2009 03:06 AM

Client ID: Run ID: ICPMS02_090629A SeqNo: 1707219 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05204	0.0050	0.05	0	104	80-120	0			
Barium	0.0587	0.0050	0.05	0	117	80-120	0			
Cadmium	0.04887	0.0020	0.05	0	97.7	80-120	0			
Calcium	5.097	0.50	5	0	102	80-120	0			
Chromium	0.04946	0.0050	0.05	0	98.9	80-120	0			
Lead	0.05027	0.0050	0.05	0	101	80-120	0			
Magnesium	5.263	0.20	5	0	105	80-120	0			
Potassium	5.098	0.20	5	0	102	80-120	0			
Selenium	0.04922	0.0050	0.05	0	98.4	80-120	0			
Silver	0.05123	0.0050	0.05	0	102	80-120	0			

LCS Sample ID: MLCSW3-062909-36852 Units: mg/L Analysis Date: 6/30/2009 02:33 PM

Client ID: Run ID: ICPMS02_090630A SeqNo: 1708072 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	5.026	0.20	5	0	101	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36852 Instrument ID ICPMS02 Method: SW6020 (Dissolve)

MS Sample ID: 0906535-20DMS Units: mg/L Analysis Date: 6/30/2009 03:32 AM
 Client ID: Run ID: ICPMS02_090629A SeqNo: 1707228 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05457	0.0050	0.05	0.002463	104	75-125	0			
Barium	0.1135	0.0050	0.05	0.05365	120	75-125	0			
Cadmium	0.04975	0.0020	0.05	0.0003148	98.9	75-125	0			
Calcium	7.914	0.50	5	2.685	105	75-125	0			
Chromium	0.04901	0.0050	0.05	0.0002281	97.6	75-125	0			
Lead	0.05035	0.0050	0.05	0.0005099	99.7	75-125	0			
Magnesium	13.53	0.20	5	8.724	96.1	75-125	0			
Potassium	4.952	0.20	5	0.3725	91.6	75-125	0			
Selenium	0.0513	0.0050	0.05	0.001509	99.6	75-125	0			
Silver	0.05159	0.0050	0.05	0.0002785	103	75-125	0			

MS Sample ID: 0906535-20DMS Units: mg/L Analysis Date: 6/30/2009 03:05 PM
 Client ID: Run ID: ICPMS02_090630A SeqNo: 1708077 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.59	0.20	5	5.704	97.7	75-125	0			

MSD Sample ID: 0906535-20DMSD Units: mg/L Analysis Date: 6/30/2009 03:38 AM
 Client ID: Run ID: ICPMS02_090629A SeqNo: 1707231 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05178	0.0050	0.05	0.002463	98.6	75-125	0.05457	5.25	25	
Barium	0.1071	0.0050	0.05	0.05365	107	75-125	0.1135	5.8	25	
Cadmium	0.04741	0.0020	0.05	0.0003148	94.2	75-125	0.04975	4.82	25	
Calcium	7.575	0.50	5	2.685	97.8	75-125	7.914	4.38	25	
Chromium	0.04811	0.0050	0.05	0.0002281	95.8	75-125	0.04901	1.85	25	
Lead	0.04908	0.0050	0.05	0.0005099	97.1	75-125	0.05035	2.55	25	
Magnesium	13.12	0.20	5	8.724	87.9	75-125	13.53	3.08	25	
Potassium	4.805	0.20	5	0.3725	88.6	75-125	4.952	3.01	25	
Selenium	0.05193	0.0050	0.05	0.001509	101	75-125	0.0513	1.22	25	
Silver	0.05088	0.0050	0.05	0.0002785	101	75-125	0.05159	1.39	25	

MSD Sample ID: 0906535-20DMSD Units: mg/L Analysis Date: 6/30/2009 03:12 PM
 Client ID: Run ID: ICPMS02_090630A SeqNo: 1708078 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.22	0.20	5	5.704	90.3	75-125	10.59	3.56	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36852 Instrument ID ICPMS02 Method: SW6020 (Dissolve)

DUP Sample ID: 0906535-20DDUP Units: mg/L Analysis Date: 6/30/2009 03:19 AM
 Client ID: Run ID: ICPMS02_090629A SeqNo: 1707223 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.0023	0.0050	0	0	0	0-0	0.002463	0	25	J
Barium	0.05305	0.0050	0	0	0	0-0	0.05365	1.12	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.0003148	0	25	
Calcium	2.603	0.50	0	0	0	0-0	2.685	3.1	25	
Chromium	ND	0.0050	0	0	0	0-0	0.0002281	0	25	
Lead	0.0004661	0.0050	0	0	0	0-0	0.0005099	0	25	J
Magnesium	8.46	0.20	0	0	0	0-0	8.724	3.07	25	
Potassium	0.3074	0.20	0	0	0	0-0	0.3725	19.1	25	
Selenium	ND	0.0050	0	0	0	0-0	0.001509	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.0002785	0	25	

DUP Sample ID: 0906535-20DDUP Units: mg/L Analysis Date: 6/30/2009 02:46 PM
 Client ID: Run ID: ICPMS02_090630A SeqNo: 1708075 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	5.427	0.20	0	0	0	0-0	5.704	4.98	25	

The following samples were analyzed in this batch:

0906543-01D	0906543-02D	0906543-03D
0906543-04D	0906543-05D	0906543-06D
0906543-07D	0906543-08D	0906543-09D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36867 Instrument ID Mercury Method: SW7470

MBLK Sample ID: GBLKW3-063009-36867 Units: mg/L Analysis Date: 6/30/2009 03:55 PM

Client ID: Run ID: MERCURY_090630A SeqNo: 1708124 Prep Date: 6/30/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020								

LCS Sample ID: GLCSW3-063009-36867 Units: mg/L Analysis Date: 6/30/2009 04:00 PM

Client ID: Run ID: MERCURY_090630A SeqNo: 1708125 Prep Date: 6/30/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00546	0.00020	0.005	0	109	85-115	0			

MS Sample ID: 0906543-01BMS Units: mg/L Analysis Date: 6/30/2009 04:06 PM

Client ID: MW-6 Run ID: MERCURY_090630A SeqNo: 1708128 Prep Date: 6/30/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00571	0.00020	0.005	-0.000057	115	85-115	0			S

MSD Sample ID: 0906543-01BMSD Units: mg/L Analysis Date: 6/30/2009 04:08 PM

Client ID: MW-6 Run ID: MERCURY_090630A SeqNo: 1708129 Prep Date: 6/30/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0058	0.00020	0.005	-0.000057	117	85-115	0.00571	1.56	20	S

DUP Sample ID: 0906543-01BDUP Units: mg/L Analysis Date: 6/30/2009 04:04 PM

Client ID: MW-6 Run ID: MERCURY_090630A SeqNo: 1708127 Prep Date: 6/30/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000057	0	20	

The following samples were analyzed in this batch:

0906543-01B	0906543-02B	0906543-03B
0906543-04B	0906543-05B	0906543-06B
0906543-07B	0906543-08B	0906543-09B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36746 Instrument ID SV-4 Method: SW8270

MBLK Sample ID: SBLKW1-090623-36746 Units: µg/L Analysis Date: 7/1/2009 10:15 AM
 Client ID: Run ID: SV-4_090701A SeqNo: 1709724 Prep Date: 6/23/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3'-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								
Carbazole	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36746 Instrument ID SV-4 Method: SW8270

Chrysene	ND	0.20						
Di-n-butyl phthalate	ND	0.20						
Di-n-octyl phthalate	ND	0.20						
Dibenz(a,h)anthracene	ND	0.20						
Dibenzofuran	ND	0.20						
Diethyl phthalate	ND	0.20						
Dimethyl phthalate	ND	0.20						
Fluoranthene	ND	0.20						
Fluorene	ND	0.20						
Hexachlorobenzene	ND	0.20						
Hexachlorobutadiene	ND	0.20						
Hexachlorocyclopentadiene	ND	0.20						
Hexachloroethane	ND	0.20						
Indeno(1,2,3-cd)pyrene	ND	0.20						
Isophorone	ND	0.20						
N-Nitrosodi-n-propylamine	ND	0.20						
N-Nitrosodiphenylamine	ND	0.20						
Naphthalene	ND	0.20						
Nitrobenzene	ND	0.20						
Pentachlorophenol	ND	0.20						
Phenanthrene	ND	0.20						
Phenol	ND	0.20						
Pyrene	ND	0.20						
Surr: 2,4,6-Tribromophenol	3.222	0.20	5	0	64.4	34-129	0	
Surr: 2-Fluorobiphenyl	3.394	0.20	5	0	67.9	40-125	0	
Surr: 2-Fluorophenol	3.339	0.20	5	0	66.8	20-120	0	
Surr: 4-Terphenyl-d14	3.398	0.20	5	0	68	40-135	0	
Surr: Nitrobenzene-d5	3.437	0.20	5	0	68.7	41-120	0	
Surr: Phenol-d6	3.971	0.20	5	0	79.4	20-120	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36746 Instrument ID SV-4 Method: SW8270

LCS Sample ID: SLCSW1-090623-36746 Units: µg/L Analysis Date: 7/1/2009 10:36 AM
 Client ID: Run ID: SV-4_090701A SeqNo: 1709725 Prep Date: 6/23/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	3.273	0.20	5	0	65.5	45-125	0			
2,4,5-Trichlorophenol	3.544	0.20	5	0	70.9	46-120	0			
2,4,6-Trichlorophenol	3.36	0.20	5	0	67.2	42-120	0			
2,4-Dichlorophenol	3.385	0.20	5	0	67.7	49-120	0			
2,4-Dimethylphenol	2.961	0.20	5	0	59.2	35-120	0			
2,4-Dinitrophenol	2.726	1.0	5	0	54.5	15-120	0			
2,4-Dinitrotoluene	3.445	0.20	5	0	68.9	50-122	0			
2,6-Dinitrotoluene	3.529	0.20	5	0	70.6	50-120	0			
2-Chloronaphthalene	3.663	0.20	5	0	73.3	50-120	0			
2-Chlorophenol	3.178	0.20	5	0	63.6	40-120	0			
2-Methylnaphthalene	3.419	0.20	5	0	68.4	50-120	0			
2-Methylphenol	3.349	0.20	5	0	67	45-120	0			
2-Nitroaniline	4.373	0.20	5	0	87.5	28-139	0			
2-Nitrophenol	3.4	0.20	5	0	68	40-120	0			
3&4-Methylphenol	3.286	0.20	5	0	65.7	35-120	0			
3,3'-Dichlorobenzidine	2.984	0.20	5	0	59.7	15-120	0			
3-Nitroaniline	3.135	0.20	5	0	62.7	30-120	0			
4,6-Dinitro-2-methylphenol	2.965	0.20	5	0	59.3	25-121	0			
4-Bromophenyl phenyl ether	2.881	0.20	5	0	57.6	45-120	0			
4-Chloro-3-methylphenol	3.68	0.20	5	0	73.6	47-120	0			
4-Chloroaniline	2.857	0.20	5	0	57.1	20-120	0			
4-Chlorophenyl phenyl ether	3.527	0.20	5	0	70.5	50-120	0			
4-Nitroaniline	3.414	0.20	5	0	68.3	30-133	0			
4-Nitrophenol	4.215	1.0	5	0	84.3	30-130	0			
Acenaphthene	3.304	0.20	5	0	66.1	45-120	0			
Acenaphthylene	3.393	0.20	5	0	67.9	47-120	0			
Acetophenone	3.425	0.20	5	0	68.5	40-120	0			
Anthracene	3.406	0.20	5	0	68.1	45-120	0			
Atrazine	3.016	0.20	5	0	60.3	40-130	0			
Benz(a)anthracene	3.605	0.20	5	0	72.1	40-120	0			
Benzaldehyde	2.646	0.20	5	0	52.9	35-130	0			
Benzo(a)pyrene	3.465	0.20	5	0	69.3	45-120	0			
Benzo(b)fluoranthene	3.485	0.20	5	0	69.7	50-120	0			
Benzo(g,h,i)perylene	3.36	0.20	5	0	67.2	42-127	0			
Benzo(k)fluoranthene	3.006	0.20	5	0	60.1	45-127	0			
Bis(2-chloroethoxy)methane	3.745	0.20	5	0	74.9	45-120	0			
Bis(2-chloroethyl)ether	3.99	0.20	5	0	79.8	37-121	0			
Bis(2-chloroisopropyl)ether	3.419	0.20	5	0	68.4	40-120	0			
Bis(2-ethylhexyl)phthalate	3.719	0.20	5	0	74.4	40-139	0			
Butyl benzyl phthalate	3.627	0.20	5	0	72.5	47-123	0			
Caprolactam	3.678	0.20	5	0	73.6	35-134	0			
Carbazole	3.066	0.20	5	0	61.3	42-128	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36746		Instrument ID SV-4		Method: SW8270				
Chrysene	3.482	0.20	5	0	69.6	43-120	0	
Di-n-butyl phthalate	3.188	0.20	5	0	63.8	45-123	0	
Di-n-octyl phthalate	3.781	0.20	5	0	75.6	45-129	0	
Dibenz(a,h)anthracene	3.576	0.20	5	0	71.5	45-125	0	
Dibenzofuran	3.376	0.20	5	0	67.5	50-120	0	
Diethyl phthalate	3.338	0.20	5	0	66.8	41-120	0	
Dimethyl phthalate	3.6	0.20	5	0	72	40-122	0	
Fluoranthene	3.054	0.20	5	0	61.1	45-125	0	
Fluorene	3.637	0.20	5	0	72.7	49-120	0	
Hexachlorobenzene	3.084	0.20	5	0	61.7	48-120	0	
Hexachlorobutadiene	3.388	0.20	5	0	67.8	40-120	0	
Hexachlorocyclopentadiene	3.058	0.20	5	0	61.2	34-136	0	
Hexachloroethane	3.288	0.20	5	0	65.8	40-120	0	
Indeno(1,2,3-cd)pyrene	4.139	0.20	5	0	82.8	41-128	0	
Isophorone	3.784	0.20	5	0	75.7	40-121	0	
N-Nitrosodi-n-propylamine	3.119	0.20	5	0	62.4	40-120	0	
N-Nitrosodiphenylamine	3.004	0.20	5	0	60.1	40-125	0	
Naphthalene	3.641	0.20	5	0	72.8	45-120	0	
Nitrobenzene	3.424	0.20	5	0	68.5	44-120	0	
Pentachlorophenol	1.778	0.20	5	0	35.6	19-121	0	
Phenanthrene	3.441	0.20	5	0	68.8	45-121	0	
Phenol	3.804	0.20	5	0	76.1	20-124	0	
Pyrene	3.689	0.20	5	0	73.8	40-130	0	
Surr: 2,4,6-Tribromophenol	3.024	0.20	5	0	60.5	34-129	0	
Surr: 2-Fluorobiphenyl	3.281	0.20	5	0	65.6	40-125	0	
Surr: 2-Fluorophenol	2.693	0.20	5	0	53.9	20-120	0	
Surr: 4-Terphenyl-d14	3.022	0.20	5	0	60.4	40-135	0	
Surr: Nitrobenzene-d5	3.319	0.20	5	0	66.4	41-120	0	
Surr: Phenol-d6	3.065	0.20	5	0	61.3	20-120	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36746 Instrument ID SV-4 Method: SW8270

LCSD Sample ID: SLCSDW1-090623-36746 Units: µg/L Analysis Date: 7/1/2009 11:35 AM
 Client ID: Run ID: SV-4_090701A SeqNo: 1709726 Prep Date: 6/23/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	4.457	0.20	5	0	89.1	45-125	3.273	30.6	20	R
2,4,5-Trichlorophenol	4.838	0.20	5	0	96.8	46-120	3.544	30.9	20	R
2,4,6-Trichlorophenol	4.698	0.20	5	0	94	42-120	3.36	33.2	20	R
2,4-Dichlorophenol	4.747	0.20	5	0	94.9	49-120	3.385	33.5	20	R
2,4-Dimethylphenol	4.07	0.20	5	0	81.4	35-120	2.961	31.6	20	R
2,4-Dinitrophenol	5.046	1.0	5	0	101	15-120	2.726	59.7	20	R
2,4-Dinitrotoluene	4.68	0.20	5	0	93.6	50-122	3.445	30.4	20	R
2,6-Dinitrotoluene	4.977	0.20	5	0	99.5	50-120	3.529	34.1	20	R
2-Chloronaphthalene	5.256	0.20	5	0	105	50-120	3.663	35.7	20	R
2-Chlorophenol	5.25	0.20	5	0	105	40-120	3.178	49.1	20	R
2-Methylnaphthalene	4.547	0.20	5	0	90.9	50-120	3.419	28.3	20	R
2-Methylphenol	5.083	0.20	5	0	102	45-120	3.349	41.1	20	R
2-Nitroaniline	4.91	0.20	5	0	98.2	28-139	4.373	11.6	20	
2-Nitrophenol	4.736	0.20	5	0	94.7	40-120	3.4	32.8	20	R
3&4-Methylphenol	5.243	0.20	5	0	105	35-120	3.286	45.9	20	R
3,3'-Dichlorobenzidine	4.772	0.20	5	0	95.4	15-120	2.984	46.1	20	R
3-Nitroaniline	4.269	0.20	5	0	85.4	30-120	3.135	30.6	20	R
4,6-Dinitro-2-methylphenol	4.627	0.20	5	0	92.5	25-121	2.965	43.8	20	R
4-Bromophenyl phenyl ether	4.021	0.20	5	0	80.4	45-120	2.881	33	20	R
4-Chloro-3-methylphenol	5.146	0.20	5	0	103	47-120	3.68	33.2	20	R
4-Chloroaniline	4.037	0.20	5	0	80.7	20-120	2.857	34.2	20	R
4-Chlorophenyl phenyl ether	4.918	0.20	5	0	98.4	50-120	3.527	32.9	20	R
4-Nitroaniline	4.277	0.20	5	0	85.5	30-133	3.414	22.4	20	R
4-Nitrophenol	5.938	1.0	5	0	119	30-130	4.215	33.9	20	R
Acenaphthene	4.448	0.20	5	0	89	45-120	3.304	29.5	20	R
Acenaphthylene	4.672	0.20	5	0	93.4	47-120	3.393	31.7	20	R
Acetophenone	4.559	0.20	5	0	91.2	40-120	3.425	28.4	20	R
Anthracene	4.588	0.20	5	0	91.8	45-120	3.406	29.6	20	R
Atrazine	4.47	0.20	5	0	89.4	40-130	3.016	38.8	20	R
Benz(a)anthracene	4.916	0.20	5	0	98.3	40-120	3.605	30.8	20	R
Benzaldehyde	3.923	0.20	5	0	78.5	35-130	2.646	38.9	20	R
Benzo(a)pyrene	4.658	0.20	5	0	93.2	45-120	3.465	29.4	20	R
Benzo(b)fluoranthene	4.788	0.20	5	0	95.8	50-120	3.485	31.5	20	R
Benzo(g,h,i)perylene	4.503	0.20	5	0	90.1	42-127	3.36	29.1	20	R
Benzo(k)fluoranthene	4.011	0.20	5	0	80.2	45-127	3.006	28.7	20	R
Bis(2-chloroethoxy)methane	4.841	0.20	5	0	96.8	45-120	3.745	25.6	20	R
Bis(2-chloroethyl)ether	5.729	0.20	5	0	115	37-121	3.99	35.8	20	R
Bis(2-chloroisopropyl)ether	5.322	0.20	5	0	106	40-120	3.419	43.5	20	R
Bis(2-ethylhexyl)phthalate	5.019	0.20	5	0	100	40-139	3.719	29.8	20	R
Butyl benzyl phthalate	4.984	0.20	5	0	99.7	47-123	3.627	31.5	20	R
Caprolactam	5.144	0.20	5	0	103	35-134	3.678	33.2	20	R
Carbazole	4.227	0.20	5	0	84.5	42-128	3.066	31.8	20	R

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **36746** Instrument ID **SV-4** Method: **SW8270**

Chrysene	4.722	0.20	5	0	94.4	43-120	3.482	30.2	20	R
Di-n-butyl phthalate	4.498	0.20	5	0	90	45-123	3.188	34.1	20	R
Di-n-octyl phthalate	4.925	0.20	5	0	98.5	45-129	3.781	26.3	20	R
Dibenz(a,h)anthracene	4.949	0.20	5	0	99	45-125	3.576	32.2	20	R
Dibenzofuran	4.625	0.20	5	0	92.5	50-120	3.376	31.2	20	R
Diethyl phthalate	4.438	0.20	5	0	88.8	41-120	3.338	28.3	20	R
Dimethyl phthalate	4.849	0.20	5	0	97	40-122	3.6	29.6	20	R
Fluoranthene	4.253	0.20	5	0	85.1	45-125	3.054	32.8	20	R
Fluorene	4.736	0.20	5	0	94.7	49-120	3.637	26.2	20	R
Hexachlorobenzene	4.15	0.20	5	0	83	48-120	3.084	29.5	20	R
Hexachlorobutadiene	4.387	0.20	5	0	87.7	40-120	3.388	25.7	20	R
Hexachlorocyclopentadiene	4.281	0.20	5	0	85.6	34-136	3.058	33.3	20	R
Hexachloroethane	5.452	0.20	5	0	109	40-120	3.288	49.5	20	R
Indeno(1,2,3-cd)pyrene	5.486	0.20	5	0	110	41-128	4.139	28	20	R
Isophorone	5.052	0.20	5	0	101	40-121	3.784	28.7	20	R
N-Nitrosodi-n-propylamine	5.031	0.20	5	0	101	40-120	3.119	46.9	20	R
N-Nitrosodiphenylamine	4.089	0.20	5	0	81.8	40-125	3.004	30.6	20	R
Naphthalene	4.772	0.20	5	0	95.4	45-120	3.641	26.9	20	R
Nitrobenzene	4.498	0.20	5	0	90	44-120	3.424	27.1	20	R
Pentachlorophenol	4.231	0.20	5	0	84.6	19-121	1.778	81.7	20	R
Phenanthrene	4.776	0.20	5	0	95.5	45-121	3.441	32.5	20	R
Phenol	5.821	0.20	5	0	116	20-124	3.804	41.9	20	R
Pyrene	5.019	0.20	5	0	100	40-130	3.689	30.6	20	R
Surr: 2,4,6-Tribromophenol	3.764	0.20	5	0	75.3	34-129	3.024	21.8	20	R
Surr: 2-Fluorobiphenyl	4.404	0.20	5	0	88.1	40-125	3.281	29.2	20	R
Surr: 2-Fluorophenol	4.492	0.20	5	0	89.8	20-120	2.693	50.1	20	R
Surr: 4-Terphenyl-d14	4.061	0.20	5	0	81.2	40-135	3.022	29.3	20	R
Surr: Nitrobenzene-d5	4.367	0.20	5	0	87.3	41-120	3.319	27.3	20	R
Surr: Phenol-d6	4.736	0.20	5	0	94.7	20-120	3.065	42.8	20	R

The following samples were analyzed in this batch:

0906543-01F	0906543-02F	0906543-03F
0906543-04F	0906543-05F	0906543-06F
0906543-08F	0906543-09F	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78545 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-062609-R78545 Units: µg/L Analysis Date: 6/26/2009 11:16 AM
 Client ID: Run ID: VOA1_090626A SeqNo: 1706384 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
Naphthalene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906543

Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78545** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0						
Trichloroethene	ND	5.0						
Vinyl chloride	ND	2.0						
Xylenes, Total	ND	15						
Surr: 1,2-Dichloroethane-d4	47.01	5.0	50	0	94	70-125	0	
Surr: 4-Bromofluorobenzene	48.04	5.0	50	0	96.1	72-125	0	
Surr: Dibromofluoromethane	51.96	5.0	50	0	104	71-125	0	
Surr: Toluene-d8	46.13	5.0	50	0	92.3	75-125	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78545 Instrument ID VOA1 Method: SW8260

LCS Sample ID: VLCSW-062609-R78545 Units: µg/L Analysis Date: 6/26/2009 10:25 AM

Client ID: Run ID: VOA1_090626A SeqNo: 1706383 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.23	5.0	50	0	98.5	80-120	0			
1,1,2,2-Tetrachloroethane	48.69	5.0	50	0	97.4	72-120	0			
1,1,2-Trichloroethane	44.03	5.0	50	0	88.1	80-120	0			
1,1-Dichloroethane	51.13	5.0	50	0	102	76-120	0			
1,1-Dichloroethene	50.71	5.0	50	0	101	73-124	0			
1,2,4-Trimethylbenzene	52.57	5.0	50	0	105	68-123	0			
1,2-Dibromoethane	45.12	5.0	50	0	90.2	80-120	0			
1,2-Dichloroethane	50.26	5.0	50	0	101	78-120	0			
1,2-Dichloropropane	49	5.0	50	0	98	80-120	0			
1,3,5-Trimethylbenzene	52.42	5.0	50	0	105	80-120	0			
2-Butanone	101.4	10	100	0	101	58-132	0			
2-Hexanone	93.9	10	100	0	93.9	61-130	0			
4-Isopropyltoluene	49.17	5.0	50	0	98.3	79-120	0			
4-Methyl-2-pentanone	96.23	10	100	0	96.2	65-127	0			
Acetone	103	10	100	0	103	59-137	0			
Benzene	49.14	5.0	50	0	98.3	73-121	0			
Bromodichloromethane	50.01	5.0	50	0	100	80-120	0			
Bromoform	47.68	5.0	50	0	95.4	79-120	0			
Bromomethane	47.11	5.0	50	0	94.2	66-137	0			
Carbon disulfide	98.67	10	100	0	98.7	68-141	0			
Carbon tetrachloride	51.13	5.0	50	0	102	75-124	0			
Chlorobenzene	48.73	5.0	50	0	97.5	80-120	0			
Chloroethane	46.45	5.0	50	0	92.9	76-121	0			
Chloroform	50.58	5.0	50	0	101	80-120	0			
Chloromethane	47.89	5.0	50	0	95.8	67-123	0			
cis-1,2-Dichloroethene	48.32	5.0	50	0	96.6	78-120	0			
cis-1,3-Dichloropropene	51.31	5.0	50	0	103	80-120	0			
Dibromochloromethane	50.35	5.0	50	0	101	80-120	0			
Ethylbenzene	45.39	5.0	50	0	90.8	80-120	0			
Isopropylbenzene	44.61	5.0	50	0	89.2	80-120	0			
m,p-Xylene	94.66	10	100	0	94.7	78-121	0			
Methyl tert-butyl ether	54.85	5.0	50	0	110	73-121	0			
Methylene chloride	46.51	10	50	0	93	65-133	0			
n-Butylbenzene	49.4	5.0	50	0	98.8	77-120	0			
n-Propylbenzene	50.91	5.0	50	0	102	78-120	0			
Naphthalene	50.65	5.0	50	0	101	65-127	0			
o-Xylene	47.2	5.0	50	0	94.4	80-120	0			
sec-Butylbenzene	53.01	5.0	50	0	106	78-120	0			
Styrene	45.25	5.0	50	0	90.5	80-120	0			
Tetrachloroethene	45.95	5.0	50	0	91.9	79-120	0			
Toluene	43.72	5.0	50	0	87.4	80-120	0			
trans-1,2-Dichloroethene	50.65	5.0	50	0	101	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906543

Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78545**

Instrument ID **VOA1**

Method: **SW8260**

trans-1,3-Dichloropropene	52.83	5.0	50	0	106	80-120	0
Trichloroethene	53.37	5.0	50	0	107	80-120	0
Vinyl chloride	46.94	2.0	50	0	93.9	70-127	0
Xylenes, Total	141.9	15	150	0	94.6	80-120	0
Surr: 1,2-Dichloroethane-d4	52.37	5.0	50	0	105	70-125	0
Surr: 4-Bromofluorobenzene	48.74	5.0	50	0	97.5	72-125	0
Surr: Dibromofluoromethane	50.63	5.0	50	0	101	71-125	0
Surr: Toluene-d8	46.75	5.0	50	0	93.5	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78545 Instrument ID VOA1 Method: SW8260

MS Sample ID: 0906566-09AMS Units: µg/L Analysis Date: 6/26/2009 12:57 PM

Client ID: Run ID: VOA1_090626A SeqNo: 1706388 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	45.46	5.0	50	0	90.9	80-120	0			
1,1,2,2-Tetrachloroethane	47.57	5.0	50	0	95.1	72-120	0			
1,1,2-Trichloroethane	45.47	5.0	50	0	90.9	80-120	0			
1,1-Dichloroethane	48.94	5.0	50	1.776	94.3	76-120	0			
1,1-Dichloroethene	96.74	5.0	50	64.75	64	73-124	0			S
1,2,4-Trimethylbenzene	47.93	5.0	50	0	95.9	68-123	0			
1,2-Dibromoethane	47.53	5.0	50	0	95.1	80-120	0			
1,2-Dichloroethane	44.7	5.0	50	0	89.4	78-120	0			
1,2-Dichloropropane	46.79	5.0	50	0	93.6	80-120	0			
1,3,5-Trimethylbenzene	46.43	5.0	50	0	92.9	80-120	0			
2-Butanone	106.5	10	100	0	107	58-132	0			
2-Hexanone	99.02	10	100	0	99	61-130	0			
4-Isopropyltoluene	43.5	5.0	50	0	87	79-120	0			
4-Methyl-2-pentanone	102.3	10	100	0	102	65-127	0			
Acetone	98.01	10	100	0	98	59-137	0			
Benzene	43.45	5.0	50	0	86.9	73-121	0			
Bromodichloromethane	46.93	5.0	50	0	93.9	80-120	0			
Bromoform	49.63	5.0	50	0	99.3	79-120	0			
Bromomethane	46.21	5.0	50	0	92.4	66-137	0			
Carbon disulfide	92.34	10	100	0	92.3	68-141	0			
Carbon tetrachloride	43.5	5.0	50	0	87	75-124	0			
Chlorobenzene	46.06	5.0	50	0	92.1	80-120	0			
Chloroethane	44.19	5.0	50	0	88.4	76-121	0			
Chloroform	48.72	5.0	50	0	97.4	80-120	0			
Chloromethane	40.33	5.0	50	0	80.7	67-123	0			
cis-1,2-Dichloroethene	51.11	5.0	50	0	102	78-120	0			
cis-1,3-Dichloropropene	50.09	5.0	50	0	100	80-120	0			
Dibromochloromethane	49.48	5.0	50	0	99	80-120	0			
Ethylbenzene	45.24	5.0	50	0	90.5	80-120	0			
Isopropylbenzene	44.43	5.0	50	0	88.9	80-120	0			
m,p-Xylene	88.62	10	100	0	88.6	78-121	0			
Methyl tert-butyl ether	52.52	5.0	50	0	105	73-121	0			
Methylene chloride	46.14	10	50	0.4314	91.4	65-133	0			
n-Butylbenzene	40.57	5.0	50	0	81.1	77-120	0			
n-Propylbenzene	46.86	5.0	50	0	93.7	78-120	0			
Naphthalene	46.63	5.0	50	0	93.3	65-127	0			
o-Xylene	45.63	5.0	50	0	91.3	80-120	0			
sec-Butylbenzene	43.22	5.0	50	0	86.4	78-120	0			
Styrene	45.96	5.0	50	0	91.9	80-120	0			
Tetrachloroethene	40.17	5.0	50	0	80.3	79-120	0			
Toluene	45.85	5.0	50	0	91.7	80-120	0			
trans-1,2-Dichloroethene	48.06	5.0	50	0	96.1	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906543

Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78545** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	47.43	5.0	50	0	94.9	80-120	0
Trichloroethene	46.52	5.0	50	0	93	80-120	0
Vinyl chloride	40.21	2.0	50	0	80.4	70-127	0
Xylenes, Total	134.3	15	150	0	89.5	80-120	0
Surr: 1,2-Dichloroethane-d4	54	5.0	50	0	108	70-125	0
Surr: 4-Bromofluorobenzene	47.86	5.0	50	0	95.7	72-125	0
Surr: Dibromofluoromethane	51.11	5.0	50	0	102	71-125	0
Surr: Toluene-d8	48.72	5.0	50	0	97.4	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78545 Instrument ID VOA1 Method: SW8260

MSD		Sample ID: 0906566-09AMSD		Units: µg/L		Analysis Date: 6/26/2009 01:22 PM				
Client ID:		Run ID: VOA1_090626A		SeqNo: 1706389		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.69	5.0	50	0	99.4	80-120	45.46	8.89	20	
1,1,2,2-Tetrachloroethane	46.59	5.0	50	0	93.2	72-120	47.57	2.08	20	
1,1,2-Trichloroethane	44.81	5.0	50	0	89.6	80-120	45.47	1.46	20	
1,1-Dichloroethane	51.12	5.0	50	1.776	98.7	76-120	48.94	4.35	20	
1,1-Dichloroethene	102.2	5.0	50	64.75	74.9	73-124	96.74	5.51	20	
1,2,4-Trimethylbenzene	49.99	5.0	50	0	100	68-123	47.93	4.21	20	
1,2-Dibromoethane	49.89	5.0	50	0	99.8	80-120	47.53	4.84	20	
1,2-Dichloroethane	51.6	5.0	50	0	103	78-120	44.7	14.3	20	
1,2-Dichloropropane	49.44	5.0	50	0	98.9	80-120	46.79	5.5	20	
1,3,5-Trimethylbenzene	47.82	5.0	50	0	95.6	80-120	46.43	2.95	20	
2-Butanone	112	10	100	0	112	58-132	106.5	5.02	20	
2-Hexanone	101.5	10	100	0	101	61-130	99.02	2.42	20	
4-Isopropyltoluene	43.94	5.0	50	0	87.9	79-120	43.5	1.02	20	
4-Methyl-2-pentanone	111.4	10	100	0	111	65-127	102.3	8.51	20	
Acetone	106.5	10	100	0	106	59-137	98.01	8.29	20	
Benzene	48.9	5.0	50	0	97.8	73-121	43.45	11.8	20	
Bromodichloromethane	48.5	5.0	50	0	97	80-120	46.93	3.29	20	
Bromoform	52.72	5.0	50	0	105	79-120	49.63	6.03	20	
Bromomethane	48.09	5.0	50	0	96.2	66-137	46.21	4	20	
Carbon disulfide	94.71	10	100	0	94.7	68-141	92.34	2.53	20	
Carbon tetrachloride	45.37	5.0	50	0	90.7	75-124	43.5	4.21	20	
Chlorobenzene	46.93	5.0	50	0	93.9	80-120	46.06	1.87	20	
Chloroethane	45.1	5.0	50	0	90.2	76-121	44.19	2.04	20	
Chloroform	49.72	5.0	50	0	99.4	80-120	48.72	2.03	20	
Chloromethane	45.44	5.0	50	0	90.9	67-123	40.33	11.9	20	
cis-1,2-Dichloroethene	53.8	5.0	50	0	108	78-120	51.11	5.13	20	
cis-1,3-Dichloropropene	52.11	5.0	50	0	104	80-120	50.09	3.95	20	
Dibromochloromethane	50.94	5.0	50	0	102	80-120	49.48	2.92	20	
Ethylbenzene	48.22	5.0	50	0	96.4	80-120	45.24	6.38	20	
Isopropylbenzene	44.74	5.0	50	0	89.5	80-120	44.43	0.711	20	
m,p-Xylene	97.81	10	100	0	97.8	78-121	88.62	9.86	20	
Methyl tert-butyl ether	57.03	5.0	50	0	114	73-121	52.52	8.24	20	
Methylene chloride	47.37	10	50	0.4314	93.9	65-133	46.14	2.63	20	
n-Butylbenzene	41.99	5.0	50	0	84	77-120	40.57	3.42	20	
n-Propylbenzene	46.59	5.0	50	0	93.2	78-120	46.86	0.581	20	
Naphthalene	49.08	5.0	50	0	98.2	65-127	46.63	5.1	20	
o-Xylene	49.17	5.0	50	0	98.3	80-120	45.63	7.46	20	
sec-Butylbenzene	46.32	5.0	50	0	92.6	78-120	43.22	6.92	20	
Styrene	48.75	5.0	50	0	97.5	80-120	45.96	5.89	20	
Tetrachloroethene	45.65	5.0	50	0	91.3	79-120	40.17	12.8	20	
Toluene	46.63	5.0	50	0	93.3	80-120	45.85	1.7	20	
trans-1,2-Dichloroethene	51.71	5.0	50	0	103	78-120	48.06	7.32	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78545** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	52.49	5.0	50	0	105	80-120	47.43	10.1	20
Trichloroethene	49.9	5.0	50	0	99.8	80-120	46.52	7.01	20
Vinyl chloride	45.11	2.0	50	0	90.2	70-127	40.21	11.5	20
Xylenes, Total	147	15	150	0	98	80-120	134.3	9.05	20
Surr: 1,2-Dichloroethane-d4	54.94	5.0	50	0	110	70-125	54	1.72	20
Surr: 4-Bromofluorobenzene	51.34	5.0	50	0	103	72-125	47.86	7.01	20
Surr: Dibromofluoromethane	54.18	5.0	50	0	108	71-125	51.11	5.83	20
Surr: Toluene-d8	50.62	5.0	50	0	101	75-125	48.72	3.83	20

The following samples were analyzed in this batch:

0906543-01A	0906543-02A	0906543-03A
0906543-04A	0906543-05A	0906543-06A
0906543-07A	0906543-08A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78552 Instrument ID VOA2 Method: SW8260

MBLK Sample ID: VBLKW-062809-R78552 Units: µg/L Analysis Date: 6/28/2009 12:52 PM
 Client ID: Run ID: VOA2_090628A SeqNo: 1706557 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
Naphthalene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78552** Instrument ID **VOA2** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0						
Trichloroethene	ND	5.0						
Vinyl chloride	ND	2.0						
Xylenes, Total	ND	15						
Surr: 1,2-Dichloroethane-d4	48.89	5.0	50	0	97.8	70-125	0	
Surr: 4-Bromofluorobenzene	48.1	5.0	50	0	96.2	72-125	0	
Surr: Dibromofluoromethane	50.46	5.0	50	0	101	71-125	0	
Surr: Toluene-d8	49.01	5.0	50	0	98	75-125	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78552 Instrument ID VOA2 Method: SW8260

LCS Sample ID: VLCSW-062809-R78552 Units: µg/L Analysis Date: 6/28/2009 11:38 AM

Client ID: Run ID: VOA2_090628A SeqNo: 1706556 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.63	5.0	50	0	97.3	80-120	0			
1,1,2,2-Tetrachloroethane	47.88	5.0	50	0	95.8	72-120	0			
1,1,2-Trichloroethane	47.76	5.0	50	0	95.5	80-120	0			
1,1-Dichloroethane	48.61	5.0	50	0	97.2	76-120	0			
1,1-Dichloroethene	49.79	5.0	50	0	99.6	73-124	0			
1,2,4-Trimethylbenzene	49.43	5.0	50	0	98.9	68-123	0			
1,2-Dibromoethane	49.23	5.0	50	0	98.5	80-120	0			
1,2-Dichloroethane	46.22	5.0	50	0	92.4	78-120	0			
1,2-Dichloropropane	48.91	5.0	50	0	97.8	80-120	0			
1,3,5-Trimethylbenzene	49.58	5.0	50	0	99.2	80-120	0			
2-Butanone	91.81	10	100	0	91.8	58-132	0			
2-Hexanone	96.56	10	100	0	96.6	61-130	0			
4-Isopropyltoluene	50.85	5.0	50	0	102	79-120	0			
4-Methyl-2-pentanone	99.31	10	100	0	99.3	65-127	0			
Acetone	97.05	10	100	0	97.1	59-137	0			
Benzene	48.7	5.0	50	0	97.4	73-121	0			
Bromodichloromethane	50.92	5.0	50	0	102	80-120	0			
Bromoform	45.94	5.0	50	0	91.9	79-120	0			
Bromomethane	53.63	5.0	50	0	107	66-137	0			
Carbon disulfide	102.1	10	100	0	102	68-141	0			
Carbon tetrachloride	48.34	5.0	50	0	96.7	75-124	0			
Chlorobenzene	47.37	5.0	50	0	94.7	80-120	0			
Chloroethane	46.87	5.0	50	0	93.7	76-121	0			
Chloroform	46.75	5.0	50	0	93.5	80-120	0			
Chloromethane	47.91	5.0	50	0	95.8	67-123	0			
cis-1,2-Dichloroethene	47.9	5.0	50	0	95.8	78-120	0			
cis-1,3-Dichloropropene	47.79	5.0	50	0	95.6	80-120	0			
Dibromochloromethane	45.87	5.0	50	0	91.7	80-120	0			
Ethylbenzene	49.68	5.0	50	0	99.4	80-120	0			
Isopropylbenzene	50.19	5.0	50	0	100	80-120	0			
m,p-Xylene	99.62	10	100	0	99.6	78-121	0			
Methyl tert-butyl ether	48.33	5.0	50	0	96.7	73-121	0			
Methylene chloride	48.14	10	50	0	96.3	65-133	0			
n-Butylbenzene	51.55	5.0	50	0	103	77-120	0			
n-Propylbenzene	49.89	5.0	50	0	99.8	78-120	0			
Naphthalene	48.15	5.0	50	0	96.3	65-127	0			
o-Xylene	49.13	5.0	50	0	98.3	80-120	0			
sec-Butylbenzene	51.04	5.0	50	0	102	78-120	0			
Styrene	49.36	5.0	50	0	98.7	80-120	0			
Tetrachloroethene	47.79	5.0	50	0	95.6	79-120	0			
Toluene	47.68	5.0	50	0	95.4	80-120	0			
trans-1,2-Dichloroethene	49.44	5.0	50	0	98.9	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78552** Instrument ID **VOA2** Method: **SW8260**

trans-1,3-Dichloropropene	45.35	5.0	50	0	90.7	80-120	0
Trichloroethene	50.23	5.0	50	0	100	80-120	0
Vinyl chloride	47.8	2.0	50	0	95.6	70-127	0
Xylenes, Total	148.7	15	150	0	99.2	80-120	0
Surr: 1,2-Dichloroethane-d4	47.52	5.0	50	0	95	70-125	0
Surr: 4-Bromofluorobenzene	48.75	5.0	50	0	97.5	72-125	0
Surr: Dibromofluoromethane	48.81	5.0	50	0	97.6	71-125	0
Surr: Toluene-d8	48.45	5.0	50	0	96.9	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78552 Instrument ID VOA2 Method: SW8260

MS Sample ID: 0906547-01AMS Units: µg/L Analysis Date: 6/28/2009 02:05 PM
 Client ID: Run ID: VOA2_090628A SeqNo: 1706559 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.26	5.0	50	0	94.5	80-120	0			
1,1,2,2-Tetrachloroethane	52.89	5.0	50	0	106	72-120	0			
1,1,2-Trichloroethane	51.39	5.0	50	0	103	80-120	0			
1,1-Dichloroethane	47.48	5.0	50	0	95	76-120	0			
1,1-Dichloroethene	47.1	5.0	50	0	94.2	73-124	0			
1,2,4-Trimethylbenzene	49.22	5.0	50	0	98.4	68-123	0			
1,2-Dibromoethane	53.28	5.0	50	0	107	80-120	0			
1,2-Dichloroethane	49.73	5.0	50	0	99.5	78-120	0			
1,2-Dichloropropane	48.61	5.0	50	0	97.2	80-120	0			
1,3,5-Trimethylbenzene	48.66	5.0	50	0	97.3	80-120	0			
2-Butanone	106.3	10	100	0	106	58-132	0			
2-Hexanone	108	10	100	0	108	61-130	0			
4-Isopropyltoluene	49.46	5.0	50	0	98.9	79-120	0			
4-Methyl-2-pentanone	110.7	10	100	0	111	65-127	0			
Acetone	103.9	10	100	0	104	59-137	0			
Benzene	49.22	5.0	50	0	98.4	73-121	0			
Bromodichloromethane	54.11	5.0	50	0	108	80-120	0			
Bromoform	51.07	5.0	50	0	102	79-120	0			
Bromomethane	55.81	5.0	50	0	112	66-137	0			
Carbon disulfide	97.14	10	100	0	97.1	68-141	0			
Carbon tetrachloride	47.01	5.0	50	0	94	75-124	0			
Chlorobenzene	48.37	5.0	50	0	96.7	80-120	0			
Chloroethane	45.65	5.0	50	0	91.3	76-121	0			
Chloroform	50.17	5.0	50	0	100	80-120	0			
Chloromethane	48.09	5.0	50	0	96.2	67-123	0			
cis-1,2-Dichloroethene	53.01	5.0	50	0	106	78-120	0			
cis-1,3-Dichloropropene	49.34	5.0	50	0	98.7	80-120	0			
Dibromochloromethane	49.83	5.0	50	0	99.7	80-120	0			
Ethylbenzene	49.11	5.0	50	0	98.2	80-120	0			
Isopropylbenzene	49.1	5.0	50	0	98.2	80-120	0			
m,p-Xylene	98.7	10	100	0	98.7	78-121	0			
Methyl tert-butyl ether	49.84	5.0	50	0	99.7	73-121	0			
Methylene chloride	50.22	10	50	0	100	65-133	0			
n-Butylbenzene	50.16	5.0	50	0	100	77-120	0			
n-Propylbenzene	48.48	5.0	50	0	97	78-120	0			
Naphthalene	50.7	5.0	50	0	101	65-127	0			
o-Xylene	49.52	5.0	50	0	99	80-120	0			
sec-Butylbenzene	48.43	5.0	50	0	96.9	78-120	0			
Styrene	50.71	5.0	50	0	101	80-120	0			
Tetrachloroethene	45.89	5.0	50	0	91.8	79-120	0			
Toluene	47.65	5.0	50	0	95.3	80-120	0			
trans-1,2-Dichloroethene	48.33	5.0	50	0	96.7	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78552** Instrument ID **VOA2** Method: **SW8260**

trans-1,3-Dichloropropene	47.27	5.0	50	0	94.5	80-120	0
Trichloroethene	49.69	5.0	50	0	99.4	80-120	0
Vinyl chloride	45.21	2.0	50	0	90.4	70-127	0
Xylenes, Total	148.2	15	150	0	98.8	80-120	0
Surr: 1,2-Dichloroethane-d4	49.41	5.0	50	0	98.8	70-125	0
Surr: 4-Bromofluorobenzene	49.83	5.0	50	0	99.7	72-125	0
Surr: Dibromofluoromethane	51.91	5.0	50	0	104	71-125	0
Surr: Toluene-d8	50	5.0	50	0	100	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78552 Instrument ID VOA2 Method: SW8260

MSD Sample ID: 0906547-01AMSD Units: µg/L Analysis Date: 6/28/2009 02:54 PM

Client ID: Run ID: VOA2_090628A SeqNo: 1706561 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.65	5.0	50	0	93.3	80-120	47.26	1.31	20	
1,1,2,2-Tetrachloroethane	53.39	5.0	50	0	107	72-120	52.89	0.947	20	
1,1,2-Trichloroethane	50.91	5.0	50	0	102	80-120	51.39	0.945	20	
1,1-Dichloroethane	47.24	5.0	50	0	94.5	76-120	47.48	0.5	20	
1,1-Dichloroethene	46.82	5.0	50	0	93.6	73-124	47.1	0.598	20	
1,2,4-Trimethylbenzene	48.13	5.0	50	0	96.3	68-123	49.22	2.24	20	
1,2-Dibromoethane	53.26	5.0	50	0	107	80-120	53.28	0.0411	20	
1,2-Dichloroethane	49.05	5.0	50	0	98.1	78-120	49.73	1.38	20	
1,2-Dichloropropane	49.92	5.0	50	0	99.8	80-120	48.61	2.65	20	
1,3,5-Trimethylbenzene	47.11	5.0	50	0	94.2	80-120	48.66	3.23	20	
2-Butanone	103.6	10	100	0	104	58-132	106.3	2.57	20	
2-Hexanone	107.5	10	100	0	107	61-130	108	0.527	20	
4-Isopropyltoluene	46.95	5.0	50	0	93.9	79-120	49.46	5.21	20	
4-Methyl-2-pentanone	107.6	10	100	0	108	65-127	110.7	2.83	20	
Acetone	99.3	10	100	0	99.3	59-137	103.9	4.52	20	
Benzene	48.95	5.0	50	0	97.9	73-121	49.22	0.564	20	
Bromodichloromethane	53.7	5.0	50	0	107	80-120	54.11	0.763	20	
Bromoform	51.69	5.0	50	0	103	79-120	51.07	1.21	20	
Bromomethane	53.11	5.0	50	0	106	66-137	55.81	4.95	20	
Carbon disulfide	96.32	10	100	0	96.3	68-141	97.14	0.848	20	
Carbon tetrachloride	45.69	5.0	50	0	91.4	75-124	47.01	2.85	20	
Chlorobenzene	48.4	5.0	50	0	96.8	80-120	48.37	0.0621	20	
Chloroethane	45.49	5.0	50	0	91	76-121	45.65	0.343	20	
Chloroform	49.98	5.0	50	0	100	80-120	50.17	0.395	20	
Chloromethane	47.59	5.0	50	0	95.2	67-123	48.09	1.06	20	
cis-1,2-Dichloroethene	38.48	5.0	50	0	77	78-120	53.01	31.8	20	SR
cis-1,3-Dichloropropene	49.23	5.0	50	0	98.5	80-120	49.34	0.227	20	
Dibromochloromethane	49.92	5.0	50	0	99.8	80-120	49.83	0.186	20	
Ethylbenzene	48.98	5.0	50	0	98	80-120	49.11	0.266	20	
Isopropylbenzene	48	5.0	50	0	96	80-120	49.1	2.28	20	
m,p-Xylene	98.69	10	100	0	98.7	78-121	98.7	0.0119	20	
Methyl tert-butyl ether	49.81	5.0	50	0	99.6	73-121	49.84	0.0579	20	
Methylene chloride	49.43	10	50	0	98.9	65-133	50.22	1.59	20	
n-Butylbenzene	46.48	5.0	50	0	93	77-120	50.16	7.61	20	
n-Propylbenzene	46.96	5.0	50	0	93.9	78-120	48.48	3.17	20	
Naphthalene	50.01	5.0	50	0	100	65-127	50.7	1.36	20	
o-Xylene	49.32	5.0	50	0	98.6	80-120	49.52	0.389	20	
sec-Butylbenzene	45.92	5.0	50	0	91.8	78-120	48.43	5.32	20	
Styrene	50.1	5.0	50	0	100	80-120	50.71	1.22	20	
Tetrachloroethane	45.24	5.0	50	0	90.5	79-120	45.89	1.43	20	
Toluene	47.88	5.0	50	0	95.8	80-120	47.65	0.481	20	
trans-1,2-Dichloroethene	48.29	5.0	50	0	96.6	78-120	48.33	0.0891	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906543

QC BATCH REPORT

Project: Navajo Lea Refinery Semi-Annual

Batch ID: R78552		Instrument ID VOA2			Method: SW8260					
trans-1,3-Dichloropropene	47.5	5.0	50	0	95	80-120	47.27	0.493	20	
Trichloroethene	48.79	5.0	50	0	97.6	80-120	49.69	1.83	20	
Vinyl chloride	44.78	2.0	50	0	89.6	70-127	45.21	0.941	20	
Xylenes, Total	148	15	150	0	98.7	80-120	148.2	0.138	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	48.05	5.0	50	0	96.1	70-125	49.41	2.78	20	
<i>Surr: 4-Bromofluorobenzene</i>	49.85	5.0	50	0	99.7	72-125	49.83	0.0553	20	
<i>Surr: Dibromofluoromethane</i>	51.31	5.0	50	0	103	71-125	51.91	1.18	20	
<i>Surr: Toluene-d8</i>	49.43	5.0	50	0	98.9	75-125	50	1.16	20	

The following samples were analyzed in this batch:

0906543-09A	0906543-10A	0906543-11A
0906543-12A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78268 Instrument ID WetChem Method: SM4500H+ B

LCS Sample ID: WLCSW1-062209-R78268 Units: pH units Analysis Date: 6/22/2009 01:00 PM

Client ID: Run ID: BALANCE1_090622A SeqNo: 1701043 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	5.98	0.10	6	0	99.7	90-110	0			

DUP Sample ID: 0906543-01edup Units: pH units Analysis Date: 6/22/2009 01:00 PM

Client ID: MW-6 Run ID: BALANCE1_090622A SeqNo: 1701054 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.8	0.10	0	0	0	0-0	6.78	0.295	20	H

The following samples were analyzed in this batch:

0906543-01E	0906543-02E	0906543-03E
0906543-04E	0906543-05E	0906543-06E
0906543-07E	0906543-08E	0906543-09E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78307** Instrument ID **WetChem** Method: **M2510 B**

MBLK Sample ID: **WBLKW1-062209-R78307** Units: **µmhos/cm** Analysis Date: **6/22/2009 10:00 AM**
Client ID: Run ID: **WETCHEM_090622D** SeqNo: **1701427** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-062209-R78307** Units: **µmhos/cm** Analysis Date: **6/22/2009 10:00 AM**
Client ID: Run ID: **WETCHEM_090622D** SeqNo: **1701428** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1420	1.0	1413	0	100	80-120	0			

DUP Sample ID: **0906543-01edup** Units: **µmhos/cm** Analysis Date: **6/22/2009 10:00 AM**
Client ID: **MW-6** Run ID: **WETCHEM_090622D** SeqNo: **1701439** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1370	1.0	0	0	0		1370	0	20	

The following samples were analyzed in this batch:

0906543-01E	0906543-02E	0906543-03E
0906543-04E	0906543-05E	0906543-06E
0906543-07E	0906543-08E	0906543-09E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78375** Instrument ID **Balance1** Method: **M2540C**

MBLK Sample ID: **BLANK-R78375** Units: **mg/L** Analysis Date: **6/23/2009 03:00 PM**

Client ID: Run ID: **BALANCE1_090623B** SeqNo: **1702965** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	ND	10								

LCS Sample ID: **LCS-R78375** Units: **mg/L** Analysis Date: **6/23/2009 03:00 PM**

Client ID: Run ID: **BALANCE1_090623B** SeqNo: **1702966** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	938	10	1000	0	93.8	85-115	0			

DUP Sample ID: **0906508-07ADUP** Units: **mg/L** Analysis Date: **6/23/2009 03:00 PM**

Client ID: Run ID: **BALANCE1_090623B** SeqNo: **1702952** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	806	10	0	0	0	0-0	736	9.08	20	

The following samples were analyzed in this batch:

0906543-01E	0906543-02E	0906543-03E
0906543-04E	0906543-05E	0906543-06E
0906543-07E	0906543-08E	0906543-09E

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78376 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW1-062309-R78376 Units: mg/L Analysis Date: 6/23/2009 10:30 AM

Client ID: Run ID: ICS3000_090623A SeqNo: 1702996 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	0.50								
Surr: Selenate (surr)	4.78	0.10	5	0	95.6	85-115	0			

LCS Sample ID: WLCSW1-062309-R78376 Units: mg/L Analysis Date: 6/23/2009 10:53 AM

Client ID: Run ID: ICS3000_090623A SeqNo: 1702998 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.46	0.50	20	0	102	90-110	0			
Fluoride	4.211	0.10	4	0	105	90-110	0			
Sulfate	20.03	0.50	20	0	100	90-110	0			
Surr: Selenate (surr)	4.693	0.10	5	0	93.9	85-115	0			

MS Sample ID: 0906573-01AMS Units: mg/L Analysis Date: 6/23/2009 12:03 PM

Client ID: Run ID: ICS3000_090623A SeqNo: 1703003 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	698.3	2.5	50	662.3	72	80-120	0			SEO
Fluoride	10.37	0.50	10	0.109	103	80-120	0			
Sulfate	1432	2.5	50	1425	14.1	80-120	0			SEO
Surr: Selenate (surr)	24.62	0.50	25	0	98.5	85-115	0			

MS Sample ID: 0906540-05AMS Units: mg/L Analysis Date: 6/23/2009 03:32 PM

Client ID: Run ID: ICS3000_090623A SeqNo: 1703023 Prep Date: DF: 1000

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11910	500	10000	974.1	109	80-120	0			
Fluoride	2274	100	2000	-33.7	115	80-120	0			
Sulfate	24340	500	10000	12620	117	80-120	0			
Surr: Selenate (surr)	5455	100	5000	0	109	85-115	0			

MSD Sample ID: 0906573-01AMSD Units: mg/L Analysis Date: 6/23/2009 12:26 PM

Client ID: Run ID: ICS3000_090623A SeqNo: 1703005 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	698	2.5	50	662.3	71.5	80-120	698.3	0.0384	20	SEO
Fluoride	10.37	0.50	10	0.109	103	80-120	10.37	0.0482	20	
Sulfate	1433	2.5	50	1425	15.5	80-120	1432	0.0505	20	SEO
Surr: Selenate (surr)	24.66	0.50	25	0	98.6	85-115	24.62	0.142	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78376 Instrument ID ICS3000 Method: E300

MSD Sample ID: 0906540-05AMSD Units: mg/L Analysis Date: 6/23/2009 03:55 PM

Client ID: Run ID: ICS3000_090623A SeqNo: 1703026 Prep Date: DF: 1000

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11900	500	10000	974.1	109	80-120	11910	0.154	20	
Fluoride	2269	100	2000	-33.7	115	80-120	2274	0.22	20	
Sulfate	24330	500	10000	12620	117	80-120	24340	0.0588	20	
Surr: Selenate (surr)	5452	100	5000	0	109	85-115	5455	0.044	20	

The following samples were analyzed in this batch:

0906543-01E	0906543-02E	0906543-03E
0906543-04E	0906543-05E	0906543-06E
0906543-07E	0906543-08E	0906543-09E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78443** Instrument ID **ICS3000** Method: **E300**

MBLK Sample ID: **WBLKW1-062409-R78443** Units: **mg/L** Analysis Date: **6/24/2009 10:26 AM**

Client ID: Run ID: **ICS3000_090624A** SeqNo: **1704347** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Surr: Selenate (surr)	4.697	0.10	5	0	93.9	85-115	0			

LCS Sample ID: **WLCSW1-062409-R78443** Units: **mg/L** Analysis Date: **6/24/2009 10:49 AM**

Client ID: Run ID: **ICS3000_090624A** SeqNo: **1704348** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.44	0.50	20	0	102	90-110	0			
Sulfate	19.97	0.50	20	0	99.9	90-110	0			
Surr: Selenate (surr)	4.682	0.10	5	0	93.6	85-115	0			

MSD Sample ID: **0906543-09EMS** Units: **mg/L** Analysis Date: **6/24/2009 03:38 PM**

Client ID: **RW-1** Run ID: **ICS3000_090624A** SeqNo: **1704360** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	84.72	2.5	50	35.22	99	80-120	0			
Sulfate	119.4	2.5	50	70.78	97.3	80-120	0			
Surr: Selenate (surr)	24.05	0.50	25	0	96.2	85-115	0			

MSD Sample ID: **0906543-09EMSD** Units: **mg/L** Analysis Date: **6/24/2009 04:02 PM**

Client ID: **RW-1** Run ID: **ICS3000_090624A** SeqNo: **1704361** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	84.57	2.5	50	35.22	98.7	80-120	84.72	0.18	20	
Sulfate	119.3	2.5	50	70.78	97.1	80-120	119.4	0.0947	20	
Surr: Selenate (surr)	24.03	0.50	25	0	96.1	85-115	24.05	0.0707	20	

MSD Sample ID: **0906543-06EMS** Units: **mg/L** Analysis Date: **6/24/2009 04:25 PM**

Client ID: **Duplicate #1** Run ID: **ICS3000_090624A** SeqNo: **1704362** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	238.2	2.5	50	167.9	141	80-120	0			S
Sulfate	146.3	2.5	50	90.37	112	80-120	0			
Surr: Selenate (surr)	25.15	0.50	25	0	101	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906543
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78443** Instrument ID **ICS3000** Method: **E300**

MSD Sample ID: **0906543-06EMSD** Units: **mg/L** Analysis Date: **6/24/2009 04:48 PM**
Client ID: **Duplicate #1** Run ID: **ICS3000_090624A** SeqNo: **1704363** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	238.5	2.5	50	167.9	141	80-120	238.2	0.13	20	S
Sulfate	147	2.5	50	90.37	113	80-120	146.3	0.446	20	
<i>Surr: Selenate (surr)</i>	25.12	0.50	25	0	100	85-115	25.15	0.111	20	

The following samples were analyzed in this batch:

0906543-01E	0906543-02E	0906543-03E
0906543-04E	0906543-05E	0906543-06E
0906543-07E	0906543-08E	0906543-09E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78452 Instrument ID ICS3K2 Method: E300

MBLK		Sample ID: WBLKW4+-062409-R78452				Units: mg/L		Analysis Date: 6/24/2009 06:11 PM		
Client ID:		Run ID: ICS3K2_090624B				SeqNo: 1704492		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	0.03	0.10								J
Surr: Selenate (surr)	4.336	0.10	5	0	86.7	85-115	0			

LCS		Sample ID: WLC5W4+-062409-R78452				Units: mg/L		Analysis Date: 6/24/2009 06:34 PM		
Client ID:		Run ID: ICS3K2_090624B				SeqNo: 1704493		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.006	0.10	8	0	100	90-110	0			
Surr: Selenate (surr)	4.703	0.10	5	0	94.1	85-115	0			

LCSD		Sample ID: WLC5DW4+-062409-R78452				Units: mg/L		Analysis Date: 6/24/2009 06:57 PM		
Client ID:		Run ID: ICS3K2_090624B				SeqNo: 1704494		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.16	0.10	8	0	102	90-110	8.006	1.91	20	
Surr: Selenate (surr)	4.766	0.10	5	0	95.3	85-115	4.703	1.33	20	

MS		Sample ID: 0906543-08CMS				Units: mg/L		Analysis Date: 6/24/2009 11:32 PM		
Client ID: MW #7		Run ID: ICS3K2_090624B				SeqNo: 1704505		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.494	0.10	4	1.665	95.7	80-120	0			
Surr: Selenate (surr)	4.975	0.10	5	0	99.5	85-115	0			

MS		Sample ID: 0906543-09CMS				Units: mg/L		Analysis Date: 6/25/2009 12:41 AM		
Client ID: RW-1		Run ID: ICS3K2_090624B				SeqNo: 1704508		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.451	0.10	4	1.616	95.9	80-120	0			
Surr: Selenate (surr)	4.983	0.10	5	0	99.7	85-115	0			

MS		Sample ID: 0906513-04CMS				Units: mg/L		Analysis Date: 6/25/2009 10:23 AM		
Client ID:		Run ID: ICS3K2_090624B				SeqNo: 1704519		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	4.123	0.10	4	0.244	97	80-120	0			
Surr: Selenate (surr)	4.959	0.10	5	0	99.2	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78452 Instrument ID ICS3K2 Method: E300

MSD Sample ID: 0906543-08CMSD Units: mg/L Analysis Date: 6/24/2009 11:55 PM
 Client ID: MW #7 Run ID: ICS3K2_090624B SeqNo: 1704506 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.481	0.10	4	1.665	95.4	80-120	5.494	0.237	20	
Surr: Selenate (surr)	4.976	0.10	5	0	99.5	85-115	4.975	0.0201	20	

MSD Sample ID: 0906543-09CMSD Units: mg/L Analysis Date: 6/25/2009 01:04 AM
 Client ID: RW-1 Run ID: ICS3K2_090624B SeqNo: 1704509 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.411	0.10	4	1.616	94.9	80-120	5.451	0.737	20	
Surr: Selenate (surr)	4.988	0.10	5	0	99.8	85-115	4.983	0.1	20	

MSD Sample ID: 0906513-04CMSD Units: mg/L Analysis Date: 6/25/2009 10:46 AM
 Client ID: Run ID: ICS3K2_090624B SeqNo: 1704520 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	4.156	0.10	4	0.244	97.8	80-120	4.123	0.797	20	
Surr: Selenate (surr)	5.02	0.10	5	0	100	85-115	4.959	1.22	20	

The following samples were analyzed in this batch:

0906543-01C	0906543-02C	0906543-03C
0906543-04C	0906543-05C	0906543-06C
0906543-07C	0906543-08C	0906543-09C

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78629** Instrument ID **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-063009-R78629** Units: **mg/L** Analysis Date: **6/30/2009 12:00 PM**
 Client ID: Run ID: **WETCHEM_090630E** SeqNo: **1708023** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-063009-R78629** Units: **mg/L** Analysis Date: **6/30/2009 12:00 PM**
 Client ID: Run ID: **WETCHEM_090630E** SeqNo: **1708024** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	964	5.0	1000	0	96.4	80-120	0			
Alkalinity, Total (As CaCO3)	964	5.0	1000	0	96.4	80-120	0			

DUP. Sample ID: **0906569-01EDUP** Units: **mg/L** Analysis Date: **6/30/2009 12:00 PM**
 Client ID: Run ID: **WETCHEM_090630E** SeqNo: **1708036** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	323	5.0	0	0	0	0-0	328	1.54	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	323	5.0	0	0	0	0-0	328	1.54	20	

The following samples were analyzed in this batch:

0906543-01E	0906543-02E	0906543-03E
0906543-06E	0906543-07E	

Client: Navajo Refining Company
 Work Order: 0906543
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78631 Instrument ID WetChem Method: SM2320B

MBLK Sample ID: WBLKW1-063009-R78631 Units: mg/L Analysis Date: 6/30/2009 03:00 PM

Client ID: Run ID: WETCHEM_090630F SeqNo: 1708065 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: WLC SW1-063009-R78631 Units: mg/L Analysis Date: 6/30/2009 03:00 PM

Client ID: Run ID: WETCHEM_090630F SeqNo: 1708066 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	981	5.0	1000	0	98.1	80-120	0			
Alkalinity, Total (As CaCO3)	981	5.0	1000	0	98.1	80-120	0			

DUP Sample ID: 0906569-02EDUP Units: mg/L Analysis Date: 6/30/2009 03:00 PM

Client ID: Run ID: WETCHEM_090630F SeqNo: 1708073 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	168	5.0	0	0	0	0-0	168	0	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	168	5.0	0	0	0	0-0	168	0	20	

The following samples were analyzed in this batch:

0906543-04E	0906543-05E	0906543-08E
0906543-09E		

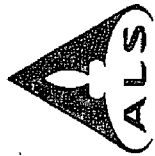
Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
WorkOrder: 0906543

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
µmhos/cm	
mg/L	Milligrams per Liter
pH units	



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Chain of Custody Form

☐ **ALS Laboratory Group**
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

Page 1 of 1

Customer Information				Project Information				ALS Project Manager: <u>ALS Work Order #:</u> <u>00538</u>															
Purchase Order				Navajo Artesia Refinery Semi-Annual				Parameter/Method Request for Analysis															
Work Order				LGA				VOC (8260) Select															
Company Name				Navajo Refining Company				TOTAL Mercury															
Send Report To				Darrell Moore				SVOC (8270) LL TCL															
Address				P.O. Box 159				Dissolved Metals (6020/7000) Select															
City/State/Zip				Artesia, NM 88211				Anions (300) Cl, F, SO4, NO3, NO2															
Phone				(515) 748-3311				Alkalinity															
Fax				(515) 748-5421				pH/Specific Conductivity															
E-Mail Address				dgboyer@SESI-NM.com				TDS															
Sample Description				Time				Matrix				Pres				# Bottles				Cations			
MW #6				06-18-09 1240				120				1238				9				X			
MW #8				06-18-09 1430				}				}				9				X			
MW #11				06-18-09 1515				}				}				9				X			
NORTH WELL				06-18-09 1600				}				}				9				X			
EAST WELL				06-18-09 1620				}				}				9				X			
Duplicate #1				06-19-09 1400				}				}				9				X			
MW #1				06-19-09 1515				}				}				9				X			
MW #7				06-19-09 1616				}				}				9				X			
RAW-1				06-19-09 1750				}				}				9				X			
TRIP B (RAW (3))				06-19-09 1750				}				}				9				X			
Samples (e) Please Print & Sign				Shipment Method				Required Turnaround Time: (Check Box)				Offsite				Results Due Date:							
S.S. Smith				Fed-X				Fed-X				Fed-X				Fed-X							
Relinquished by: <u>S.S. Smith</u>				Time: <u>1700</u>				Received by: <u>S.S. Smith</u>				Time: <u>1700</u>				Notes: 10 Work Days TAT.							
Relinquished by: <u>S.S. Smith</u>				Time: <u>1700</u>				Received by: <u>S.S. Smith</u>				Time: <u>1700</u>				Notes: 10 Work Days TAT.							
Logged by (Laboratory):				Time:				Time:				Time:				Time:							
Preservative Key: 1-HCl, 2-HNO3, 3-H2SO4, 4-NaOH, 5-Na2S2O3, 6-NaHSO3, 7-Other: 8-4°C, 9-5035				Time:				Time:				Time:				Time:							

☒ QC Package: (Check One Box Below)
☒ Level II Std QC
☐ Level III Std QC/RAW Data
☐ Level IV SW846/CLP
☐ Other

Copyright 2008 by ALS Laboratory Group.

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 20-Jun-09 08:45

Work Order: 0906543

Received by: RDH

Checklist completed by Robert D. Harris
eSignature

20-Jun-09
Date

Reviewed by: Jay Lynn F Thibault
eSignature

23-Jun-09
Date

Matrices: waters

Carrier name: FedEx

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☐

No ☒

Sufficient sample volume for indicated test?

Yes ☐

No ☒

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

3.7c.2.8c.3.1c

002

Cooler(s)/Kit(s):

2400,1837,2354

Water - VOA vials have zero headspace?

Yes ☒

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

-

Login Notes: Sample MW #1 amber bottles for SVOC's were broken in transit.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

This portion can be removed for Recipient's records.

6/15/09

FedEx Tracking Number

869790880571

040845

Order's
name

B Royce
F25

Phone

575 390-7767

Company

Address

703 E Clinton

Dept./Room/Suite/Room

Habbe

State

NM

ZIP

88240

Internal Billing Reference

NMU-07-003

ALS Laboratory Group

450 Stancliff Rd., Suite 210

Houston, Texas 77099

Tel. +1 281 530 5656

Fax. +1 281 530 5887

CUSTODY SEAL

Date:

6/15

Time:

17:00

Name:

JERRY J. JONES

Company:

SEI

Seal Broken By:

12/1

6/20/09

This portion can be removed for Recipient's records.

6/19/09

FedEx Tracking Number

869790880560

Order's
name

B Royce
F25

Phone

575 390-7767

Company

Address

703 E Clinton

Dept./Room/Suite/Room

Habbe

State

NM

ZIP

88240

Internal Billing Reference

NV



ALS Laboratory Group

10450 Stancliff Rd., Suite 210

Houston, Texas 77099

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Fax. +1 281 530 5887

CUSTODY SEAL

Date:

6/19/09

Time:

08:00

Name:

JERRY J. JONES

Company:

SEI

Seal Broken By:

12/1

6/20/09



ALS Laboratory Group

10450 Stancliff Rd., Suite 210

Houston, Texas 77099

Tel. +1 281 530 5656

Fax. +1 281 530 5887

CUSTODY SEAL

Date:

06-19-09

Name:

Jones

Company:

SEI

Time:

19:00

Seal Broken By:

12/1

6/20/09

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

01-Jul-2009

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Dear Darrell,

ALS Laboratory Group received 4 samples on 23-Jun-2009 09:10 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 47.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Lora Terrill

JayLynn F Thibault
Project Manager



Certificate No: T104704231-08-TX

ALS Group USA, Corp.
Part of the **ALS Laboratory Group**
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Phone: (281) 530-5656 Fax: (281) 530-5887
www.alsglobal.com www.elabi.com
A Campbell Brothers Limited Company

Client: Navajo Refining Company
 Project: Navajo Lea Refinery Semi-Annual
 Work Order: 0906569

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0906569-01	MW #2	Water		6/22/2009 08:45	6/23/2009 09:10	☐
0906569-02	South Well	Water		6/22/2009 09:20	6/23/2009 09:10	☐
0906569-03	MW #1	Water		6/22/2009 10:45	6/23/2009 09:10	☐
0906569-04	Trip Blank	Water		6/22/2009 11:30	6/23/2009 09:10	☐

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: MW #2

Lab ID: 0906569-01

Collection Date: 6/22/2009 08:45 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	6/26/2009 03:13 PM
DISSOLVED METALS			SW6020			
Aluminum	0.0657		0.0100	mg/L	1	6/30/2009 03:51 PM
Arsenic	0.0386		0.00500	mg/L	1	6/30/2009 03:51 PM
Barium	0.0803		0.00500	mg/L	1	6/30/2009 03:51 PM
Boron	0.190		0.0200	mg/L	1	6/30/2009 03:51 PM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 03:51 PM
Calcium	34.4		0.500	mg/L	1	6/30/2009 03:51 PM
Chromium	ND		0.00500	mg/L	1	6/30/2009 03:51 PM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 03:51 PM
Copper	0.00621		0.00500	mg/L	1	6/30/2009 03:51 PM
Iron	ND		0.200	mg/L	1	6/30/2009 03:51 PM
Lead	ND		0.00500	mg/L	1	6/30/2009 03:51 PM
Magnesium	6.52		0.200	mg/L	1	6/30/2009 03:51 PM
Manganese	0.00583		0.00500	mg/L	1	6/30/2009 03:51 PM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 03:51 PM
Nickel	ND		0.00500	mg/L	1	6/30/2009 03:51 PM
Potassium	2.65		0.200	mg/L	1	6/30/2009 03:51 PM
Selenium	ND		0.00500	mg/L	1	6/30/2009 03:51 PM
Silver	ND		0.00500	mg/L	1	6/30/2009 03:51 PM
Sodium	256		10.0	mg/L	50	6/30/2009 03:44 PM
Zinc	0.110		0.00500	mg/L	1	6/30/2009 03:51 PM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 01:29 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
3,4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: MW #2

Lab ID: 0906569-01

Collection Date: 6/22/2009 08:45 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 01:29 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Bis(2-ethylhexyl)phthalate	0.0017		0.00020	mg/L	1	6/30/2009 01:29 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Di-n-butyl phthalate	0.00031		0.00020	mg/L	1	6/30/2009 01:29 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Diethyl phthalate	0.00021		0.00020	mg/L	1	6/30/2009 01:29 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 01:29 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: MW #2
Collection Date: 6/22/2009 08:45 AM

Work Order: 0906569
Lab ID: 0906569-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
Surr: 2,4,6-Tribromophenol	68.2		34-129	%REC	1	6/30/2009 01:29 AM
Surr: 2-Fluorobiphenyl	63.7		40-125	%REC	1	6/30/2009 01:29 AM
Surr: 2-Fluorophenol	58.0		20-120	%REC	1	6/30/2009 01:29 AM
Surr: 4-Terphenyl-d14	60.9		40-135	%REC	1	6/30/2009 01:29 AM
Surr: Nitrobenzene-d5	53.9		41-120	%REC	1	6/30/2009 01:29 AM
Surr: Phenol-d6	61.1		20-120	%REC	1	6/30/2009 01:29 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/25/2009	Analyst: LG
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 01:29 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 08:18 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 08:18 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 08:18 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 08:18 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 08:18 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: MW #2

Lab ID: 0906569-01

Collection Date: 6/22/2009 08:45 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 08:18 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 08:18 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:18 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 08:18 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 08:18 PM
Surr: 1,2-Dichloroethane-d4	115		70-125	%REC	1	6/24/2009 08:18 PM
Surr: 4-Bromofluorobenzene	108		72-125	%REC	1	6/24/2009 08:18 PM
Surr: Dibromofluoromethane	112		71-125	%REC	1	6/24/2009 08:18 PM
Surr: Toluene-d8	109		75-125	%REC	1	6/24/2009 08:18 PM
ANIONS			E300			Analyst: IGF
Chloride	252		5.00	mg/L	10	6/25/2009 07:10 PM
Fluoride	0.765		0.100	mg/L	1	6/25/2009 06:47 PM
Sulfate	66.8		5.00	mg/L	10	6/25/2009 07:10 PM
Nitrate/Nitrite (as N)	2.69		0.100	mg/L	1	6/25/2009 01:27 AM
Surr: Selenate (surr)	101		85-115	%REC	10	6/25/2009 07:10 PM
Surr: Selenate (surr)	100		85-115	%REC	1	6/25/2009 06:47 PM
Surr: Selenate (surr)	100		85-115	%REC	1	6/25/2009 01:27 AM
ALKALINITY			SM2320B			Analyst: RPM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: MW #2

Lab ID: 0906569-01

Collection Date: 6/22/2009 08:45 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity, Bicarbonate (As CaCO ₃)	328		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 12:00 PM
Alkalinity, Total (As CaCO ₃)	328		5.00	mg/L	1	6/30/2009 12:00 PM
SPECIFIC CONDUCTIVITY						
Specific Conductivity	1,700		M2510 B 1.00	µmhos/cm	1	Analyst: TDW 6/23/2009 06:00 PM
PH						
pH	7.91	H	SM4500H+ B 0.100	pH units	1	Analyst: TDW 6/23/2009 06:00 PM
TOTAL DISSOLVED SOLIDS						
Total Dissolved Solids (Residue, Filterable)	988		M2540C 10.0	mg/L	1	Analyst: TDW 6/25/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: South Well

Lab ID: 0906569-02

Collection Date: 6/22/2009 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470			
Mercury	ND		0.000200	mg/L	1	6/26/2009 03:15 PM
DISSOLVED METALS			SW6020			
Aluminum	ND		0.0100	mg/L	1	6/30/2009 03:57 PM
Arsenic	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Barium	0.154		0.00500	mg/L	1	6/30/2009 03:57 PM
Boron	0.189		0.0200	mg/L	1	6/30/2009 03:57 PM
Cadmium	ND		0.00200	mg/L	1	6/30/2009 03:57 PM
Calcium	205		10.0	mg/L	20	6/30/2009 10:26 PM
Chromium	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Cobalt	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Copper	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Iron	ND		0.200	mg/L	1	6/30/2009 03:57 PM
Lead	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Magnesium	21.0		0.200	mg/L	1	6/30/2009 03:57 PM
Manganese	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Molybdenum	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Nickel	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Potassium	2.65		0.200	mg/L	1	6/30/2009 03:57 PM
Selenium	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Silver	ND		0.00500	mg/L	1	6/30/2009 03:57 PM
Sodium	97.3		0.200	mg/L	1	6/30/2009 03:57 PM
Zinc	0.0195		0.00500	mg/L	1	6/30/2009 03:57 PM
LOW-LEVEL SEMIVOLATILES			SW8270			
1,1'-Biphenyl	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2,4-Dimethylphenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 01:51 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: South Well

Lab ID: 0906569-02

Collection Date: 6/22/2009 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 01:51 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Bis(2-ethylhexyl)phthalate	0.0039		0.00020	mg/L	1	6/30/2009 01:51 AM
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 01:51 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: South Well
Collection Date: 6/22/2009 09:20 AM

Work Order: 0906569
Lab ID: 0906569-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
Surr: 2,4,6-Tribromophenol	58.0		34-129	%REC	1	6/30/2009 01:51 AM
Surr: 2-Fluorobiphenyl	61.4		40-125	%REC	1	6/30/2009 01:51 AM
Surr: 2-Fluorophenol	53.1		20-120	%REC	1	6/30/2009 01:51 AM
Surr: 4-Terphenyl-d14	59.3		40-135	%REC	1	6/30/2009 01:51 AM
Surr: Nitrobenzene-d5	50.9		41-120	%REC	1	6/30/2009 01:51 AM
Surr: Phenol-d6	57.4		20-120	%REC	1	6/30/2009 01:51 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/25/2009	Analyst: LG
1-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 01:51 AM
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 08:44 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 08:44 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 08:44 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 08:44 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 08:44 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners
Project: Navajo Lea Refinery Semi-Annual
Sample ID: South Well
Collection Date: 6/22/2009 09:20 AM

Work Order: 0906569
Lab ID: 0906569-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 08:44 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 08:44 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 08:44 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 08:44 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 08:44 PM
Surr: 1,2-Dichloroethane-d4	119		70-125	%REC	1	6/24/2009 08:44 PM
Surr: 4-Bromofluorobenzene	102		72-125	%REC	1	6/24/2009 08:44 PM
Surr: Dibromofluoromethane	103		71-125	%REC	1	6/24/2009 08:44 PM
Surr: Toluene-d8	107		75-125	%REC	1	6/24/2009 08:44 PM
ANIONS			E300		Analyst: IGF	
Chloride	497		10.0	mg/L	20	6/26/2009 10:08 PM
Fluoride	0.665		0.100	mg/L	1	6/25/2009 07:33 PM
Sulfate	106		5.00	mg/L	10	6/25/2009 07:56 PM
Nitrate/Nitrite (as N)	3.02		0.100	mg/L	1	6/25/2009 01:49 AM
Surr: Selenate (surr)	97.5		85-115	%REC	20	6/26/2009 10:08 PM
Surr: Selenate (surr)	99.4		85-115	%REC	1	6/25/2009 01:49 AM
Surr: Selenate (surr)	101		85-115	%REC	1	6/25/2009 07:33 PM
Surr: Selenate (surr)	99.7		85-115	%REC	10	6/25/2009 07:56 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: South Well

Lab ID: 0906569-02

Collection Date: 6/22/2009 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ALKALINITY			SM2320B			Analyst: RPM
Alkalinity, Bicarbonate (As CaCO ₃)	168		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Carbonate (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND		5.00	mg/L	1	6/30/2009 03:00 PM
Alkalinity, Total (As CaCO ₃)	168		5.00	mg/L	1	6/30/2009 03:00 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	2,130		1.00	µmhos/cm	1	6/23/2009 06:00 PM
PH			SM4500H+ B			Analyst: TDW
pH	6.99	H	0.100	pH units	1	6/23/2009 06:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	1,450		10.0	mg/L	1	6/25/2009 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: MW #1

Lab ID: 0906569-03

Collection Date: 6/22/2009 10:45 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/25/2009	Analyst: LG
1,1'-Biphenyl	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2,4,5-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2,4,6-Trichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2,4-Dichlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2,4-Dimethylphenol	0.00039		0.00020	mg/L	1	6/30/2009 02:12 AM
2,4-Dinitrophenol	ND		0.0010	mg/L	1	6/30/2009 02:12 AM
2,4-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2,6-Dinitrotoluene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2-Chloronaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2-Chlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2-Methylnaphthalene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
2-Nitrophenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
3&4-Methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
3,3'-Dichlorobenzidine	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
3-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
4,6-Dinitro-2-methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
4-Bromophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
4-Chloro-3-methylphenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
4-Chloroaniline	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
4-Chlorophenyl phenyl ether	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
4-Nitroaniline	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
4-Nitrophenol	ND		0.0010	mg/L	1	6/30/2009 02:12 AM
Acenaphthene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Acenaphthylene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Acetophenone	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Anthracene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Atrazine	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Benz(a)anthracene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Benzaldehyde	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Benzo(a)pyrene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Benzo(b)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Benzo(g,h,i)perylene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Benzo(k)fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Bis(2-chloroethoxy)methane	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Bis(2-chloroethyl)ether	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Bis(2-chloroisopropyl)ether	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Bis(2-ethylhexyl)phthalate	0.00054		0.00020	mg/L	1	6/30/2009 02:12 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners
 Project: Navajo Lea Refinery Semi-Annual
 Sample ID: MW #1
 Collection Date: 6/22/2009 10:45 AM

Work Order: 0906569
 Lab ID: 0906569-03
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Butyl benzyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Caprolactam	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Carbazole	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Chrysene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Di-n-butyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Di-n-octyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Dibenz(a,h)anthracene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Dibenzofuran	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Diethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Dimethyl phthalate	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Fluoranthene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Fluorene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Hexachlorobenzene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Hexachlorobutadiene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Hexachlorocyclopentadiene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Hexachloroethane	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Indeno(1,2,3-cd)pyrene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Isophorone	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
N-Nitrosodi-n-propylamine	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
N-Nitrosodiphenylamine	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Naphthalene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Nitrobenzene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Pentachlorophenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Phenanthrene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Phenol	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Pyrene	ND		0.00020	mg/L	1	6/30/2009 02:12 AM
Surr: 2,4,6-Tribromophenol	66.3		34-129	%REC	1	6/30/2009 02:12 AM
Surr: 2-Fluorobiphenyl	64.8		40-125	%REC	1	6/30/2009 02:12 AM
Surr: 2-Fluorophenol	62.6		20-120	%REC	1	6/30/2009 02:12 AM
Surr: 4-Terphenyl-d14	61.1		40-135	%REC	1	6/30/2009 02:12 AM
Surr: Nitrobenzene-d5	55.1		41-120	%REC	1	6/30/2009 02:12 AM
Surr: Phenol-d6	63.1		20-120	%REC	1	6/30/2009 02:12 AM
LOW-LEVEL SEMIVOLATILES			SW8270		Prep Date: 6/25/2009	Analyst: LG
1-Methylnaphthalene	0.00037		0.00020	mg/L	1	6/30/2009 02:12 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: Trip Blank

Lab ID: 0906569-04

Collection Date: 6/22/2009 11:30 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILES			SW8260			Analyst: PC
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,2-Dibromoethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,2-Dichloropropane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
2-Butanone	ND		0.010	mg/L	1	6/24/2009 07:53 PM
2-Hexanone	ND		0.010	mg/L	1	6/24/2009 07:53 PM
4-Isopropyltoluene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	6/24/2009 07:53 PM
Acetone	ND		0.010	mg/L	1	6/24/2009 07:53 PM
Benzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Bromodichloromethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Bromoform	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Bromomethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Carbon disulfide	ND		0.010	mg/L	1	6/24/2009 07:53 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Chlorobenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Chloroethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Chloroform	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Chloromethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Dibromochloromethane	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Ethylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Isopropylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
m,p-Xylene	ND		0.010	mg/L	1	6/24/2009 07:53 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Methylene chloride	ND		0.010	mg/L	1	6/24/2009 07:53 PM
n-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
n-Propylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Naphthalene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
o-Xylene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
sec-Butylbenzene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Styrene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 07-Oct-09

Client: Holly Energy Partners

Project: Navajo Lea Refinery Semi-Annual

Work Order: 0906569

Sample ID: Trip Blank

Lab ID: 0906569-04

Collection Date: 6/22/2009 11:30 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Tetrachloroethene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Toluene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Trichloroethene	ND		0.0050	mg/L	1	6/24/2009 07:53 PM
Vinyl chloride	ND		0.0020	mg/L	1	6/24/2009 07:53 PM
Xylenes, Total	ND		0.015	mg/L	1	6/24/2009 07:53 PM
Surr: 1,2-Dichloroethane-d4	122		70-125	%REC	1	6/24/2009 07:53 PM
Surr: 4-Bromofluorobenzene	106		72-125	%REC	1	6/24/2009 07:53 PM
Surr: Dibromofluoromethane	118		71-125	%REC	1	6/24/2009 07:53 PM
Surr: Toluene-d8	109		75-125	%REC	1	6/24/2009 07:53 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Laboratory Group

Date: 01-Jul-09

Client: Navajo Refining Company
Project: Navajo Lea Refinery Semi-Annual
WorkOrder: 0906569

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
µmhos/cm	
mg/L	Milligrams per Liter
pH units	

ALS Laboratory Group

Date: 01-Jul-09

Client: Navajo Refining Company
Work Order: 0906569
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **36819** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-062609-36819** Units: **mg/L** Analysis Date: **6/26/2009 02:34 PM**

Client ID: Run ID: **MERCURY_090626A** SeqNo: **1705742** Prep Date: **6/26/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020								

LCS Sample ID: **GLCSW1-062609-36819** Units: **mg/L** Analysis Date: **6/26/2009 02:36 PM**

Client ID: Run ID: **MERCURY_090626A** SeqNo: **1705743** Prep Date: **6/26/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00481	0.00020	0.005	0	96.2	85-115	0			

MS Sample ID: **0906513-04FMS** Units: **mg/L** Analysis Date: **6/26/2009 02:47 PM**

Client ID: Run ID: **MERCURY_090626A** SeqNo: **1705747** Prep Date: **6/26/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.00020	0.005	-0.000022	102	85-115	0			

MSD Sample ID: **0906513-04FMSSD** Units: **mg/L** Analysis Date: **6/26/2009 02:49 PM**

Client ID: Run ID: **MERCURY_090626A** SeqNo: **1705748** Prep Date: **6/26/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00515	0.00020	0.005	-0.000022	103	85-115	0.00509	1.17	20	

DUP Sample ID: **0906513-04FDUP** Units: **mg/L** Analysis Date: **6/26/2009 02:45 PM**

Client ID: Run ID: **MERCURY_090626A** SeqNo: **1705745** Prep Date: **6/26/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000022	0	20	

The following samples were analyzed in this batch:

0906569-01B 0906569-02B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36852 Instrument ID ICPMS02 Method: SW6020 (Dissolve)

MBLK Sample ID: MBLKW3-062909-36852 Units: mg/L Analysis Date: 6/30/2009 02:59 AM

Client ID: Run ID: ICPMS02_090629A SeqNo: 1707215 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Lead	0.0004722	0.0050								J
Magnesium	ND	0.20								
Potassium	0.1516	0.20								J
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								

LCS Sample ID: MLCSW3-062909-36852 Units: mg/L Analysis Date: 6/30/2009 03:06 AM

Client ID: Run ID: ICPMS02_090629A SeqNo: 1707219 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05204	0.0050	0.05	0	104	80-120	0			
Barium	0.0587	0.0050	0.05	0	117	80-120	0			
Cadmium	0.04887	0.0020	0.05	0	97.7	80-120	0			
Calcium	5.097	0.50	5	0	102	80-120	0			
Chromium	0.04946	0.0050	0.05	0	98.9	80-120	0			
Lead	0.05027	0.0050	0.05	0	101	80-120	0			
Magnesium	5.263	0.20	5	0	105	80-120	0			
Potassium	5.098	0.20	5	0	102	80-120	0			
Selenium	0.04922	0.0050	0.05	0	98.4	80-120	0			
Silver	0.05123	0.0050	0.05	0	102	80-120	0			

LCS Sample ID: MLCSW3-062909-36852 Units: mg/L Analysis Date: 6/30/2009 02:33 PM

Client ID: Run ID: ICPMS02_090630A SeqNo: 1708072 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	5.026	0.20	5	0	101	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36852 Instrument ID ICPMS02 Method: SW6020 (Dissolve)

MS Sample ID: 0906535-20DMS Units: mg/L Analysis Date: 6/30/2009 03:32 AM
 Client ID: Run ID: ICPMS02_090629A SeqNo: 1707228 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05457	0.0050	0.05	0.002463	104	75-125	0			
Barium	0.1135	0.0050	0.05	0.05365	120	75-125	0			
Cadmium	0.04975	0.0020	0.05	0.0003148	98.9	75-125	0			
Calcium	7.914	0.50	5	2.685	105	75-125	0			
Chromium	0.04901	0.0050	0.05	0.0002281	97.6	75-125	0			
Lead	0.05035	0.0050	0.05	0.0005099	99.7	75-125	0			
Magnesium	13.53	0.20	5	8.724	96.1	75-125	0			
Potassium	4.952	0.20	5	0.3725	91.6	75-125	0			
Selenium	0.0513	0.0050	0.05	0.001509	99.6	75-125	0			
Silver	0.05159	0.0050	0.05	0.0002785	103	75-125	0			

MS Sample ID: 0906535-20DMS Units: mg/L Analysis Date: 6/30/2009 03:05 PM
 Client ID: Run ID: ICPMS02_090630A SeqNo: 1708077 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.59	0.20	5	5.704	97.7	75-125	0			

MSD Sample ID: 0906535-20DMSD Units: mg/L Analysis Date: 6/30/2009 03:38 AM
 Client ID: Run ID: ICPMS02_090629A SeqNo: 1707231 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05178	0.0050	0.05	0.002463	98.6	75-125	0.05457	5.25	25	
Barium	0.1071	0.0050	0.05	0.05365	107	75-125	0.1135	5.8	25	
Cadmium	0.04741	0.0020	0.05	0.0003148	94.2	75-125	0.04975	4.82	25	
Calcium	7.575	0.50	5	2.685	97.8	75-125	7.914	4.38	25	
Chromium	0.04811	0.0050	0.05	0.0002281	95.8	75-125	0.04901	1.85	25	
Lead	0.04908	0.0050	0.05	0.0005099	97.1	75-125	0.05035	2.55	25	
Magnesium	13.12	0.20	5	8.724	87.9	75-125	13.53	3.08	25	
Potassium	4.805	0.20	5	0.3725	88.6	75-125	4.952	3.01	25	
Selenium	0.05193	0.0050	0.05	0.001509	101	75-125	0.0513	1.22	25	
Silver	0.05088	0.0050	0.05	0.0002785	101	75-125	0.05159	1.39	25	

MSD Sample ID: 0906535-20DMSD Units: mg/L Analysis Date: 6/30/2009 03:12 PM
 Client ID: Run ID: ICPMS02_090630A SeqNo: 1708078 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	10.22	0.20	5	5.704	90.3	75-125	10.59	3.56	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906569
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36852 Instrument ID ICPMS02 Method: SW6020 (Dissolve)

DUP Sample ID: 0906535-20DDUP Units: mg/L Analysis Date: 6/30/2009 03:19 AM
Client ID: Run ID: ICPMS02_090629A SeqNo: 1707223 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.0023	0.0050	0	0	0	0-0	0.002463	0	25	J
Barium	0.05305	0.0050	0	0	0	0-0	0.05365	1.12	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.0003148	0	25	
Calcium	2.603	0.50	0	0	0	0-0	2.685	3.1	25	
Chromium	ND	0.0050	0	0	0	0-0	0.0002281	0	25	
Lead	0.0004661	0.0050	0	0	0	0-0	0.0005099	0	25	J
Magnesium	8.46	0.20	0	0	0	0-0	8.724	3.07	25	
Potassium	0.3074	0.20	0	0	0	0-0	0.3725	19.1	25	
Selenium	ND	0.0050	0	0	0	0-0	0.001509	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.0002785	0	25	

DUP Sample ID: 0906535-20DDUP Units: mg/L Analysis Date: 6/30/2009 02:46 PM
Client ID: Run ID: ICPMS02_090630A SeqNo: 1708075 Prep Date: 6/29/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	5.427	0.20	0	0	0	0-0	5.704	4.98	25	

The following samples were analyzed in this batch:

0906569-01D 0906569-02D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36789 Instrument ID SV-2 Method: SW8270

MBLK Sample ID: SBLKW1-090625-36789 Units: µg/L Analysis Date: 6/30/2009 12:25 AM
 Client ID: Run ID: SV-2_090629A SeqNo: 1707484 Prep Date: 6/25/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
2,4-Dichlorophenol	ND	0.20								
2,4-Dimethylphenol	ND	0.20								
2,4-Dinitrophenol	ND	1.0								
2,4-Dinitrotoluene	ND	0.20								
2,6-Dinitrotoluene	ND	0.20								
2-Chloronaphthalene	ND	0.20								
2-Chlorophenol	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.20								
2-Nitroaniline	ND	0.20								
2-Nitrophenol	ND	0.20								
3&4-Methylphenol	ND	0.20								
3,3'-Dichlorobenzidine	ND	0.20								
3-Nitroaniline	ND	0.20								
4,6-Dinitro-2-methylphenol	ND	0.20								
4-Bromophenyl phenyl ether	ND	0.20								
4-Chloro-3-methylphenol	ND	0.20								
4-Chloroaniline	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
4-Nitroaniline	ND	0.20								
4-Nitrophenol	ND	1.0								
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Acetophenone	ND	0.20								
Anthracene	ND	0.20								
Atrazine	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzaldehyde	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Caprolactam	ND	0.20								
Carbazole	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906569

QC BATCH REPORT

Project: Navajo Lea Refinery Semi-Annual

Batch ID: 36789 Instrument ID SV-2 Method: SW8270

Chrysene ND 0.20

Di-n-butyl phthalate ND 0.20

Di-n-octyl phthalate ND 0.20

Dibenz(a,h)anthracene ND 0.20

Dibenzofuran ND 0.20

Diethyl phthalate ND 0.20

Dimethyl phthalate ND 0.20

Fluoranthene ND 0.20

Fluorene ND 0.20

Hexachlorobenzene ND 0.20

Hexachlorobutadiene ND 0.20

Hexachlorocyclopentadiene ND 0.20

Hexachloroethane ND 0.20

Indeno(1,2,3-cd)pyrene ND 0.20

Isophorone ND 0.20

N-Nitrosodi-n-propylamine ND 0.20

N-Nitrosodiphenylamine ND 0.20

Naphthalene ND 0.20

Nitrobenzene ND 0.20

Pentachlorophenol ND 0.20

Phenanthrene ND 0.20

Phenol ND 0.20

Pyrene ND 0.20

Surr: 2,4,6-Tribromophenol 3.498 0.20 5 0 70 34-129 0

Surr: 2-Fluorobiphenyl 3.84 0.20 5 0 76.8 40-125 0

Surr: 2-Fluorophenol 3.328 0.20 5 0 66.6 20-120 0

Surr: 4-Terphenyl-d14 3.507 0.20 5 0 70.1 40-135 0

Surr: Nitrobenzene-d5 3.297 0.20 5 0 65.9 41-120 0

Surr: Phenol-d6 3.67 0.20 5 0 73.4 20-120 0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36789 Instrument ID SV-2 Method: SW8270

LCS		Sample ID: SLCSW1-090625-36789		Units: µg/L		Analysis Date: 6/30/2009 12:46 AM				
Client ID:		Run ID: SV-2_090629A		SeqNo: 1707485		Prep Date: 6/25/2009		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	3.824	0.20	5	0	76.5	45-125	0			
2,4,5-Trichlorophenol	4.172	0.20	5	0	83.4	46-120	0			
2,4,6-Trichlorophenol	3.959	0.20	5	0	79.2	42-120	0			
2,4-Dichlorophenol	4.062	0.20	5	0	81.2	49-120	0			
2,4-Dimethylphenol	3.36	0.20	5	0	67.2	35-120	0			
2,4-Dinitrophenol	3.938	1.0	5	0	78.8	15-120	0			
2,4-Dinitrotoluene	4.048	0.20	5	0	81	50-122	0			
2,6-Dinitrotoluene	3.932	0.20	5	0	78.6	50-120	0			
2-Chloronaphthalene	4.2	0.20	5	0	84	50-120	0			
2-Chlorophenol	3.749	0.20	5	0	75	40-120	0			
2-Methylnaphthalene	4.113	0.20	5	0	82.3	50-120	0			
2-Methylphenol	3.983	0.20	5	0	79.7	45-120	0			
2-Nitroaniline	4.282	0.20	5	0	85.6	28-139	0			
2-Nitrophenol	3.818	0.20	5	0	76.4	40-120	0			
3&4-Methylphenol	3.937	0.20	5	0	78.7	35-120	0			
3,3'-Dichlorobenzidine	3.414	0.20	5	0	68.3	15-120	0			
3-Nitroaniline	3.235	0.20	5	0	64.7	30-120	0			
4,6-Dinitro-2-methylphenol	4.358	0.20	5	0	87.2	25-121	0			
4-Bromophenyl phenyl ether	4.15	0.20	5	0	83	45-120	0			
4-Chloro-3-methylphenol	3.771	0.20	5	0	75.4	47-120	0			
4-Chloroaniline	3.183	0.20	5	0	63.7	20-120	0			
4-Chlorophenyl phenyl ether	4.054	0.20	5	0	81.1	50-120	0			
4-Nitroaniline	3.583	0.20	5	0	71.7	30-133	0			
4-Nitrophenol	3.447	1.0	5	0	68.9	30-130	0			
Acenaphthene	3.942	0.20	5	0	78.8	45-120	0			
Acenaphthylene	3.896	0.20	5	0	77.9	47-120	0			
Acetophenone	3.789	0.20	5	0	75.8	40-120	0			
Anthracene	4.192	0.20	5	0	83.8	45-120	0			
Atrazine	4.116	0.20	5	0	82.3	40-130	0			
Benz(a)anthracene	4.23	0.20	5	0	84.6	40-120	0			
Benzaldehyde	3.221	0.20	5	0	64.4	35-130	0			
Benzo(a)pyrene	4.244	0.20	5	0	84.9	45-120	0			
Benzo(b)fluoranthene	4.168	0.20	5	0	83.4	50-120	0			
Benzo(g,h,i)perylene	4.156	0.20	5	0	83.1	42-127	0			
Benzo(k)fluoranthene	4.328	0.20	5	0	86.6	45-127	0			
Bis(2-chloroethoxy)methane	3.622	0.20	5	0	72.4	45-120	0			
Bis(2-chloroethyl)ether	3.64	0.20	5	0	72.8	37-121	0			
Bis(2-chloroisopropyl)ether	3.02	0.20	5	0	60.4	40-120	0			
Bis(2-ethylhexyl)phthalate	4.228	0.20	5	0	84.6	40-139	0			
Butyl benzyl phthalate	4.235	0.20	5	0	84.7	47-123	0			
Caprolactam	4.197	0.20	5	0	83.9	35-134	0			
Carbazole	4.03	0.20	5	0	80.6	42-128	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36789 Instrument ID SV-2 Method: SW8270

Chrysene	4.098	0.20	5	0	82	43-120	0
Di-n-butyl phthalate	4.211	0.20	5	0	84.2	45-123	0
Di-n-octyl phthalate	4.46	0.20	5	0	89.2	45-129	0
Dibenz(a,h)anthracene	4.128	0.20	5	0	82.6	45-125	0
Dibenzofuran	3.957	0.20	5	0	79.1	50-120	0
Diethyl phthalate	3.92	0.20	5	0	78.4	41-120	0
Dimethyl phthalate	3.942	0.20	5	0	78.8	40-122	0
Fluoranthene	4.269	0.20	5	0	85.4	45-125	0
Fluorene	4.115	0.20	5	0	82.3	49-120	0
Hexachlorobenzene	4.121	0.20	5	0	82.4	48-120	0
Hexachlorobutadiene	3.829	0.20	5	0	76.6	40-120	0
Hexachlorocyclopentadiene	3.492	0.20	5	0	69.8	34-136	0
Hexachloroethane	3.383	0.20	5	0	67.7	40-120	0
Indeno(1,2,3-cd)pyrene	4.268	0.20	5	0	85.4	41-128	0
Isophorone	3.532	0.20	5	0	70.6	40-121	0
N-Nitrosodi-n-propylamine	3.548	0.20	5	0	71	40-120	0
N-Nitrosodiphenylamine	3.965	0.20	5	0	79.3	40-125	0
Naphthalene	3.935	0.20	5	0	78.7	45-120	0
Nitrobenzene	3.434	0.20	5	0	68.7	44-120	0
Pentachlorophenol	3.802	0.20	5	0	76	19-121	0
Phenanthrene	4.172	0.20	5	0	83.4	45-121	0
Phenol	3.723	0.20	5	0	74.5	20-124	0
Pyrene	4.145	0.20	5	0	82.9	40-130	0
Surr: 2,4,6-Tribromophenol	3.673	0.20	5	0	73.5	34-129	0
Surr: 2-Fluorobiphenyl	3.657	0.20	5	0	73.1	40-125	0
Surr: 2-Fluorophenol	3.349	0.20	5	0	67	20-120	0
Surr: 4-Terphenyl-d14	3.347	0.20	5	0	66.9	40-135	0
Surr: Nitrobenzene-d5	3.175	0.20	5	0	63.5	41-120	0
Surr: Phenol-d6	3.522	0.20	5	0	70.4	20-120	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36789 Instrument ID SV-2 Method: SW8270

LCSD Sample ID: SLCS DW1-090625-36789 Units: µg/L Analysis Date: 6/30/2009 01:08 AM

Client ID: Run ID: SV-2_090629A SeqNo: 1707486 Prep Date: 6/25/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	3.736	0.20	5	0	74.7	45-125	3.824	2.33	20	
2,4,5-Trichlorophenol	3.994	0.20	5	0	79.9	46-120	4.172	4.37	20	
2,4,6-Trichlorophenol	4.043	0.20	5	0	80.9	42-120	3.959	2.1	20	
2,4-Dichlorophenol	4.01	0.20	5	0	80.2	49-120	4.062	1.29	20	
2,4-Dimethylphenol	3.294	0.20	5	0	65.9	35-120	3.36	2	20	
2,4-Dinitrophenol	4.084	1.0	5	0	81.7	15-120	3.938	3.65	20	
2,4-Dinitrotoluene	4.033	0.20	5	0	80.7	50-122	4.048	0.374	20	
2,6-Dinitrotoluene	3.927	0.20	5	0	78.5	50-120	3.932	0.123	20	
2-Chloronaphthalene	4.227	0.20	5	0	84.5	50-120	4.2	0.648	20	
2-Chlorophenol	3.876	0.20	5	0	77.5	40-120	3.749	3.33	20	
2-Methylnaphthalene	3.927	0.20	5	0	78.5	50-120	4.113	4.61	20	
2-Methylphenol	4.022	0.20	5	0	80.4	45-120	3.983	0.966	20	
2-Nitroaniline	4.223	0.20	5	0	84.5	28-139	4.282	1.4	20	
2-Nitrophenol	3.76	0.20	5	0	75.2	40-120	3.818	1.53	20	
3&4-Methylphenol	4.054	0.20	5	0	81.1	35-120	3.937	2.93	20	
3,3'-Dichlorobenzidine	3.695	0.20	5	0	73.9	15-120	3.414	7.9	20	
3-Nitroaniline	3.545	0.20	5	0	70.9	30-120	3.235	9.15	20	
4,6-Dinitro-2-methylphenol	4.301	0.20	5	0	86	25-121	4.358	1.33	20	
4-Bromophenyl phenyl ether	4.06	0.20	5	0	81.2	45-120	4.15	2.19	20	
4-Chloro-3-methylphenol	3.603	0.20	5	0	72.1	47-120	3.771	4.57	20	
4-Chloroaniline	3.62	0.20	5	0	72.4	20-120	3.183	12.8	20	
4-Chlorophenyl phenyl ether	3.858	0.20	5	0	77.2	50-120	4.054	4.95	20	
4-Nitroaniline	3.585	0.20	5	0	71.7	30-133	3.583	0.0492	20	
4-Nitrophenol	3.417	1.0	5	0	68.3	30-130	3.447	0.859	20	
Acenaphthene	3.595	0.20	5	0	71.9	45-120	3.942	9.21	20	
Acenaphthylene	3.725	0.20	5	0	74.5	47-120	3.896	4.51	20	
Acetophenone	3.709	0.20	5	0	74.2	40-120	3.789	2.15	20	
Anthracene	4.199	0.20	5	0	84	45-120	4.192	0.168	20	
Atrazine	4.047	0.20	5	0	80.9	40-130	4.116	1.69	20	
Benz(a)anthracene	4.082	0.20	5	0	81.6	40-120	4.23	3.57	20	
Benzaldehyde	3.258	0.20	5	0	65.2	35-130	3.221	1.16	20	
Benzo(a)pyrene	4.218	0.20	5	0	84.4	45-120	4.244	0.624	20	
Benzo(b)fluoranthene	4.861	0.20	5	0	97.2	50-120	4.168	15.4	20	
Benzo(g,h,i)perylene	4.275	0.20	5	0	85.5	42-127	4.156	2.82	20	
Benzo(k)fluoranthene	3.844	0.20	5	0	76.9	45-127	4.328	11.8	20	
Bis(2-chloroethoxy)methane	3.592	0.20	5	0	71.8	45-120	3.622	0.829	20	
Bis(2-chloroethyl)ether	3.722	0.20	5	0	74.4	37-121	3.64	2.22	20	
Bis(2-chloroisopropyl)ether	3.091	0.20	5	0	61.8	40-120	3.02	2.34	20	
Bis(2-ethylhexyl)phthalate	4.107	0.20	5	0	82.1	40-139	4.228	2.92	20	
Butyl benzyl phthalate	4.235	0.20	5	0	84.7	47-123	4.235	0.0137	20	
Caprolactam	4.142	0.20	5	0	82.8	35-134	4.197	1.31	20	
Carbazole	3.927	0.20	5	0	78.5	42-128	4.03	2.61	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: 36789	Instrument ID SV-2		Method: SW8270							
Chrysene	4.239	0.20	5	0	84.8	43-120	4.098	3.38	20	
Di-n-butyl phthalate	4.071	0.20	5	0	81.4	45-123	4.211	3.38	20	
Di-n-octyl phthalate	4.497	0.20	5	0	89.9	45-129	4.46	0.818	20	
Dibenz(a,h)anthracene	4.017	0.20	5	0	80.3	45-125	4.128	2.71	20	
Dibenzofuran	3.928	0.20	5	0	78.6	50-120	3.957	0.751	20	
Diethyl phthalate	3.864	0.20	5	0	77.3	41-120	3.92	1.45	20	
Dimethyl phthalate	3.915	0.20	5	0	78.3	40-122	3.942	0.686	20	
Fluoranthene	4.199	0.20	5	0	84	45-125	4.269	1.65	20	
Fluorene	3.982	0.20	5	0	79.6	49-120	4.115	3.3	20	
Hexachlorobenzene	4.038	0.20	5	0	80.8	48-120	4.121	2.02	20	
Hexachlorobutadiene	3.667	0.20	5	0	73.3	40-120	3.829	4.3	20	
Hexachlorocyclopentadiene	3.382	0.20	5	0	67.6	34-136	3.492	3.2	20	
Hexachloroethane	3.525	0.20	5	0	70.5	40-120	3.383	4.1	20	
Indeno(1,2,3-cd)pyrene	4.594	0.20	5	0	91.9	41-128	4.268	7.36	20	
Isophorone	3.609	0.20	5	0	72.2	40-121	3.532	2.15	20	
N-Nitrosodi-n-propylamine	3.604	0.20	5	0	72.1	40-120	3.548	1.55	20	
N-Nitrosodiphenylamine	4.015	0.20	5	0	80.3	40-125	3.965	1.24	20	
Naphthalene	3.919	0.20	5	0	78.4	45-120	3.935	0.408	20	
Nitrobenzene	3.351	0.20	5	0	67	44-120	3.434	2.44	20	
Pentachlorophenol	3.952	0.20	5	0	79	19-121	3.802	3.87	20	
Phenanthrene	4.147	0.20	5	0	82.9	45-121	4.172	0.601	20	
Phenol	3.784	0.20	5	0	75.7	20-124	3.723	1.62	20	
Pyrene	4.33	0.20	5	0	86.6	40-130	4.145	4.37	20	
Surr: 2,4,6-Tribromophenol	3.732	0.20	5	0	74.6	34-129	3.673	1.58	20	
Surr: 2-Fluorobiphenyl	3.582	0.20	5	0	71.6	40-125	3.657	2.07	20	
Surr: 2-Fluorophenol	3.36	0.20	5	0	67.2	20-120	3.349	0.304	20	
Surr: 4-Terphenyl-d14	3.396	0.20	5	0	67.9	40-135	3.347	1.46	20	
Surr: Nitrobenzene-d5	3.016	0.20	5	0	60.3	41-120	3.175	5.16	20	
Surr: Phenol-d6	3.636	0.20	5	0	72.7	20-120	3.522	3.18	20	

The following samples were analyzed in this batch:

0906569-01F	0906569-02F	0906569-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-062409-R78455 Units: µg/L Analysis Date: 6/24/2009 10:32 AM
 Client ID: Run ID: VOA1_090624B SeqNo: 1704552 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
2-Hexanone	ND	10								
4-Isopropyltoluene	ND	5.0								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	0.9263	5.0								J
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
Naphthalene	ND	5.0								
o-Xylene	ND	5.0								
sec-Butylbenzene	ND	5.0								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906569

QC BATCH REPORT

Project: Navajo Lea Refinery Semi-Annual

Batch ID: **R78455** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
Surr: 1,2-Dichloroethane-d4	51	5.0	50	0	102	70-125	0
Surr: 4-Bromofluorobenzene	50.51	5.0	50	0	101	72-125	0
Surr: Dibromofluoromethane	52.86	5.0	50	0	106	71-125	0
Surr: Toluene-d8	47.37	5.0	50	0	94.7	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

LCS Sample ID: VLCSW-062409-R78455 Units: µg/L Analysis Date: 6/24/2009 09:41 AM

Client ID: Run ID: VOA1_090624B SeqNo: 1704551 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	53.79	5.0	50	0	108	80-120	0			
1,1,2,2-Tetrachloroethane	44.98	5.0	50	0	90	72-120	0			
1,1,2-Trichloroethane	45.42	5.0	50	0	90.8	80-120	0			
1,1-Dichloroethane	50.55	5.0	50	0	101	76-120	0			
1,1-Dichloroethene	49.01	5.0	50	0	98	73-124	0			
1,2,4-Trimethylbenzene	50.51	5.0	50	0	101	68-123	0			
1,2-Dibromoethane	44.29	5.0	50	0	88.6	80-120	0			
1,2-Dichloroethane	49.11	5.0	50	0	98.2	78-120	0			
1,2-Dichloropropane	48.3	5.0	50	0	96.6	80-120	0			
1,3,5-Trimethylbenzene	47.98	5.0	50	0	96	80-120	0			
2-Butanone	99.09	10	100	0	99.1	58-132	0			
2-Hexanone	90.94	10	100	0	90.9	61-130	0			
4-Isopropyltoluene	49.2	5.0	50	0	98.4	79-120	0			
4-Methyl-2-pentanone	96.85	10	100	0	96.8	65-127	0			
Acetone	86.75	10	100	0	86.7	59-137	0			
Benzene	48.16	5.0	50	0	96.3	73-121	0			
Bromodichloromethane	48.07	5.0	50	0	96.1	80-120	0			
Bromoform	48.75	5.0	50	0	97.5	79-120	0			
Bromomethane	49.49	5.0	50	0	99	66-137	0			
Carbon disulfide	99.86	10	100	0	99.9	68-141	0			
Carbon tetrachloride	50.62	5.0	50	0	101	75-124	0			
Chlorobenzene	48.1	5.0	50	0	96.2	80-120	0			
Chloroethane	43.53	5.0	50	0	87.1	76-121	0			
Chloroform	48.32	5.0	50	0	96.6	80-120	0			
Chloromethane	47.53	5.0	50	0	95.1	67-123	0			
cis-1,2-Dichloroethene	50.56	5.0	50	0	101	78-120	0			
cis-1,3-Dichloropropene	49.95	5.0	50	0	99.9	80-120	0			
Dibromochloromethane	50.32	5.0	50	0	101	80-120	0			
Ethylbenzene	47.96	5.0	50	0	95.9	80-120	0			
Isopropylbenzene	49.8	5.0	50	0	99.6	80-120	0			
m,p-Xylene	92.82	10	100	0	92.8	78-121	0			
Methyl tert-butyl ether	48.35	5.0	50	0	96.7	73-121	0			
Methylene chloride	48.3	10	50	0	96.6	65-133	0			
n-Butylbenzene	47.06	5.0	50	0	94.1	77-120	0			
n-Propylbenzene	47.6	5.0	50	0	95.2	78-120	0			
Naphthalene	46.79	5.0	50	0	93.6	65-127	0			
o-Xylene	47.66	5.0	50	0	95.3	80-120	0			
sec-Butylbenzene	49.83	5.0	50	0	99.7	78-120	0			
Styrene	48.16	5.0	50	0	96.3	80-120	0			
Tetrachloroethene	48.22	5.0	50	0	96.4	79-120	0			
Toluene	47.27	5.0	50	0	94.5	80-120	0			
trans-1,2-Dichloroethene	48.64	5.0	50	0	97.3	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906569

QC BATCH REPORT

Project: Navajo Lea Refinery Semi-Annual

Batch ID: **R78455**

Instrument ID **VOA1**

Method: **SW8260**

trans-1,3-Dichloropropene	52.18	5.0	50	0	104	80-120	0
Trichloroethene	53.01	5.0	50	0	106	80-120	0
Vinyl chloride	44.95	2.0	50	0	89.9	70-127	0
Xylenes, Total	140.5	15	150	0	93.7	80-120	0
Surr: 1,2-Dichloroethane-d4	49.32	5.0	50	0	98.6	70-125	0
Surr: 4-Bromofluorobenzene	53.42	5.0	50	0	107	72-125	0
Surr: Dibromofluoromethane	51.97	5.0	50	0	104	71-125	0
Surr: Toluene-d8	50.86	5.0	50	0	102	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

MS		Sample ID: 0906452-02AMS				Units: µg/L		Analysis Date: 6/24/2009 01:55 PM		
Client ID:		Run ID: VOA1_090624B				SeqNo: 1704556		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.79	5.0	50	0	102	80-120	0			
1,1,2,2-Tetrachloroethane	53.12	5.0	50	0	106	72-120	0			
1,1,2-Trichloroethane	46.4	5.0	50	0	92.8	80-120	0			
1,1-Dichloroethane	52.92	5.0	50	0	106	76-120	0			
1,1-Dichloroethene	50.45	5.0	50	0	101	73-124	0			
1,2,4-Trimethylbenzene	45.76	5.0	50	0	91.5	68-123	0			
1,2-Dibromoethane	48.09	5.0	50	0	96.2	80-120	0			
1,2-Dichloroethane	49.59	5.0	50	0	99.2	78-120	0			
1,2-Dichloropropane	48.63	5.0	50	0	97.3	80-120	0			
1,3,5-Trimethylbenzene	51.45	5.0	50	0	103	80-120	0			
2-Butanone	116.3	10	100	0	116	58-132	0			
2-Hexanone	104.2	10	100	0	104	61-130	0			
4-Isopropyltoluene	44.81	5.0	50	0	89.6	79-120	0			
4-Methyl-2-pentanone	103.7	10	100	0	104	65-127	0			
Acetone	101.1	10	100	0	101	59-137	0			
Benzene	46.36	5.0	50	0	92.7	73-121	0			
Bromodichloromethane	50.39	5.0	50	0	101	80-120	0			
Bromoform	48.67	5.0	50	0	97.3	79-120	0			
Bromomethane	59.01	5.0	50	0	118	66-137	0			
Carbon disulfide	99.31	10	100	0	99.3	68-141	0			
Carbon tetrachloride	47.94	5.0	50	0	95.9	75-124	0			
Chlorobenzene	47.11	5.0	50	0	94.2	80-120	0			
Chloroethane	45.18	5.0	50	0	90.4	76-121	0			
Chloroform	51.79	5.0	50	0	104	80-120	0			
Chloromethane	42.55	5.0	50	0	85.1	67-123	0			
cis-1,2-Dichloroethene	52.17	5.0	50	0	104	78-120	0			
cis-1,3-Dichloropropene	47.43	5.0	50	0	94.9	80-120	0			
Dibromochloromethane	49.37	5.0	50	0	98.7	80-120	0			
Ethylbenzene	46.69	5.0	50	0	93.4	80-120	0			
Isopropylbenzene	45.98	5.0	50	0.6308	90.7	80-120	0			
m,p-Xylene	90.16	10	100	0	90.2	78-121	0			
Methyl tert-butyl ether	58.38	5.0	50	0	117	73-121	0			
Methylene chloride	49.61	10	50	0	99.2	65-133	0			
n-Butylbenzene	48.24	5.0	50	0	96.5	77-120	0			
n-Propylbenzene	48.14	5.0	50	0	96.3	78-120	0			
Naphthalene	49.66	5.0	50	0	99.3	65-127	0			
o-Xylene	47.94	5.0	50	0	95.9	80-120	0			
sec-Butylbenzene	50.01	5.0	50	0	100	78-120	0			
Styrene	46.05	5.0	50	0	92.1	80-120	0			
Tetrachloroethene	45	5.0	50	0	90	79-120	0			
Toluene	45.29	5.0	50	0	90.6	80-120	0			
trans-1,2-Dichloroethene	52.19	5.0	50	0	104	78-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company

Work Order: 0906569

QC BATCH REPORT

Project: Navajo Lea Refinery Semi-Annual

Batch ID: **R78455**

Instrument ID **VOA1**

Method: **SW8260**

trans-1,3-Dichloropropene	54.28	5.0	50	0	109	80-120	0
Trichloroethene	50.51	5.0	50	0	101	80-120	0
Vinyl chloride	47.05	2.0	50	0	94.1	70-127	0
Xylenes, Total	138.1	15	150	0	92.1	80-120	0
Surr: 1,2-Dichloroethane-d4	54.41	5.0	50	0	109	70-125	0
Surr: 4-Bromofluorobenzene	49.09	5.0	50	0	98.2	72-125	0
Surr: Dibromofluoromethane	53.22	5.0	50	0	106	71-125	0
Surr: Toluene-d8	48.87	5.0	50	0	97.7	75-125	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78455 Instrument ID VOA1 Method: SW8260

MSD Sample ID: 0906452-02AMSD Units: µg/L Analysis Date: 6/24/2009 02:21 PM

Client ID: Run ID: VOA1_090624B SeqNo: 1704557 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.34	5.0	50	0	96.7	80-120	50.79	4.94	20	
1,1,2,2-Tetrachloroethane	51.09	5.0	50	0	102	72-120	53.12	3.89	20	
1,1,2-Trichloroethane	46.2	5.0	50	0	92.4	80-120	46.4	0.427	20	
1,1-Dichloroethane	49.05	5.0	50	0	98.1	76-120	52.92	7.58	20	
1,1-Dichloroethene	45.05	5.0	50	0	90.1	73-124	50.45	11.3	20	
1,2,4-Trimethylbenzene	49.83	5.0	50	0	99.7	68-123	45.76	8.5	20	
1,2-Dibromoethane	50.02	5.0	50	0	100	80-120	48.09	3.94	20	
1,2-Dichloroethane	46.78	5.0	50	0	93.6	78-120	49.59	5.84	20	
1,2-Dichloropropane	46.95	5.0	50	0	93.9	80-120	48.63	3.52	20	
1,3,5-Trimethylbenzene	49.63	5.0	50	0	99.3	80-120	51.45	3.59	20	
2-Butanone	116.2	10	100	0	116	58-132	116.3	0.0744	20	
2-Hexanone	104.7	10	100	0	105	61-130	104.2	0.433	20	
4-Isopropyltoluene	44.08	5.0	50	0	88.2	79-120	44.81	1.64	20	
4-Methyl-2-pentanone	109.2	10	100	0	109	65-127	103.7	5.23	20	
Acetone	97.66	10	100	0	97.7	59-137	101.1	3.44	20	
Benzene	44.38	5.0	50	0	88.8	73-121	46.36	4.36	20	
Bromodichloromethane	46.94	5.0	50	0	93.9	80-120	50.39	7.08	20	
Bromoform	48.71	5.0	50	0	97.4	79-120	48.67	0.0827	20	
Bromomethane	50.26	5.0	50	0	101	66-137	59.01	16	20	
Carbon disulfide	93.76	10	100	0	93.8	68-141	99.31	5.75	20	
Carbon tetrachloride	43.14	5.0	50	0	86.3	75-124	47.94	10.5	20	
Chlorobenzene	46.77	5.0	50	0	93.5	80-120	47.11	0.733	20	
Chloroethane	42.27	5.0	50	0	84.5	76-121	45.18	6.65	20	
Chloroform	49.11	5.0	50	0	98.2	80-120	51.79	5.32	20	
Chloromethane	45.41	5.0	50	0	90.8	67-123	42.55	6.51	20	
cis-1,2-Dichloroethene	51.31	5.0	50	0	103	78-120	52.17	1.67	20	
cis-1,3-Dichloropropene	48.71	5.0	50	0	97.4	80-120	47.43	2.67	20	
Dibromochloromethane	50.31	5.0	50	0	101	80-120	49.37	1.87	20	
Ethylbenzene	47.52	5.0	50	0	95	80-120	46.69	1.78	20	
Isopropylbenzene	45.46	5.0	50	0.6308	89.7	80-120	45.98	1.15	20	
m,p-Xylene	93.71	10	100	0	93.7	78-121	90.16	3.86	20	
Methyl tert-butyl ether	58.99	5.0	50	0	118	73-121	58.38	1.04	20	
Methylene chloride	47.42	10	50	0	94.8	65-133	49.61	4.51	20	
n-Butylbenzene	44.25	5.0	50	0	88.5	77-120	48.24	8.63	20	
n-Propylbenzene	49.59	5.0	50	0	99.2	78-120	48.14	2.96	20	
Naphthalene	51.68	5.0	50	0	103	65-127	49.66	4	20	
o-Xylene	49.28	5.0	50	0	98.6	80-120	47.94	2.75	20	
sec-Butylbenzene	48.14	5.0	50	0	96.3	78-120	50.01	3.81	20	
Styrene	48.2	5.0	50	0	96.4	80-120	46.05	4.56	20	
Tetrachloroethene	42.51	5.0	50	0	85	79-120	45	5.68	20	
Toluene	43.63	5.0	50	0	87.3	80-120	45.29	3.74	20	
trans-1,2-Dichloroethene	49.77	5.0	50	0	99.5	78-120	52.19	4.74	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906569
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78455** Instrument ID **VOA1** Method: **SW8260**

trans-1,3-Dichloropropene	50.81	5.0	50	0	102	80-120	54.28	6.59	20
Trichloroethene	45.27	5.0	50	0	90.5	80-120	50.51	10.9	20
Vinyl chloride	42.07	2.0	50	0	84.1	70-127	47.05	11.2	20
Xylenes, Total	143	15	150	0	95.3	80-120	138.1	3.48	20
Surr: 1,2-Dichloroethane-d4	51.8	5.0	50	0	104	70-125	54.41	4.92	20
Surr: 4-Bromofluorobenzene	50.34	5.0	50	0	101	72-125	49.09	2.5	20
Surr: Dibromofluoromethane	52.44	5.0	50	0	105	71-125	53.22	1.47	20
Surr: Toluene-d8	49.47	5.0	50	0	98.9	75-125	48.87	1.23	20

The following samples were analyzed in this batch:

0906569-01A 0906569-02A 0906569-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78365** Instrument ID **WetChem** Method: **M2510 B**

MBLK Sample ID: **WBLKW1-062309-R78365** Units: **µmhos/cm** Analysis Date: **6/23/2009 06:00 PM**

Client ID: Run ID: **WETCHEM_090623J** SeqNo: **1702768** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	ND	1.0								

LCS Sample ID: **WLCSW1-062309-R78365** Units: **µmhos/cm** Analysis Date: **6/23/2009 06:00 PM**

Client ID: Run ID: **WETCHEM_090623J** SeqNo: **1702769** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1450	1.0	1413	0	103	80-120	0			

DUP Sample ID: **0906569-01edup** Units: **µmhos/cm** Analysis Date: **6/23/2009 06:00 PM**

Client ID: **MW #2** Run ID: **WETCHEM_090623J** SeqNo: **1702775** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1700	1.0	0	0	0		1700	0	20	

The following samples were analyzed in this batch:

0906569-01E	0906569-02E
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Client: Navajo Refining Company
Work Order: 0906569
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78367 Instrument ID WetChem Method: SM4500H+ B

LCS Sample ID: WLC SW1-062309-R78367 Units: pH units Analysis Date: 6/23/2009 06:00 PM
Client ID: Run ID: WETCHEM_090623K SeqNo: 1702791 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	5.97	0.10	6	0	99.5	90-110	0			

DUP Sample ID: 0906569-01edup Units: pH units Analysis Date: 6/23/2009 06:00 PM
Client ID: MW #2 Run ID: WETCHEM_090623K SeqNo: 1702795 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.89	0.10	0	0	0	0-0	7.91	0.253	20	H

The following samples were analyzed in this batch:

0906569-01E 0906569-02E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78452 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW4+-062409-R78452 Units: mg/L Analysis Date: 6/24/2009 06:11 PM

Client ID: Run ID: ICS3K2_090624B SeqNo: 1704492 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	0.03	0.10								J
Surr: Selenate (surr)	4.336	0.10	5	0	86.7	85-115	0			

LCS Sample ID: WLCSW4+-062409-R78452 Units: mg/L Analysis Date: 6/24/2009 06:34 PM

Client ID: Run ID: ICS3K2_090624B SeqNo: 1704493 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.006	0.10	8	0	100	90-110	0			
Surr: Selenate (surr)	4.703	0.10	5	0	94.1	85-115	0			

LCSD Sample ID: WLCSDW4+-062409-R78452 Units: mg/L Analysis Date: 6/24/2009 06:57 PM

Client ID: Run ID: ICS3K2_090624B SeqNo: 1704494 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.16	0.10	8	0	102	90-110	8.006	1.91	20	
Surr: Selenate (surr)	4.766	0.10	5	0	95.3	85-115	4.703	1.33	20	

MS Sample ID: 0906543-08CMS Units: mg/L Analysis Date: 6/24/2009 11:32 PM

Client ID: Run ID: ICS3K2_090624B SeqNo: 1704505 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.494	0.10	4	1.665	95.7	80-120	0			
Surr: Selenate (surr)	4.975	0.10	5	0	99.5	85-115	0			

MS Sample ID: 0906543-09CMS Units: mg/L Analysis Date: 6/25/2009 12:41 AM

Client ID: Run ID: ICS3K2_090624B SeqNo: 1704508 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.451	0.10	4	1.616	95.9	80-120	0			
Surr: Selenate (surr)	4.983	0.10	5	0	99.7	85-115	0			

MS Sample ID: 0906513-04CMS Units: mg/L Analysis Date: 6/25/2009 10:23 AM

Client ID: Run ID: ICS3K2_090624B SeqNo: 1704519 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	4.123	0.10	4	0.244	97	80-120	0			
Surr: Selenate (surr)	4.959	0.10	5	0	99.2	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906569
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78452 Instrument ID ICS3K2 Method: E300

MSD Sample ID: 0906543-08CMSD Units: mg/L Analysis Date: 6/24/2009 11:55 PM
Client ID: Run ID: ICS3K2_090624B SeqNo: 1704506 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.481	0.10	4	1.665	95.4	80-120	5.494	0.237	20	
Surr: Selenate (surr)	4.976	0.10	5	0	99.5	85-115	4.975	0.0201	20	

MSD Sample ID: 0906543-09CMSD Units: mg/L Analysis Date: 6/25/2009 01:04 AM
Client ID: Run ID: ICS3K2_090624B SeqNo: 1704509 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.411	0.10	4	1.616	94.9	80-120	5.451	0.737	20	
Surr: Selenate (surr)	4.988	0.10	5	0	99.8	85-115	4.983	0.1	20	

MSD Sample ID: 0906513-04CMSD Units: mg/L Analysis Date: 6/25/2009 10:46 AM
Client ID: Run ID: ICS3K2_090624B SeqNo: 1704520 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	4.156	0.10	4	0.244	97.8	80-120	4.123	0.797	20	
Surr: Selenate (surr)	5.02	0.10	5	0	100	85-115	4.959	1.22	20	

The following samples were analyzed in this batch:

0906569-01C 0906569-02C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78503 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW2-062509-R78503 Units: mg/L Analysis Date: 6/25/2009 11:55 AM

Client ID: Run ID: ICS3K2_090625C SeqNo: 1705588 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	0.307	0.50								J
Surr: Selenate (surr)	4.92	0.10	5	0	98.4	85-115	0			

LCS Sample ID: WLCSW2-062509-R78503 Units: mg/L Analysis Date: 6/25/2009 12:18 PM

Client ID: Run ID: ICS3K2_090625C SeqNo: 1705589 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.9	0.50	20	0	99.5	90-110	0			
Fluoride	4.086	0.10	4	0	102	90-110	0			
Sulfate	19.29	0.50	20	0	96.5	90-110	0			
Surr: Selenate (surr)	4.623	0.10	5	0	92.5	85-115	0			

MS Sample ID: 0906633-03AMS Units: mg/L Analysis Date: 6/25/2009 02:58 PM

Client ID: Run ID: ICS3K2_090625C SeqNo: 1705593 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	367.1	5.0	100	282.9	84.3	80-120	0			
Fluoride	20.8	1.0	20	-0.065	104	80-120	0			
Sulfate	160.4	5.0	100	66.72	93.6	80-120	0			
Surr: Selenate (surr)	49.82	1.0	50	0	99.6	85-115	0			

MS Sample ID: 0906633-03AMS Units: mg/L Analysis Date: 6/25/2009 06:01 PM

Client ID: Run ID: ICS3K2_090625C SeqNo: 1705597 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	273.7	0.50	10	262.3	115	80-120	0			EO
Fluoride	2.608	0.10	2	0.588	101	80-120	0			
Sulfate	74.11	0.50	10	61.6	125	80-120	0			SEO
Surr: Selenate (surr)	5.023	0.10	5	0	100	85-115	0			

MSD Sample ID: 0906633-03AMSD Units: mg/L Analysis Date: 6/25/2009 03:21 PM

Client ID: Run ID: ICS3K2_090625C SeqNo: 1705594 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	365.2	5.0	100	282.9	82.4	80-120	367.1	0.517	20	
Fluoride	21.21	1.0	20	-0.065	106	80-120	20.8	1.92	20	
Sulfate	159.2	5.0	100	66.72	92.4	80-120	160.4	0.749	20	
Surr: Selenate (surr)	49.74	1.0	50	0	99.5	85-115	49.82	0.163	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 0906569
Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78503 Instrument ID ICS3K2 Method: E300

MSD Sample ID: 0906633-03AMSD Units: mg/L Analysis Date: 6/25/2009 06:24 PM
Client ID: Run ID: ICS3K2_090625C SeqNo: 1705598 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	269.9	0.50	10	262.3	75.8	80-120	273.7	1.43	20	SEO
Fluoride	2.692	0.10	2	0.588	105	80-120	2.608	3.17	20	
Sulfate	73.4	0.50	10	61.6	118	80-120	74.11	0.963	20	EO
Surr: Selenate (surr)	4.968	0.10	5	0	99.4	85-115	5.023	1.1	20	

The following samples were analyzed in this batch:

0906569-01E 0906569-02E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78509** Instrument ID **Balance1** Method: **M2540C**

MBLK Sample ID: **BLANK-R78509** Units: **mg/L** Analysis Date: **6/25/2009 03:00 PM**

Client ID: Run ID: **BALANCE1_090625A** SeqNo: **1705675** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	ND	10								

LCS Sample ID: **LCS-R78509** Units: **mg/L** Analysis Date: **6/25/2009 03:00 PM**

Client ID: Run ID: **BALANCE1_090625A** SeqNo: **1705676** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	946	10	1000	0	94.6	85-115	0			

DUP Sample ID: **0906614-02CDUP** Units: **mg/L** Analysis Date: **6/25/2009 03:00 PM**

Client ID: Run ID: **BALANCE1_090625A** SeqNo: **1705673** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	972	10	0	0	0	0-0	1006	3.44	20	

The following samples were analyzed in this batch:

0906569-01E 0906569-02E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78543 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW2-062609-R78543 Units: mg/L Analysis Date: 6/26/2009 10:27 AM
 Client ID: Run ID: ICS3K2_090626A SeqNo: 1706346 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Surr: Selenate (surr)	4.642	0.10	5	0	92.8	85-115	0			

LCS Sample ID: WLCSW2-062609-R78543 Units: mg/L Analysis Date: 6/26/2009 10:50 AM
 Client ID: Run ID: ICS3K2_090626A SeqNo: 1706347 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.32	0.50	20	0	102	90-110	0			
Surr: Selenate (surr)	4.776	0.10	5	0	95.5	85-115	0			

MS Sample ID: 0906674-01DMS Units: mg/L Analysis Date: 6/26/2009 01:44 PM
 Client ID: Run ID: ICS3K2_090626A SeqNo: 1706352 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	802.6	5.0	100	729.9	72.7	80-120	0			SEO
Surr: Selenate (surr)	50.35	1.0	50	0	101	85-115	0			

MS Sample ID: 0906678-01AMS Units: mg/L Analysis Date: 6/26/2009 05:33 PM
 Client ID: Run ID: ICS3K2_090626A SeqNo: 1706361 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	38.16	0.50	10	28.22	99.5	80-120	0			
Surr: Selenate (surr)	5.333	0.10	5	0	107	85-115	0			

MSD Sample ID: 0906674-01DMSD Units: mg/L Analysis Date: 6/26/2009 02:07 PM
 Client ID: Run ID: ICS3K2_090626A SeqNo: 1706353 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	800.2	5.0	100	729.9	70.3	80-120	802.6	0.299	20	SEO
Surr: Selenate (surr)	50.51	1.0	50	0	101	85-115	50.35	0.319	20	

MSD Sample ID: 0906678-01AMSD Units: mg/L Analysis Date: 6/26/2009 05:56 PM
 Client ID: Run ID: ICS3K2_090626A SeqNo: 1706362 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	37.86	0.50	10	28.22	96.5	80-120	38.16	0.784	20	
Surr: Selenate (surr)	5.286	0.10	5	0	106	85-115	5.333	0.885	20	

The following samples were analyzed in this batch: 0906569-02E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: R78629 Instrument ID WetChem Method: SM2320B

MBLK Sample ID: WBLKW1-063009-R78629 Units: mg/L Analysis Date: 6/30/2009 12:00 PM

Client ID: Run ID: WETCHEM_090630E SeqNo: 1708023 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: WLCSW1-063009-R78629 Units: mg/L Analysis Date: 6/30/2009 12:00 PM

Client ID: Run ID: WETCHEM_090630E SeqNo: 1708024 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	964	5.0	1000	0	96.4	80-120	0			
Alkalinity, Total (As CaCO3)	964	5.0	1000	0	96.4	80-120	0			

DUP Sample ID: 0906569-01EDUP Units: mg/L Analysis Date: 6/30/2009 12:00 PM

Client ID: MW #2 Run ID: WETCHEM_090630E SeqNo: 1708036 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	323	5.0	0	0	0	0-0	328	1.54	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	323	5.0	0	0	0	0-0	328	1.54	20	

The following samples were analyzed in this batch:

0906569-01E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 0906569
 Project: Navajo Lea Refinery Semi-Annual

QC BATCH REPORT

Batch ID: **R78631** Instrument ID **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-063009-R78631** Units: **mg/L** Analysis Date: **6/30/2009 03:00 PM**
 Client ID: Run ID: **WETCHEM_090630F** SeqNo: **1708065** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-063009-R78631** Units: **mg/L** Analysis Date: **6/30/2009 03:00 PM**
 Client ID: Run ID: **WETCHEM_090630F** SeqNo: **1708066** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	981	5.0	1000	0	98.1	80-120	0			
Alkalinity, Total (As CaCO3)	981	5.0	1000	0	98.1	80-120	0			

DUP Sample ID: **0906569-02EDUP** Units: **mg/L** Analysis Date: **6/30/2009 03:00 PM**
 Client ID: **South Well** Run ID: **WETCHEM_090630F** SeqNo: **1708073** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	168	5.0	0	0	0	0-0	168	0	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	168	5.0	0	0	0	0-0	168	0	20	

The following samples were analyzed in this batch:

0906569-02E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

10450 Stancil Rd., Suite 210
Houston, Texas 77099
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Fax. +1 281 530 5887

3352 128th Ave.
Holland, MI 49424-9263
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Fax: +1 616 399 6185

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Customer Information				Project Information				Parameter/Method Request for Analysis									
Purchase Order	Project Name	Navajo Artesia Refinery Semi-Annual	VOC (8260) Select														
Work Order	Project Number	120	TPH (8015M) GAG-DRO, DRO				TOTAL MERCURY										
Company Name	Bill To Company	Navajo Refining Company	SVOC (8270) LL TCL														
Send Report To	Invoice Attn	Darrell Moore	Dissolved Metals (6020/7000) Select														
Address	Address	P.O. Box 159	Anions (300) Cl, F, SO4, NO3, NO2														
City/State/Zip	City/State/Zip	Artesia, NM 88211	Alkalinity														
Phone	Phone	(505) 748-3311	pH/Specific Conductivity														
Fax	Fax	(505) 746-5421	TDS														
e-Mail Address	e-Mail Address	dgboyer@SESI-NM.com	Nitrate/Nitrite (300)														
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW #2	06-22-09	0845	150	123.8	9	X	X	X	X	X	X	X	X	X	X	
2	800774 WELL	06-22-09	0920	150	123.8	9	X	X	X	X	X	X	X	X	X	X	
3	MW#1	06-22-09	1045	150	8	2											
4	721p BIAWA	06-22-09	1130	150	1.8	2	X										
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign	Shipment Method	Required Turnaround Time	Check Box	Other	Results Due Date
DO NOT SIGN	FED X	5 Wk Days	☒ 5 Wk Days	2 Wk Days	24 Hour
Retrieved by: <i>Donna Jones</i>	Date: 06-22-09	Time: 1130	Notes: 10 Work Days TAT.		
Retrieved by: <i>Donna Jones</i>	Date: 06-23-09	Time: 1010	QC Package: (Check One Box Below)		
			☒ Level II Std QC	☐ TRRP Check List	
			☐ Level III Std QC/Raw Data	☐ TRRP Level IV	
			☐ Level IV SW846/CLP	☐ Other	

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 23-Jun-09 09:10

Work Order: 0906569

Received by: RNG

Checklist completed by Robert D. Harris
eSignature

23-Jun-09
Date

Reviewed by: Jay Lynn F Thibault
eSignature

24-Jun-09
Date

Matrices: waters

Carrier name: FedEx

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☒ No ☐ Not Present ☐

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s): 2.2c 002

Cooler(s)/Kit(s): 1816

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: