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2010 AGWMR

03/21/2011



TETRA TECH, INC.

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6121 Indian School Rd. NE Suite 200
Albuquerque, NM 87110
(505) 237-8440

March 21, 2011

Mr. Glen von Gonten
State of New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

**RE: ConocoPhillips Hampton No. 4M Natural Gas Production Site 2010 Annual Report
San Juan County, New Mexico**

Dear Mr. von Gonten:

Enclosed please find a copy of the above-referenced document as compiled by Tetra Tech, Inc., formerly Maxim Technologies, for these Farmington area sites.

Please do not hesitate to contact me at (505) 237-8440 if you have any questions or require additional information.

Sincerely,

Kelly E. Blanchard
Project Manager/Geologist

Enclosures (1)

Cc: Brandon Powell, NMOCD
Terry Lauck, ConocoPhillips

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2010 ANNUAL GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS COMPANY

HAMPTON NO. 4M NATURAL GAS PRODUCTION WELL SITE SAN JUAN COUNTY, NEW MEXICO

OCD # 3RP-69-0

API # 30-045-25810

Prepared for:



Risk Management and Remediation
420 South Keeler Avenue
Bartlesville, OK 74004

Prepared by:



TETRA TECH, INC.

6121 Indian School Rd. NE, Suite 200
Albuquerque, NM 87110
Tetra Tech Project No. 114-690131

March 2011

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2010 ANNUAL GROUNDWATER MONITORING REPORT

HAMPTON NO. 4M

SAN JUAN COUNTY, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of the 2010 annual groundwater monitoring event conducted by Tetra Tech, Inc. (Tetra Tech), at the ConocoPhillips Company Hampton No. 4M site (Site) in San Juan County, New Mexico.

The Site is located on Federal land approximately ¼ mile south of Hampton Arroyo and 2 miles southeast of Aztec, New Mexico off Hwy 173 on Hampton Canyon Road. The Site consists of a gas production well and associated equipment and installations. The location and general features of the Hampton No. 4M site are presented as **Figure 1** and **Figure 2**, respectively.

1.1 Site Background

The Hampton No. 4M gas well was spudded on November 22, 1983, by Southland Royalty Company (Southland). Burlington Resources, Inc. (Burlington) acquired Southland in January of 1996; Burlington was subsequently acquired by ConocoPhillips in March of 2006.

The Public Service Company of New Mexico (PNM) operated a dehydration unit and an unlined earthen pit at the site from 1990 to 1996. Closure of a dehydrator pit revealed impacted soil and groundwater in 1996. While drilling a monitoring well up-gradient of the former pit in January 1997, impacted groundwater was encountered adjacent to Burlington equipment. A groundwater seep was discovered in April 1997; PNM, Burlington, and the New Mexico Oil Conservation Division (NMOCD) agreed on the installation of a collection trench. In March 2000, the OCD named Burlington responsible party of impacts up-gradient of the pit, while PNM was named responsible party of impacts down-gradient of the pit. Burlington excavated approximately 120 cubic yards of impacted soil from the vicinity of MW-13 and MW-14 in mid-2000, destroying both wells in the process. Maps outlining the excavation area for these activities, as well as a former excavation conducted by Burlington in December 1997 are provided in **Attachment A**. Tetra Tech began conducting monitoring events at the Site in November 2007. The existing monitor well network consists of 9 wells: MW-1, MW-5, MW-7, MW-9, MW-11, MW-12, MW-15, MW-16, and TMW-1. The groundwater seep is also part of the current program to monitor the progression of natural attenuation at the site. A generalized geologic cross section for the site is provided as **Figure 3**. A brief history of the Site is also outlined in **Table 1**.

2.0 METHODOLOGY AND RESULTS

2.1 Groundwater Sampling Methodology

Groundwater Elevation Measurements

On September 28, 2010 groundwater elevation measurements were collected from Monitor Wells MW-1, MW-5, MW-7, MW-9, MW-11, MW-12, MW-15, MW-16, and TMW-1 using a dual interface probe. Groundwater elevations are detailed in **Table 2**. A groundwater elevation contour map is presented as **Figure 4**. Based on September 2010 monitoring event data, groundwater flow is to the north and is consistent with historic records at this site.

Groundwater sampling

Monitor Wells MW-1, MW-5, MW-7, MW-9, MW-11, MW-12, MW-15, MW-16, TMW-1 were sampled on September 28, 2010. Approximately three well volumes were purged from each monitor well with either 1.5 inch or a 3.5 inch dedicated polyethylene disposable bailer prior to sampling. Purge water was disposed of in the site produced water tank. A sample was collected from a groundwater seep by inserting a sample container into the seep. Tetra Tech field personnel encountered light, non-aqueous phase liquid (LNAPL) in Monitor Well MW-16 during the sampling event. Approximately 2 feet of LNAPL was visible in a 3.5 inch disposable bailer used to purge the well. Tetra Tech placed two oil absorbent socks in MW-16 after obtaining a groundwater sample. Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Southern Petroleum Laboratories in Houston, Texas. Samples were analyzed for the presence of benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B. Tetra Tech groundwater sampling field forms are included as **Appendix A**.

Tetra Tech returned to the Site on December 15, 2010 to check the status of the socks in Monitor Well MW-16. Both oil absorbent socks were full and an additional two feet of visible LNAPL was present in the 3.5 inch bailer. Tetra Tech bailed approximately 3.5 gallons of LNAPL/water mixture from MW-16 and disposed of it in the site produced water tank. Tetra Tech sampled the LNAPL/water mixture for total petroleum hydrocarbons (TPH) diesel range organics (DRO) and TPH gasoline range organics (GRO) on December 15, 2010. Before leaving the Site, Tetra Tech placed 3 new absorbent socks in MW-16 and will periodically check the status of the socks, and replace as necessary, throughout 2011.

2.2 Groundwater Sampling Analytical Results

Groundwater collected from Monitor Wells MW-1, MW-7, MW-9, MW-11, and MW-15 and from the groundwater seep were either below laboratory detection limits or did not exceed New Mexico Water Quality Control Commission (NMWQCC) standards. Constituents detected above NMWQCC standards during the September 2010 sampling event were:

- **Benzene** – The NMWQCC standard for benzene is 10 micrograms per liter ($\mu\text{g/L}$). The concentration of benzene detected in groundwater collected from MW-5 was 130 $\mu\text{g/L}$; the concentration in groundwater collected from MW-12 was 550 $\mu\text{g/L}$; in the concentration in groundwater collected from MW-16 was 3000 $\mu\text{g/L}$; and from TMW-1 was 13 $\mu\text{g/L}$.
- **Ethylbenzene** - The NMWQCC standard for ethylbenzene is 750 $\mu\text{g/L}$. The concentration of ethylbenzene detected in groundwater collected from MW-16 was 3,400 $\mu\text{g/L}$.
- **Toluene** – The NMWQCC standard for toluene is 750 $\mu\text{g/L}$. Toluene was detected in groundwater collected from MW-7 at 4,300 $\mu\text{g/L}$ and from MW-16 at 4,600 $\mu\text{g/L}$.

- **Xylenes** – The NMWQCC standard for total xylenes is 620 ug/L. Xylenes were detected in groundwater collected from MW-5 at 5,100 ug/L and from MW-16 at 23,600 ug/L

BTEX constituents were detected above NMWQCC standards in the sample collected from MW-16 on December 15, 2010. Benzene was detected at 5,200 ug/L, toluene at 13,000 ug/L, ethylbenzene at 1,100 ug/L, and total xylenes at 14,500 ug/L; TPH-GRO was detected at 75 mg/L, while TPH-DRO was detected at 31 mg/L. A historical summary of laboratory analytical results is included as **Table 3**, with a summary of the December 2010 MW-16 groundwater sample added as an addendum at the bottom of the table. The corresponding laboratory analysis report for the September and December 2010 sampling event is included as **Appendix B**.

3.0 CONCLUSIONS

Groundwater samples collected from MW-5, MW-12, MW-16 and TMW-1 have consistently exceeded NMWQCC groundwater quality standards for BTEX constituents since Tetra Tech began monitoring the Site. A sharp increase in ethylbenzene and xylenes concentrations in groundwater collected from MW-16 is noted for the September 2010 sampling event. Furthermore, Tetra Tech encountered LNAPL in MW-16 during the September 2010 sampling event and again in December 2010. Following removal of as much LNAPL as possible, Tetra Tech put two LNAPL-absorbent socks in MW-16 in September 2010 and replaced them in December 2010.

Tetra Tech recommends continued annual groundwater sampling and free product removal at the Site. Once all COC's approach compliance levels, Tetra Tech will begin sampling on a quarterly basis. When eight consecutive quarters of data within compliance levels has been achieved, Site closure will be requested. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetratech.com if you have any questions or require additional information.

FIGURES

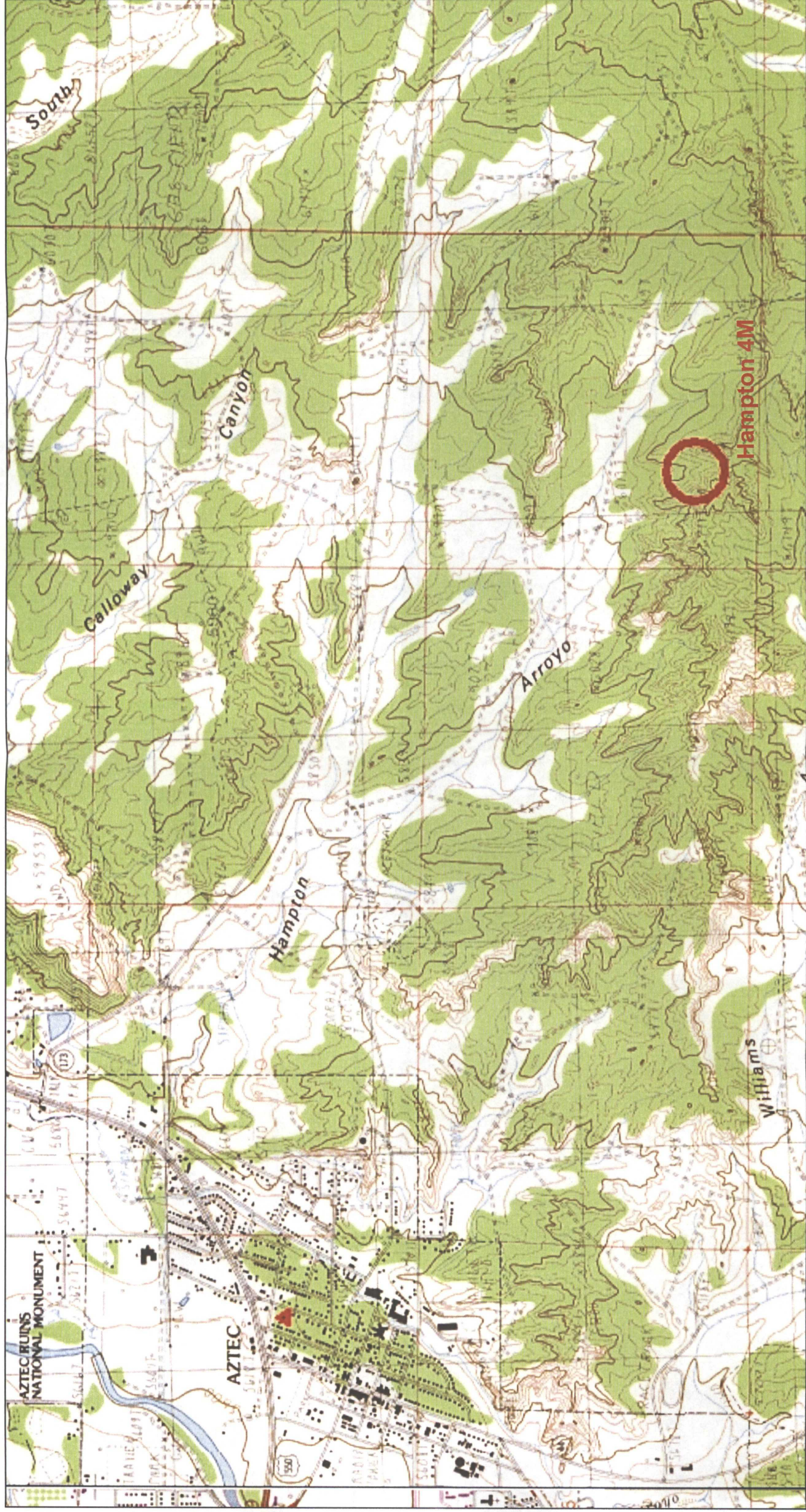
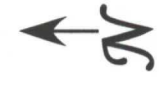


Figure 1. Site Location Map
ConocoPhillips Hampton 4M Site
Aztec, New Mexico

Approximate Scale:



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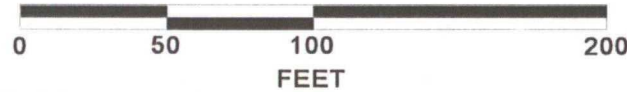


ConocoPhillips High Resolution Aerial Imagery 2008

Figure 2. Site Layout Map
ConocoPhillips Company
Hampton 4M Site
Aztec, New Mexico

LEGEND

- Monitoring Well
- Seep
- El Paso Gas Pipeline



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ConocoPhillips High Resolution Aerial Imagery 2008

Figure 3. Groundwater Contour Map
ConocoPhillips Company
Hampton 4M Site
Aztec, New Mexico

LEGEND

-  Monitoring Well
 -  Seep
 -  El Paso Gas Pipeline
 -  Groundwater Elevation Contour
Dashed Where Inferred
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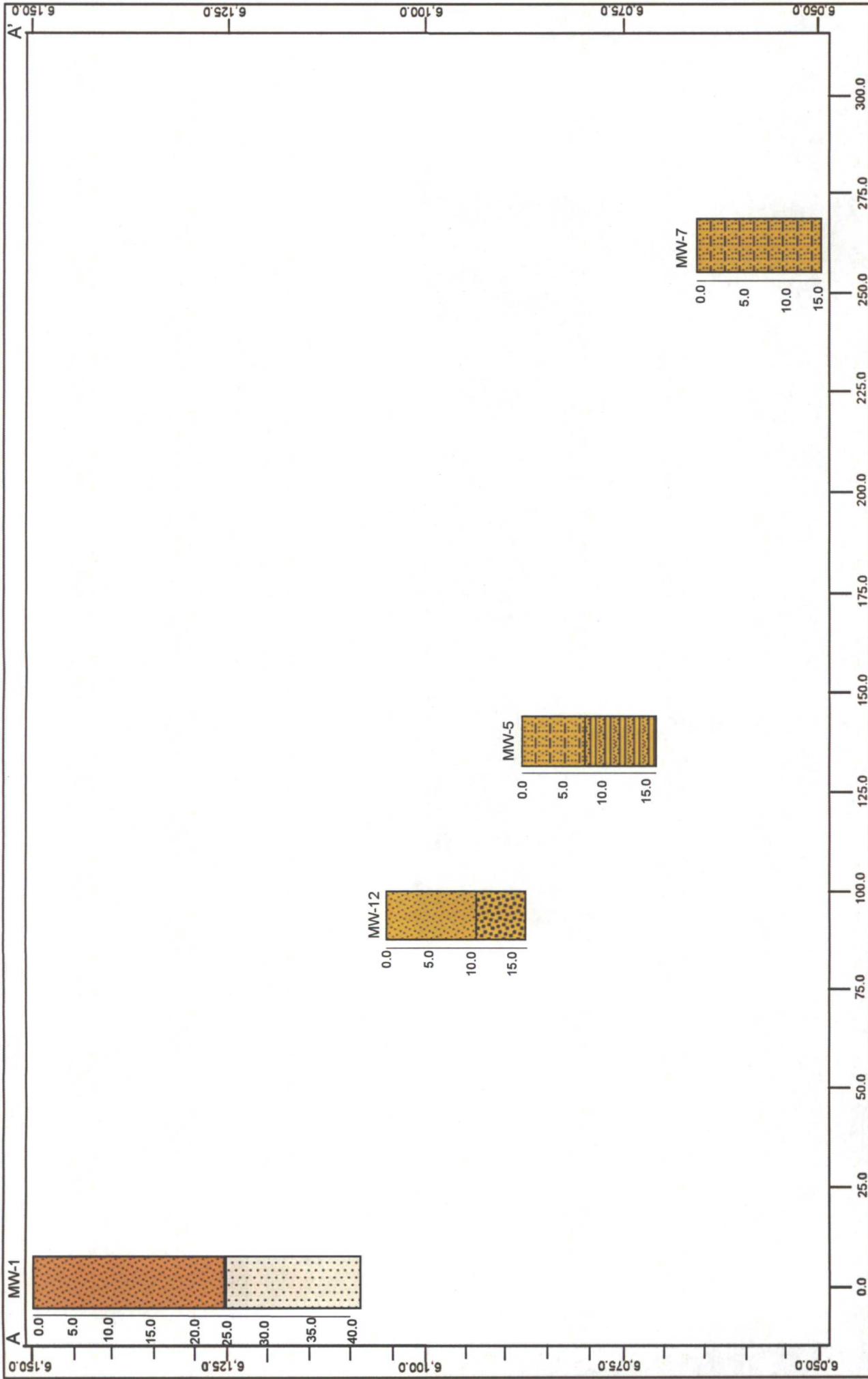


FIGURE 4:
Generalized Geologic
Cross Section

Hampton No. 4M
San Juan County, NM

Description

TABLES

Table 1. ConocoPhillips Hampton No. 4M Site History Timeline

<u>Date</u>	<u>Activity</u>
11/22/1983	Hampton No. 4M spudded by Southland Royalty Company (Southland Royalty).
3/1/1990	Southland Royalty entered into an agreement with Gas Company of New Mexico (predecessor to Public Service Company of New Mexico -- PNM) to sell production from the Hampton 4M well. PNM installed and operated dehydration equipment in the northern-most portion of the site as part of the contract.
6/30/1995	Williams Field Services purchased the dehydration equipment from PNM.
1/2/1996	Burlington Resources completed the acquisition of Southland Royalty Company.
4/23/1996	PNM discovered potential hydrocarbon contamination beneath PNM's dehydrator discharge pit during a site assessment. PNM subsequently began pit closure work.
12/16/1996	PNM discovered hydrocarbon-impacted groundwater while drilling to determine the vertical extent of hydrocarbon contamination beneath a former unlined, earthen dehydrator discharge pit located on the north end of the Hampton 4M well pad. Total BTEX in groundwater was 20,620 parts per billion (ug/L) and benzene was 3,840 ug/L.
1/13/1997	PNM notified NMOC in writing of the discovery of groundwater contamination at the site.
1/28/1997	PNM gauged Monitor Well MW-2 and discovered approximately 4 feet of LNAPL.
1/31/1997	PNM installed two up-gradient monitoring wells from PNM's former pit. Impacted groundwater was discovered in the well adjacent to Burlington's equipment.
1/31/1997	PNM installed MW-3 and MW-4.
4/14/1997	During a site visit, Burlington discovered a surface seep north of the well pad with LNAPL discharging to a small drainage area. Burlington notified NMOCD and PNM on the same day.
4/16/1997	Burlington hosted an on-site meeting with PNM and NMOCD to discuss the seep. NMOCD asked for immediate action to contain the seep. The group agreed to install a collection trench.

Table 1. ConocoPhillips Hampton No. 4M Site History Timeline

<u>Date</u>	<u>Activity</u>
4/17/1997	Burlington constructed a collection trench between the seep and the well head. A sandstone shelf was encountered 6 to 8 feet bgs. Black to grey saturated soil was found above the sandstone. Hydrocarbon vapors were monitored during construction of the trench with a photoionization detector (PID). PID readings were between 1,000 - 2,000 ppm.
4/30/1997	Burlington attempted to excavate the area of the former tank discharge pit. Sandstone was encountered at one foot below the bottom of the pit. The excavator could not penetrate the sandstone. There was no indication of hydrocarbon contamination in this area. Burlington subsequently excavated 9 to 10 test holes in the vicinity of the well pad. No hydrocarbon impacts were found in any of the test holes.
06/05-06/1997	Burlington advanced 7 boreholes around the well pad. Each of the 7 boreholes was subsequently completed as a temporary monitoring well.
8/1/1997	NMOCD issued a letter to PNM and Burlington. PNM was directed to assess contamination downgradient of its pit and Burlington was directed to submit an assessment plan for the portion of the site upgradient of the PNM disposal pit.
Nov-97	PNM installed an LNAPL recovery well system adjacent to PNM's former pit in November 1997 (exact dates unknown).
December 1997 - 2000	Hydrocarbon impacted soil was excavated from December 1997 to 2000 at various locations to the depth of groundwater. Potassium permanganate was applied to the excavations.
Jan-98	PNM initiated LNAPL recovery (exact date unknown).
2/23/1998	Mr. J. Burton Everett, the owner of property downgradient from the site, wrote a letter to the NMOCD, expressing concern over the migration of hydrocarbons onto his property.
3/13/1998	NMOCD sent a letter to PNM directing the removal, within 30 days, of the remaining source areas of LNAPL in the vicinity and immediately downgradient of PNM's former pit.

Table 1. ConocoPhillips Hampton No. 4M Site History Timeline

<u>Date</u>	<u>Activity</u>
April/May 1998	LNAPL was discovered upgradient from the dehydration pit and Burlington installed two additional monitoring wells.
10/28/1998	Burlington responded to NMOCD's letter of September 1, 1998. The letter stated that if PNM did not begin remediation of PNM's former pit by October 30, 1998, Burlington would begin remediating the entire site, starting at PNM's former pit and working south to Burlington's former pit.
Nov-98	PNM's LNAPL recovery efforts were terminated (exact date unknown) as a result of Burlington's removal of PNM's system during excavation activities.
4/14/1999	NMOCD sampled a groundwater seep to the northwest of the well pad. The analytical results revealed benzene in excess of NMWQCC groundwater quality standards.
3/24/2000	NMOCD issued Order No. R-11134-A to Burlington and PNM. The Order 1) denied the application by PNM for rescinding the prior directive, 2) declared Burlington the responsible party for any contamination south and upgradient to the PNM disposal pit, 3) declared PNM the responsible party for any soil contamination remaining below its former pit, 4) directed PNM and Burlington to share responsibility of remediation for any groundwater or soil contamination, other than soil contamination below the former PNM pit, remaining north and downgradient of the property for which Burlington is responsible, 5) directed PNM and Burlington to submit remediation plans to NMOCD, 6) directed both PNM and Burlington to begin remedial activities within 10 days of NMOCD approval of the plans, 7) directed PNM to have oversight and reporting responsibilities for GW remediation in the area north and downgradient of the property for which Burlington is responsible, and 8) retained jurisdiction for NMOCD for any further orders as may be necessary.

Table 1. ConocoPhillips Hampton No. 4M Site History Timeline

<u>Date</u>	<u>Activity</u>
Second Quarter 2000	Burlington excavated approximately 120 c.y. of hydrocarbon-impacted soil to groundwater depth in the vicinity of MW-13 and MW-14 in mid-2000 (exact dates unknown). Both wells were destroyed in the process. A shale confining layer was discovered at the bottom of the excavation. The excavated soil was landfarmed on a nearby wellpad lease.
Third Quarter 2001	Burlington backfilled the mid-2000 excavation area with clean fill.
3/31/2006	ConocoPhillips Company completed the acquisition of Burlington Resources.
11/8/2007	Tetra Tech conducted quarterly groundwater monitoring activities.
1/17/2008	Tetra Tech conducted quarterly groundwater monitoring activities.
3/19/2008	Tetra Tech conducted quarterly groundwater monitoring activities.
7/22/2008	Tetra Tech conducted quarterly groundwater monitoring activities.
10/23/2008	Tetra Tech conducted quarterly groundwater monitoring activities.
1/29/2009	Tetra Tech conducted quarterly groundwater monitoring activities.
8/6/2009	Tetra Tech submitted the 2008 Annual Report to the NMOCD.
9/24/2009	Tetra Tech completed annual groundwater monitoring activities.
9/28/2010	Tetra Tech completed annual groundwater monitoring activities. LNAPL was encountered in MW-16. Tetra Tech purged LNAPL from the well and placed two absorbent socks in MW-16.
12/15/2010	Tetra Tech returned to the Site to check the status of the absorbent socks in MW-16. The socks were saturated. Tetra Tech purged approximately 3.5 gallons of LNAPL and water from the well and placed three additional absorbent socks in MW-16.

Table 2. ConocoPhillips Company Hampton 4M - Groundwater Elevation Summary

Monitor Well	TOC Elevation (ft AMSL)	Sample Date	Depth to Water (ft)	GW Elevation (ft AMSL)
MW-1	6149.42	11/8/2007	42.81	6106.61
		1/17/2008	42.96	6106.46
		3/19/2008	42.93	6106.49
		7/22/2008	42.74	6106.68
		10/23/2008	32.80	6116.62
		1/21/2009	42.90	6106.52
		9/24/2009	43.09	6106.33
		9/28/2010	43.19	6106.23
MW-5	6090.83	11/8/2007	16.52	6074.31
		1/17/2008	15.65	6075.18
		3/19/2008	13.64	6077.19
		7/22/2008	15.72	6075.11
		10/23/2008	16.53	6074.30
		1/21/2009	16.04	6074.79
		9/24/2009	16.89	6073.94
		9/28/2010	16.55	6074.28
TMW-1	No survey - DTW only	11/8/2007	19.06	NA
		1/17/2008	19.37	NA
		3/19/2008	18.55	NA
		7/22/2008	18.10	NA
		10/23/2008	19.19	NA
		1/21/2009	19.25	NA
		9/24/2009	19.61	NA
		9/28/2010	19.11	NA
MW-7	6066.91	11/8/2007	20.22	6046.69
		1/17/2008	20.50	6046.41
		3/19/2008	20.02	6046.89
		7/22/2008	19.29	6047.62
		10/23/2008	19.95	6046.96
		1/21/2009	20.44	6046.47
		9/24/2009	20.55	6046.36
		9/28/2010	21.24	6045.67
MW-9	6122.52	11/8/2007	22.91	6099.61
		1/17/2008	22.76	6099.76
		3/19/2008	22.38	6100.14
		7/22/2008	23.10	6099.42
		10/23/2008	23.02	6099.50
		1/21/2009	22.85	6099.67
		9/24/2009	23.64	6098.88
		9/28/2010	23.70	6098.82

Table 2. ConocoPhillips Company Hampton 4M - Groundwater Elevation Summary

Monitor Well	TOC Elevation (ft AMSL)	Sample Date	Depth to Water (ft)	GW Elevation (ft AMSL)
MW-11	6015.75	11/8/2007	56.00	5959.75
		1/17/2008	55.86	5959.89
		3/19/2008	55.88	5959.87
		7/22/2008	55.71	5960.04
		10/23/2008	55.91	5959.84
		1/21/2009	55.75	5960.00
		9/24/2009	56.02	5959.73
		9/28/2010	56.06	5959.69
MW-12	6109.02	11/8/2007	20.46	6088.56
		1/17/2008	20.24	6088.78
		3/19/2008	19.85	6089.17
		7/22/2008	20.54	6088.48
		10/23/2008	20.61	6088.41
		1/21/2009	20.37	6088.65
		9/24/2009	21.23	6087.79
		9/28/2010	21.27	6087.75
MW-15	No survey - DTW only	11/8/2007	18.03	NA
		1/17/2008	18.20	NA
		3/19/2008	17.60	NA
		7/22/2008	17.79	NA
		10/23/2008	18.01	NA
		1/21/2009	18.20	NA
		9/24/2009	18.33	NA
		9/28/2010	18.25	NA
MW-16	No survey - DTW only	11/8/2007	25.03	NA
		1/17/2008	24.88	NA
		3/19/2008	24.37	NA
		7/22/2008	25.00	NA
		10/23/2008	25.57	NA
		1/21/2009	24.97	NA
		9/24/2009	25.75	NA
		9/28/2010	25.41	NA

Explanation

ft = feet

AMSL = Above mean sea level

DTW = Depth to water

NA = Not available

**Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory
Analytical Results Summary**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-1	10/30/1997	2.4	2.3	<0.2	1.1
	1/12/1998	4.3	3.3	0.2	1.0
	4/14/1998	1.0	1.3	<0.5	<0.5
	7/1/1998	1.3	1.0	<0.5	3.7
	10/5/1998	<1.0	<1.0	<1.0	<3.0
	11/9/1998	No sample collected			
	1/27/1999	0.8	0.9	<0.5	<1.5
	5/5/1999	No sample collected			
	7/12/1999	1.1	0.5	<0.5	<0.5
	8/17/1999	No sample collected			
	10/21/1999	No sample collected			
	1/27/2000	No sample collected			
	6/13/2000	No sample collected			
	6/26/2001	No sample collected			
	9/18/2001	No sample collected			
	12/18/2002	No sample collected			
	3/22/2002	No sample collected			
	9/24/2003	0.9J	1	U	0.4J
	12/15/2003	1.1	0.9J	U	U
	3/15/2004	U	U	U	U
	6/21/2004	U	U	U	U
	9/29/2004	U	U	U	U
	12/31/2004	U	0.9J	U	3.3J
	3/22/2005	U	0.3J	U	U
	6/23/2005	Missing Lab Data			
	10/24/2005	U	U	U	U
	12/12/2005	U	0.7J	U	0.6J
	3/20/2006	1.1	0.9J	U	0.6J
	6/21/2006	0.3J	1.4	0.4J	1.8J
	10/18/2006	U	0.2	0.2	1.3
	12/12/2006	U	0.2	0.2	1.4
	3/26/2007	<0.3 U	0.3 J	0.2 J	0.4 J
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/15/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	9/24/2009	<1.0U	<1.0U	<1.0U	<1.0U
	9/28/2010	<1.0	<1.0	<1.0	<1.0

**Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory
Analytical Results Summary**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-5	10/29/1997	5934	10024	709	8188
	1/12/1998	7521	11213	779	8436
	4/14/1998	7000	11000	720	7800
	7/1/1998	6500	10000	780	7500
	10/5/1998	6800	8400	740	6900
	11/9/1998	6200	8200	670	6500
	1/27/1999	6400	8900	660	6700
	5/5/1999	6800	9800	900	7800
	5/26/1999	6600	10000	650	8100
	7/12/1999	6300	10000	750	8800
	8/17/1999	5400	9800	670	7500
	8/17/1999	5900	8900	500	6200
	10/21/1999	5200	9600	650	6900
	1/27/2000	4700	10000	680	7400
	6/13/2000	8400	19000	1700	22000
	3/29/2001	3890	9600	640	7730
	6/26/2001	3800	11000	700	9000
	9/18/2001	4100	11000	760	10000
	12/18/2001	3200	9700	600	7800
	3/22/2002	3500	10000	830	8500
	6/28/2002	3700	12000	760	10000
	9/23/2002	3000	9800	640	8300
	12/31/2002	2900	8900	580	7300
	3/27/2003	1220	4870	487	6010
	6/27/2003	2040	8550	640	8050
	9/24/2003	2110	9090	700	9200
	12/15/2003	2150	9240	720	8810
	3/15/2005	1370	8100	660	8710
	6/21/2004	1610	8740	640	8220
	9/29/2004	1710	7250	670	8090
	12/31/2004	1820	9150	730	9030
	3/22/2005	420	1420	110	1160
	6/23/2005	Missing Lab Data			
	10/24/2005	1070	6660	610	7620
	12/12/2005	900	5930	520	6280
	3/20/2006	820	6270	510	6040
	6/21/2006	930	6110	580	6690
	10/18/2006	690	5140	500	5870
	12/18/2006	640	5090	500	5610
	3/26/2007	660	6470	530	5450
	6/26/2007	740	8070	640	7320
	11/8/2007	410	4800	390	5000
	1/17/2008	440	6400	510	6100
	3/19/2008	370	2900	240	2570
	7/22/2008	340	6100	550	6400
	10/23/2008	270	6200	440	6300
	1/21/2009	250	3800	510	5200
	9/24/2009	190	4300	470	5100
	9/28/2010	130	2400	600	5200

Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory Analytical Results Summary

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-7	1/12/1998	780	246	258	3942
	4/14/1998	820	340	190	2450
	7/1/1998	950	440	200	3020
	10/5/1998	1600	930	180	1530
	11/9/1998	1800	1000	160	1240
	1/27/1999	2100	1000	160	1050
	5/5/1999	210	3	30	147
	5/26/1999	190	7	32	150
	7/12/1999	130	7	22	101
	8/17/1999	No sample collected			
	10/21/1999	260	11	15	89
	1/27/2000	670	580	54	680
	6/17/2000	420	1100	75	1400
	3/29/2001	830	150	320	1790
	6/26/2001	540	330	250	1410
	9/18/2001	870	560	320	2020
	12/18/2001	400	30	160	885
	3/22/2002	180	U	78	260
	6/28/2002	89	1	41	79
	9/23/2002	80	3	31	18.89
	12/31/2002	160	2.2	74	31.5
	3/27/2003	195	0.4	44.2	109
	6/27/2003	300	1.4 J	117	461.6
	9/24/2003	90	12	2	694
	12/15/2004	150	4J	115	549
	3/15/2004	56	1J	6	3
	6/21/2004	180	U	55	58J
	9/29/2004	163	0.9J	54.5	69.8
	12/31/2004	94	3J	10	24J
	3/22/2005	20.8	U	2.4	4.8
	6/23/2005	Missing Lab Data			
	10/24/2005	65.2	0.7J	2	2.7J
	12/12/2005	66.2	1J	8.7	8.5J
	3/20/2006	72	U	12.6	16.9
	6/21/2006	89.9	10.6	4.8	14.5
	10/18/2006	31.9	0.4J	1.8	4.1
	12/12/2006	29.4	1.5	3.1	5.7
	3/26/2007	11.5	1.0	0.6 J	0.8 J
	6/26/2007	56	0.4 J	17.7	1.3
	11/8/2007	44	<0.7 U	2.0	<0.8 U
	1/17/2008	17	<0.7 U	3.0	<0.8 U
	3/19/2008	5	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	32	<5.0 U	12.0	7
	10/23/2008	17	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	9/24/2009	3.7	<1.0U	<1.0U	<1.0U
	9/28/2010	1.3	<1.0	2.3	<1.0

Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory Analytical Results Summary

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-9	7/1/1998	12.0	<1.0	<1.0	<3.0
	10/5/1998	0.8	<0.5	<0.5	2.2
	11/9/1998	73.0	<0.5	2.2	1.6
	1/27/1999	120.0	<0.5	2.5	1.8
	5/5/1999	120.0	<0.5	1.6	0.8
	5/26/1999	140.0	<0.5	1.5	<0.5
	5/26/1999	290.0	<0.5	0.6	<1.5
	7/12/1999	320.0	<0.5	0.6	<1.5
	8/17/1999	130.0	U	U	U
	10/21/1999	<0.5	1.9	<0.5	2.5
	1/27/2000	<0.2	<0.2	<0.2	<0.2
	6/13/2000	<0.5	<0.5	<0.5	<1.0
	3/29/2001	<0.5	<0.5	<0.5	<1.0
	6/26/2001	<0.5	<0.5	<0.5	<1.0
	9/18/2001	U	U	U	U
	12/18/2001	U	U	U	U
	3/22/2002	U	U	U	U
	6/28/2002	U	U	U	U
	9/23/2002	0.4 J	U	U	U
	3/27/2003	U	U	U	U
	6/27/2003	0.5J	U	U	U
	9/24/2003	U	U	U	U
	12/15/2003	U	U	U	U
	3/15/2004	U	U	U	U
	6/21/2004	U	0.4J	U	0.7J
	9/29/2004	U	U	U	U
	12/31/2004	Missing Lab Data			
	3/22/2005	U	U	U	U
	6/23/2005	U	0.3J	U	U
	12/12/2005	No sample collected			
	3/20/2006	U	U	U	U
	6/21/2006	U	U	U	U
	10/18/2006	U	U	U	0.3J
	12/12/2006	0.3J	0.7J	0.3J	1.2J
	3/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	9/24/2009	<1.0U	<1.0U	<1.0U	<1.0U
	9/28/2010	<1.0	<1.0	<1.0	<1.0

**Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory
Analytical Results Summary**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-11	1/27/1999	<0.5	2.5	0.7	13.1
	5/5/1999	<0.5	<0.5	<0.5	<1.5
	5/26/1999	0.8	1.7	<0.5	1.1
	7/12/1999	No sample collected			
	8/17/1999	No sample collected			
	10/21/1999	<0.5	<0.5	<0.5	<1.5
	1/27/2000	<0.5	<0.5	<0.5	<0.5
	6/13/2000	<0.5	<0.5	<0.5	0.9
	3/29/2001	<0.2	<0.2	<0.2	<0.2
	6/26/2001	<0.5	<0.5	<0.5	<1.0
	9/18/2001	<0.5	<0.5	<0.5	<1.0
	12/18/2001	<0.5	<0.5	<0.5	<1.0
	12/19/2001	U	U	U	U
	12/20/2001	U	U	U	U
	12/21/2001	U	U	U	U
	12/22/2001	U	U	U	U
	5/24/2003	U	U	U	U
	6/27/2003	0.4J	0.3J	U	0.4J
	9/24/2003	U	U	U	U
	12/15/2003	0.5J	U	U	U
	3/15/2004	U	U	U	U
	6/21/04	U	U	U	0.5J
	9/29/2004	U	U	U	U
	12/31/2004	U	U	U	U
	3/22/2005	U	U	U	U
	6/23/2005	Missing Lab Data			
	10/24/2005	U	U	U	U
	12/12/2005	U	0.3J	U	U
	3/20/2006	U	U	U	U
	6/21/2006	U	0.3J	U	0.8J
	10/18/2006	U	0.3J	0.4J	1.2J
	12/12/2006	U	U	U	0.3J
	3/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	9/24/2009	<1.0U	<1.0U	<1.0U	<1.0U
	9/28/2010	<1.0	<1.0	<1.0	<1.0

Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory Analytical Results Summary

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-12	5/5/1999	790	840	260	2880
	5/5/1999	1200	13000	5100	68000
	5/26/1999	1900	820	200	1720
	5/26/1999	1800	640	160	1600
	7/12/1999	4500	760	400	3100
	7/12/1999	4600	730	390	3080
	8/17/1999	4800	5000	320	3390
	8/17/1999	5900	6100	390	4100
	10/21/1999	5600	650	540	2890
	1/27/2000	4100	550	430	2379
	6/13/2000	5000	1300	490	2700
	3/29/2001	5170	1790	366	2620
	6/26/2001	4800	1900	390	2560
	9/18/2001	5100	2400	430	2820
	12/18/2001	4000	1500	320	1880
	3/22/2002	3300	930	290	1270
	6/28/2002	4200	1800	410	1940
	9/23/2002	3800	1500	310	1510
	12/31/2002	3600	840	280	1010
	3/27/2003	Well dry - No samples collected			
	5/24/2003	3990	2230	299	1470
	6/27/2003	5290	2750	360	1600
	9/24/2003	4600	1690	290	1150
	12/15/2003	4200	1360	240	1150
	3/15/2004	2090	1120	300	1250
	6/21/2004	3870	1820	280	1500
	6/29/2004	5140	2220	240	1280
	12/31/2004	4160	1220	250	1150
	3/22/2005	2380	1100	130	710
	6/23/2005	Missing Lab Data			
	10/24/2005	1350	150	80	330
	12/16/2005	2380	422	111	341
	3/20/2006	2100	210	71	225
	6/21/2006	2270	385	85	355
	10/18/2006	1740	477	112	399
	12/12/2006	2400	1110	142	668
	3/26/2007	4130	1680	340	1180
	6/26/2007	1520	432	118	340
	11/8/2007	780	310	43	170
	1/17/2008	2000	1400	180	790
	3/19/2008	1600	560	160	530
	7/22/2008	730	22	14	21
	10/23/2008	500	30	22	40
	1/21/2009	1100	430	110	410
	9/24/2009	610	8.3	10	19.5
	9/28/2010	550	<1.0	15	16

Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory Analytical Results Summary

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-15	10/21/1999	<0.5	1.2	<0.5	1.5
	1/27/2000	<0.5	<0.5	<0.5	<0.5
	6/13/2000	<0.5	<0.5	<0.5	<0.5
	3/29/2001	<0.2	<0.2	<0.2	<0.2
	6/26/2001	<0.5	<0.5	<0.5	<0.5
	9/18/2001	<0.5	<0.5	<0.5	<0.5
	12/18/2001	<0.5	<0.5	<0.5	<0.5
	3/22/2002	U	U	U	U
	6/28/2002	U	U	U	U
	9/23/2002	U	U	U	U
	12/31/2002	U	U	U	U
	3/27/2003	U	0.3J	U	0.9J
	6/27/2003	0.4J	U	U	U
	9/24/2003	U	U	U	U
	12/15/2004	0.7J	U	U	U
	3/15/2004	U	0.3J	U	U
	6/21/2004	U	U	U	U
	9/29/2004	U	U	U	U
	12/31/2004	U	0.9J	0.3J	1.4J
	3/22/2005	U	U	U	U
	6/23/2005	Missing Lab Data			
	10/24/2005	U	U	U	U
	12/12/2005	U	0.3J	U	0.4J
	3/20/2006	U	U	U	U
	6/21/2006	0.7J	U	0.3J	U
	10/18/2006	U	0.3J	U	0.2J
	12/12/2006	U	U	U	U
	3/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	6/26/2007	<0.3 U	0.5 J	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	9/24/2009	<1.0U	<1.0U	<1.0U	<1.0U
	9/28/2010	<1.0	<1.0	<1.0	<1.0

**Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory
Analytical Results Summary**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-16	10/21/1999	220	300	5	142
	10/21/1999	214	268	4	151
	1/27/2000	1600	170	56	225
	6/13/2000	8700	430	680	2200
	6/26/2001	9300	1100	810	3410
	9/18/2001	11000	6400	590	6400
	12/18/2001	9900	6900	570	7400
	3/22/2003	10000	6600	1100	7400
	6/28/2002	11000	7000	770	5700
	9/23/2002	8900	9900	610	8500
	12/31/2002	8800	7900	770	7400
	3/27/2003	10400	11200	840	8670
	5/27/2003	No sample collected			
	9/24/2003	10300	15400	870	10590
	12/15/2004	9640	12600	720	1550
	3/15/2004	9200	16000	1310	12000
	6/21/2004	8040	18100	2450	18580
	9/29/2004	8330	14000	760	8230
	12/31/2004	8340	17100	1550	18830
	3/28/2005	4140	5810	760	10480
	6/23/2005	Missing Lab Data			
	10/24/2005	6280	9800	670	6910
	12/12/2005	6940	11500	750	8060
	3/20/2006	6820	11500	830	8550
	6/21/2006	6640	11200	690	7570
	10/18/2006	5700	10200	620	6520
	12/12/2006	4600	10000	550	6830
	3/26/2007	2970	2820	260	5220
	6/26/2007	5230	9110	770	7760
	11/8/2007	5500	12000	570	6200
	1/17/2008	4600	9100	550	5600
	3/19/2008	5500	9600	510	6900
	7/22/2008	3600	6100	430	4500
	10/23/2008	4700	9100	480	6600
	1/21/2009	4200	7500	480 J	6900
	9/24/2009	3200	4600	340	3500
	9/29/2010	3000	4600	3400	23600

**Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory
Analytical Results Summary**

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
TMW-1	1/27/2000	930	1400	350	6700
	6/13/2000	2400	3400	550	9100
	6/26/2001	1100	3500	330	5500
	9/18/2001	No sample collected			
	12/18/2001	No sample collected			
	3/22/2002	No sample collected			
	6/28/2002	No sample collected			
	9/23/2002	No sample collected			
	12/31/2002	No sample collected			
	3/27/2003	No sample collected			
	5/23/2003	830	123	107	1004.7
	6/27/2003	474	36.6	59.6	490.7
	9/24/2003	292	139	17	221
	12/15/2003	55.9	1.3	3.9	42.5
	3/15/2004	No sample collected			
	6/21/2004	40.6	U	14.1	14.7
	9/29/2004	410	8.7	59.6	458.5
	12/31/2004	3J	5J	1J	11J
	3/22/2005	67.8	13.3	8.1	101.7
	6/23/2005	Missing Lab Data			
	10/24/2005	483	705	45	328
	12/12/2005	122	317	19	160
	3/20/2006	71	82	16	151
	6/21/2006	159	65.7	56.9	360
	10/18/2006	6.4	1.6	2.1	13.8
	12/12/2006	No sample collected			
	3/26/2007	NA	NA	NA	NA
	6/26/2007	269	2.6	4.9	15.7
	11/8/2007	300	12	6	38
	1/17/2008	0.8	<0.7 U	<0.8 U	1
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	130	29	11	22
	10/23/2008	NA	NA	NA	NA
	1/21/2009	13	<5.0 U	<5.0 U	<5.0 U
	9/24/2009	NS	NS	NS	NS
	9/28/2010	13	<1.0	<1.0	3.2

Table 3. ConocoPhillips Company Hampton 4M - Groundwater Laboratory Analytical Results Summary

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
Seep	7/1/1998	1.6	0.7	0.6	0.36
	4/14/1999	40.0	2.2	2.1	19
	10/21/1999	65.0	230	11.0	434
	3/29/2001	11.6	<0.2	0.7J	25
	6/26/2001	<0.5	<0.5	<0.5	<1.0
	9/18/2001	<0.5	<0.5	<0.5	<1.0
	12/18/2001	<0.5	<0.5	<0.5	<1.0
	3/22/2002	5.9	U	0.8	3.4
	6/28/2002	U	U	U	U
	9/23/2002	U	U	U	U
	12/31/2002	0.7	U	U	U
	3/27/2003	6.3	0.2J	1.8	10
	9/24/2003	U	0.3J	U	U
	12/15/2003	0.4J	0.3J	U	U
	3/15/2004	U	U	U	U
	6/21/2004	U	U	U	U
	9/29/2004	U	U	U	U
	12/31/2004	U	0.2J	U	0.4J
	3/28/2005	U	U	U	U
	6/23/2005	Missing Lab Data			
	10/24/2005	U	J	U	U
	12/12/2005	U	0.5J	0.3J	0.9J
	3/20/2006	U	U	U	U
	6/21/2006	4	12.9	0.8J	15
	10/18/2006	U	0.5J	0.3J	1.4J
	12/12/2006	U	U	U	U
	3/26/2007	<0.3 U	0.3 J	<0.2 U	<0.6 UJ
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	NA	NA	NA	NA
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	NA	NA	NA	NA
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	9/24/2009	<1.0U	<1.0U	<1.0U	<1.0U
	9/28/2010	<1.0	<1.0	<1.0	<1.0
NMWQCC Standards		10 (µg/L)	750 (µg/L)	750 (µg/L)	620 (µg/L)

Explanation

J = Analyte concentration detected at a value between MDL and PQL

MDL = Method Detection Limit

NA = Not Analyzed

NS = Not Sampled

NMWQCC = New Mexico Water Quality Control Commission

PQL = Practical Quantitation Limit

U = Analyte was analyzed for but not detected at the indicated MDL

µg/L = micrograms per liter (parts per billion)

December 15, 2010 MW-16 Sample Results					
Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	TPH-GRO (mg/L)	TPH-GRO (mg/L)
5,200	13,000	1,100	14,500	75	31

APPENDIX A
FIELD SAMPLING FORMS



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 1 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-1Coded/
Replicate No. _____Date 9/28/10Weather Sunny, CoolTime Sampling
Began 845Time Sampling
Completed 0905

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 49.54 47.48 Water-Level Elevation _____Held _____ Depth to Water Below MP 43.19 Diameter of Casing 2"Wet _____ Water Column in Well 4.29 Gallons Pumped/Bailed Prior to Sampling 225Gallons per Foot 0.16Gallons in Well 6864 Sampling Pump Intake Setting (feet below land surface) _____Sampling Equipment Purge pump (Bailer) X3 = 2.059

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm ³)	TDS (g/L)	DO (mg/L)	ORP (mV)	DO% _o	V _o
0857	12.62	4.45	2862	1.860	3.66	240.8	34.6	1.1
0858	12.65	4.44	2861	1.860	3.16	193.5	29.5	1.2
0900	12.65	4.44	2862	1.860	2.96	155.1	28.2	1.7
0903	12.65	4.46	2861	1.859	2.45	126.7	22.4	2.0

Sampling Equipment Purge Pump/Bailer

Constituents Sampled _____ Container Description _____ Preservative _____

BTEX 3 40mL VOA's HClRemarks H₂O is mostly clear. no odor or sheen observed.Sampling Personnel Christine Matthews & Cassie Brown

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 2 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-5Coded/
Replicate No. _____Date 9/28/10Weather Sunny, coolTime Sampling
Began 1145Time Sampling
Completed 1200

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____

MP Elevation _____

Total Sounded Depth of Well Below MP 20.03

Water-Level Elevation _____

Held _____ Depth to Water Below MP 16.65Diameter of Casing 2"Wet _____ Water Column in Well 3.48Gallons Pumped/Bailed Prior to Sampling 21 gallonGallons per Foot 0.16Gallons in Well .65128 x 3 =Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm ³)	TDS (g/L)	DO (mg/L)	ORP (mV)
<u>1155</u>	<u>16.39</u>	<u>7.26</u>	<u>8800</u>	<u>2.470</u>	<u>3.03</u>	<u>275</u>
						<u>1.25</u>

2-3268
Volume
0.75
1.25
2.00

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks H₂O is black with white bacteria & strong hydrocarbon odorSampling Personnel Christine Mathews & Cassie Brown

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 3 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-7Coded/
Replicate No. _____Date 9/28/10Weather Sunny, coolTime Sampling
Began 1440Time Sampling
Completed 1445

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 20.20 Water-Level Elevation _____Held _____ Depth to Water Below MP 21.24 Diameter of Casing 2"Wet _____ Water Column in Well 1.04 Gallons Pumped/Bailed _____Gallons per Foot 0.16Gallons in Well 166 Sampling Pump Intake Setting _____

(feet below land surface)

Sampling Equipment Purge pump Bailer 13 = .499

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks H₂O was clear with orange and black flakes. well mostly drySampling Personnel Christine Matthews & Cassie Brown

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 4 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-9Coded/
Replicate No. _____Date 9/28/10Weather Sunny, coolTime Sampling
Began ~~0905~~ 0950Time Sampling
Completed 1005

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP ~~34.55~~ 32.39 Water-Level Elevation _____Held _____ Depth to Water Below MP 23.70 Diameter of Casing 2"Wet _____ Water Column in Well 8.69 Gallons Pumped/Bailed Prior to Sampling 4.25Gallons per Foot 0.16Gallons in Well 1.3904 Sampling Pump Intake Setting (feet below land surface) _____Purging Equipment Purge pump / Bailer X3 = 4.1712

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)	DO% DO90	Vol V0
959	15.20	6.51	3568	2.318	2.13	21.89 89.3	21.3	8.1
1002	14.77	6.23	3568	2.319	1.41	94.9	14.1	3.5
1003	14.68	6.19	3566	2.318	1.37	95.7	13.7	4.0

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HCl

Remarks _____

Sampling Personnel Christine Matthews & Cassie Brown

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 5 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-11 Coded/
Replicate No. _____Date 9.28.10Weather Sunny, hot
90° Time Sampling
Began 1340Time Sampling
Completed 1415

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP ~~88.5~~ 68.77 Water-Level Elevation _____Held _____ Depth to Water Below MP 6.06 Diameter of Casing 2"Wet _____ Water Column in Well 1271 Gallons Pumped/Bailed
Prior to Sampling 6.25Gallons per Foot 0.16Gallons in Well 2.033 x 3 =Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump Bailer 6.17

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)	DO % vol
1409	14.59	6.55	2609	1.696	6.31	0.9	58.4 5.2
1412	14.28	6.50	2598	1.688	3.02	1.0	29.1 5.5
1413	14.22	6.50	2598	1.688	2.53	-4.0	24.8 6.2

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks the H₂O is clear with red/orange bading; cleared after purging 1 volumeSampling Personnel Craig Brown & Christine Matthews

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 6 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-12 Coded/
Replicate No. _____Date 9/28/10
Time Sampling
Completed 1125Weather Sunny, warm Time Sampling
Began 1110

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 30.21 Water-Level Elevation _____Held _____ Depth to Water Below MP 21.27 Diameter of Casing 2"Wet _____ Water Column in Well 8.94 Gallons Pumped/Bailed Prior to Sampling 4.5Gallons per Foot 0.16Gallons in Well 1.43Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer X3 = 4.29

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)	Vol
<u>1118</u>	<u>14.40</u>	<u>6.50</u>	<u>3197</u>	<u>2.078</u>	<u>2.91</u>	<u>-213.0</u>	<u>3.5</u>
<u>1120</u>	<u>14.16</u>	<u>6.48</u>	<u>3199</u>	<u>2.079</u>	<u>2.42</u>	<u>-213.2</u>	<u>4.0</u>
<u>1121</u>	<u>14.15</u>	<u>6.47</u>	<u>3196</u>	<u>2.078</u>	<u>2.21</u>	<u>-214.3</u>	<u>4.25</u>

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks H₂O is gray with a very sparse stringy discontinuous sheen.Sampling Personnel CM & CB Strong sulfur reduction

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46

Strong sulfur reduction



WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 7 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-15Coded/
Replicate No. _____Date 9-28-10Weather Sunny; cool 60°Time Sampling
Began 0915Time Sampling
Completed 0925

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP ~~27.29~~ 24.95 Water-Level Elevation _____Held _____ Depth to Water Below MP 18.25 Diameter of Casing 2"Wet _____ Water Column in Well 6.7 Gallons Pumped/Bailed 3.25
Prior to SamplingGallons per Foot 0.16Gallons in Well 1.072 x 3 = 3.21Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump/Bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm)	TDS (g/L)	DO (mg/L)	ORP (mV)	Vol.
0923	15.69	4.08	3261	2.118	7.65	71.5	2.25
0924	15.65	4.08	3254	2.115	4.04	365.2	2.75
0925	15.64	4.08	3252	2.114	3.77	365.3	3.25

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX _____ 3 40mL VOA's _____ HCl _____

Remarks H₂O slightly brown, mostly clear, no odor or sheenSampling Personnel Cassie Brown & Christine Matthews observed

Well Casing Volumes

Gal./ft.	1 1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.10	2 1/2" = 0.24	3 1/2" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 8 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. MW-16Coded/
Replicate No. _____Date 9.29.10
9.28.10Weather Sunny, cool
60°Time Sampling
Began 1015 9.28.10Time Sampling
Completed 920

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP -31.6 29.75 Water-Level Elevation _____Held _____ Depth to Water Below MP 25.41 Diameter of Casing 4"Wet _____ Water Column in Well 4.34 Gallons Pumped/Bailed
Prior to Sampling No parameters due to free product.Gallons per Foot 0.65 0.16Gallons in Well 2.821 x 3 =Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer 8.46

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks Yellow
Noticeable free product in bailer - approximately 2" in a 3" bailerSampling Personnel (ASW) Brown & Christine Mathews Strong hydrocarbon odor, H₂O is black

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 9 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. TMW-1Coded/
Replicate No. _____Date 9/28/10Weather Sunny, hotTime Sampling
Began 1:235Time Sampling
Completed 1:245

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 19.64 Water-Level Elevation _____Held _____ Depth to Water Below MP 19.11 Diameter of Casing 2"Wet _____ Water Column in Well .53 Gallons Pumped/Bailed Prior to Sampling _____Gallons per Foot 0.16Gallons in Well .085 Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump Bailer X3 = .254

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm ³)	TDS (g/L)	DO (mg/L)	ORP (mV)

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks No parameters collected well, was dry. Sampled H₂O thatSampling Personnel TM & CB was in well

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Hampton 4MPage 10 of 10

Project No. _____

Site Location San Juan County, Hwy 173 near Aztec, NMSite/Well No. seepCoded/
Replicate No. _____Date 9-28-10Weather Sunny, hotTime Sampling
Began 1205Time Sampling
Completed 1225

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP _____ Water-Level Elevation _____

Held _____ Depth to Water Below MP _____

Wet _____ Water Column in Well _____

Gallons per Foot _____

Gallons in Well _____

Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks H₂O was present after a little digging. no odorSampling Personnel am & CB or sheen

Observe

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46

APPENDIX B
LABORATORY ANALYSIS REPORT



SPL Inc.
8880 Interchange Drive
Houston, TX 77054
Phone: (713) 660-0901
Fax: (713) 660-8975

Certificate of Analysis

October 22, 2010

Workorder: H10100034

Kelly Blanchard
Tetra Tech
6121 Indian School Road NE
Suite 200
Albuquerque, NM 87110

Project: Hampton No. 4M
Project Number: Hampton No. 4M
Site: Hampton No. 4M, San Juan County, NM
PO Number: ENFOS
NELAC Cert. No.: T104704205-09-3

This Report Contains A Total Of 33 Pages

Excluding Any Attachments



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Project: Hampton No. 4M
Project Number: Hampton No. 4M
Site: Hampton No. 4M, San Juan County, NM
PO Number: ENFOS
NELAC Cert. No.: T104704205-09-3

REVISED REPORT:

This report was revised on October 22, 2010 to edit the site address and correct the collection date for MW-16.

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

Upon receipt of your samples, a 16oz plastic unpreserved container was received for sample "MW-16" for the requested DRO analysis. The container was approximately half full. Due to insufficient sample volume, the analysis could not be performed.

II: ANALYSES AND EXCEPTIONS:

Per the Conoco Phillips TSM Revision 0, a copy of the internal chain of custody is to be included in final data package. However, due to LIMS limitations, this cannot be provided at this time.

There were no exceptions noted.

III. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.



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October 22, 2010

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Suite 200
Albuquerque, NM 87110

Project: Hampton No. 4M
Project Number: Hampton No. 4M
Site: Hampton No. 4M, San Juan County, NM
PO Number: ENFOS
NELAC Cert. No.: T104704205-09-3

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

Erica Cardenas, Senior Project Manager

Enclosures



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SAMPLE SUMMARY

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID	Sample ID	Matrix	COC ID	Date/Time Collected	Date/Time Received
H10100034001	MW-7	Water		9/29/2010 14:45	10/1/2010 09:30
H10100034002	MW-11	Water		9/28/2010 14:15	10/1/2010 09:30
H10100034003	TMW-1	Water		9/28/2010 12:45	10/1/2010 09:30
H10100034004	Seep	Water		9/28/2010 12:25	10/1/2010 09:30
H10100034005	MW-5	Water		9/28/2010 12:00	10/1/2010 09:30
H10100034006	MW-9	Water		9/28/2010 10:05	10/1/2010 09:30
H10100034007	MW-15	Water		9/28/2010 09:25	10/1/2010 09:30
H10100034008	MW-1	Water		9/28/2010 09:05	10/1/2010 09:30
H10100034009	MW-12	Water		9/28/2010 11:25	10/1/2010 09:30
H10100034010	MW-16	Water		9/28/2010 09:20	10/1/2010 09:30
H10100034011	Duplicate	Water		9/28/2010 11:30	10/1/2010 09:30
H10100034012	Trip Blank	Water		9/28/2010 09:40	10/1/2010 09:30



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034001

Date/Time Received: 10/1/2010 09:30 Matrix: Water

Sample ID: MW-7

Date/Time Collected: 9/29/2010 14:45

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2719 SW-846 8260B on 10/07/2010 15:10 by LKT

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	1.3		1.0	0.13	1			2719
Ethylbenzene	2.3		1.0	0.48	1			2719
Toluene	ND		1.0	0.13	1			2719
m,p-Xylene	ND		1.0	0.58	1			2719
o-Xylene	ND		1.0	0.35	1			2719
Xylenes, Total	ND		1.0	0.35	1			2719
4-Bromofluorobenzene (S)	98.8 %		74-125		1			2719
1,2-Dichloroethane-d4 (S)	72.8 %		70-130		1			2719
Toluene-d8 (S)	103 %		82-118		1			2719



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034002

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: MW-11

Date/Time Collected: 9/28/2010 14:15

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2721 SW-846 8260B on 10/08/2010 18:15 by LKT

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		1.0	0.13	1			2721
Ethylbenzene	ND		1.0	0.48	1			2721
Toluene	ND		1.0	0.13	1			2721
m,p-Xylene	ND		1.0	0.58	1			2721
o-Xylene	ND		1.0	0.35	1			2721
Xylenes, Total	ND		1.0	0.35	1			2721
4-Bromofluorobenzene (S)	90.8 %		74-125		1			2721
1,2-Dichloroethane-d4 (S)	74.5 %		70-130		1			2721
Toluene-d8 (S)	99.8 %		82-118		1			2721



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034003

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: TMW-1

Date/Time Collected: 9/28/2010 12:45

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2721 SW-846 8260B on 10/08/2010 19:41 by LKT

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	13		1.0	0.13	1			2721
Ethylbenzene	ND		1.0	0.48	1			2721
Toluene	ND		1.0	0.13	1			2721
m,p-Xylene	3.2		1.0	0.58	1			2721
o-Xylene	ND		1.0	0.35	1			2721
Xylenes, Total	3.2		1.0	0.35	1			2721
4-Bromofluorobenzene (S)	95.3 %		74-125		1			2721
1,2-Dichloroethane-d4 (S)	74.3 %		70-130		1			2721
Toluene-d8 (S)	102 %		82-118		1			2721



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034004

Date/Time Received: 10/1/2010 09:30 Matrix: Water

Sample ID: Seep

Date/Time Collected: 9/28/2010 12:25

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2725 SW-846 8260B on 10/09/2010 18:10 by LKT

Parameters	Results					Batch Information	
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Benzene	ND		1.0	0.13	1		2725
Ethylbenzene	ND		1.0	0.48	1		2725
Toluene	ND		1.0	0.13	1		2725
m,p-Xylene	ND		1.0	0.58	1		2725
o-Xylene	ND		1.0	0.35	1		2725
Xylenes, Total	ND		1.0	0.35	1		2725
4-Bromofluorobenzene (S)	95.1 %		74-125		1		2725
1,2-Dichloroethane-d4 (S)	70.7 %		70-130		1		2725
Toluene-d8 (S)	102 %		82-118		1		2725



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: **H10100034005**

Date/Time Received: 10/1/2010 09:30 Matrix: Water

Sample ID: **MW-5**

Date/Time Collected: 9/28/2010 12:00

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2729 - SW-846 8260B on 10/10/2010 16:20 by LKT

Parameters	Results					Batch Information		
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep	Analysis
Benzene	130		20	2.6	20			2729
Ethylbenzene	600		20	9.5	20			2729
Toluene	2400		20	2.7	20			2729
m,p-Xylene	3600		20	12	20			2729
o-Xylene	1600		20	6.9	20			2729
Xylenes, Total	5200		20	6.9	20			2729
4-Bromofluorobenzene (S)	115 %		74-125		20			2729
1,2-Dichloroethane-d4 (S)	112 %		70-130		20			2729
Toluene-d8 (S)	95.1 %		82-118		20			2729



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034006

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: MW-9

Date/Time Collected: 9/28/2010 10:05

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2729 SW-846 8260B on 10/10/2010 13:47 by LKT

Parameters	Results					Batch Information	
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Benzene	ND		1.0	0.13	1		2729
Ethylbenzene	ND		1.0	0.48	1		2729
Toluene	ND		1.0	0.13	1		2729
m,p-Xylene	ND		1.0	0.58	1		2729
o-Xylene	ND		1.0	0.35	1		2729
Xylenes, Total	ND		1.0	0.35	1		2729
4-Bromofluorobenzene (S)	109 %		74-125		1		2729
1,2-Dichloroethane-d4 (S)	107 %		70-130		1		2729
Toluene-d8 (S)	106 %		82-118		1		2729



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034007

Date/Time Received: 10/1/2010 09:30 Matrix: Water

Sample ID: MW-15

Date/Time Collected: 9/28/2010 09:25

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2729 SW-846 8260B on 10/10/2010 14:17 by LKT

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		1.0	0.13	1			2729
Ethylbenzene	ND		1.0	0.48	1			2729
Toluene	ND		1.0	0.13	1			2729
m,p-Xylene	ND		1.0	0.58	1			2729
o-Xylene	ND		1.0	0.35	1			2729
Xylenes, Total	ND		1.0	0.35	1			2729
4-Bromofluorobenzene (S)	103 %		74-125		1			2729
1,2-Dichloroethane-d4 (S)	111 %		70-130		1			2729
Toluene-d8 (S)	97.6 %		82-118		1			2729



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: **H10100034008**

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: **MW-1**

Date/Time Collected: 9/28/2010 09:05

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2729 SW-846 8260B on 10/10/2010 14:48 by LKT

Parameters	Results					Batch Information		
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep	Analysis
Benzene	ND		1.0	0.13	1			2729
Ethylbenzene	ND		1.0	0.48	1			2729
Toluene	ND		1.0	0.13	1			2729
m,p-Xylene	ND		1.0	0.58	1			2729
o-Xylene	ND		1.0	0.35	1			2729
Xylenes, Total	ND		1.0	0.35	1			2729
4-Bromofluorobenzene (S)	107 %		74-125		1			2729
1,2-Dichloroethane-d4 (S)	98.7 %		70-130		1			2729
Toluene-d8 (S)	103 %		82-118		1			2729



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034009

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: MW-12

Date/Time Collected: 9/28/2010 11:25

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2691 SW-846 8260B on 10/04/2010 19:00 by LKT DF = 1.

Batch: 2719 SW-846 8260B on 10/07/2010 14:07 by LKT DF = 5.

Parameters	Results				DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit	MDL			Prep	Analysis
Benzene	550		5.0	0.64	5			2719
Ethylbenzene	15		1.0	0.48	1			2691
Toluene	ND		1.0	0.13	1			2691
m,p-Xylene	16		1.0	0.58	1			2691
o-Xylene	ND		1.0	0.35	1			2691
Xylenes, Total	16		1.0	0.35	1			2691
4-Bromofluorobenzene (S)	95.8 %		74-125		5			2719
4-Bromofluorobenzene (S)	96.6 %		74-125		1			2691
1,2-Dichloroethane-d4 (S)	74.3 %		70-130		5			2719
1,2-Dichloroethane-d4 (S)	80.1 %		70-130		1			2691
Toluene-d8 (S)	101 %		82-118		1			2691
Toluene-d8 (S)	102 %		82-118		5			2719



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034010

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: MW-16

Date/Time Collected: 9/28/2010 09:20

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2729 SW-846 8260B on 10/10/2010 16:50 by LKT DF = 25.

Batch: 2741 SW-846 8260B on 10/11/2010 18:48 by LKT DF = 200.

Parameters	Results	Qual	Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l						Prep	Analysis
Benzene	3000		25	3.2	25			2729
Ethylbenzene	3400		25	12	25			2729
Toluene	4600		200	27	200			2741
m,p-Xylene	19000		200	120	200			2741
o-Xylene	4600		25	8.6	25			2729
Xylenes, Total	23600		25	8.6	200			2741
4-Bromofluorobenzene (S)	108 %		74-125		25			2729
4-Bromofluorobenzene (S)	116 %		74-125		200			2741
1,2-Dichloroethane-d4 (S)	91.2 %		70-130		200			2741
1,2-Dichloroethane-d4 (S)	113 %		70-130		25			2729
Toluene-d8 (S)	89.2 %		82-118		25			2729
Toluene-d8 (S)	98 %		82-118		200			2741

Gasoline Range Organics (GRO)

Analysis Desc: SW-846 8015B GRO Gas

SW-846 8015B GRO Gas Analytical Batches:

Batch: 2156 SW-846 8015B GRO Gas on 10/06/2010 17:14 by NNM

Parameters	Results	Qual	Report Limit	MDL	DF	RegLmt	Batch Information	
	mg/l						Prep	Analysis
Gasoline Range Organics	580		100	17	1000			2156
1,4-Difluorobenzene (S)	105 %		60-155		1000			2156
4-Bromofluorobenzene (S)	110 %		50-158		1000			2156



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034011

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: Duplicate

Date/Time Collected: 9/28/2010 11:30

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2691 SW-846 8260B on 10/04/2010 19:28 by LKT DF = 1.

Batch: 2719 SW-846 8260B on 10/07/2010 14:36 by LKT DF = 5.

Parameters	Results			MDL	DF	Batch Information	
	ug/l	Qual	Report Limit			Prep	Analysis
Benzene	540		5.0	0.64	5		2719
Ethylbenzene	17		1.0	0.48	1		2691
Toluene	ND		1.0	0.13	1		2691
m,p-Xylene	16		1.0	0.58	1		2691
o-Xylene	ND		1.0	0.35	1		2691
Xylenes, Total	16		1.0	0.35	1		2691
4-Bromofluorobenzene (S)	95.3 %		74-125		1		2691
4-Bromofluorobenzene (S)	97.7 %		74-125		5		2719
1,2-Dichloroethane-d4 (S)	73.5 %		70-130		5		2719
1,2-Dichloroethane-d4 (S)	79 %		70-130		1		2691
Toluene-d8 (S)	101 %		82-118		1		2691
Toluene-d8 (S)	102 %		82-118		5		2719



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ANALYTICAL RESULTS

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID: H10100034012

Date/Time Received: 10/1/2010 09:30

Matrix: Water

Sample ID: Trip Blank

Date/Time Collected: 9/28/2010 09:40

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2721 SW-846 8260B on 10/08/2010 17:46 by LKT

Parameters	Results				DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit	MDL			Prep	Analysis
Benzene	ND		1.0	0.13	1			2721
Ethylbenzene	ND		1.0	0.48	1			2721
Toluene	ND		1.0	0.13	1			2721
m,p-Xylene	ND		1.0	0.58	1			2721
o-Xylene	ND		1.0	0.35	1			2721
Xylenes, Total	ND		1.0	0.35	1			2721
4-Bromofluorobenzene (S)	91.1 %		74-125		1			2721
1,2-Dichloroethane-d4 (S)	74.2 %		70-130		1			2721
Toluene-d8 (S)	101 %		82-118		1			2721



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

QC Batch: MSV/2690 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 5030 Preparation: 10/04/2010 00:00 by LKT
Associated Lab Samples: H10090644001 H10090644002 H10090644003 H10090644004 H10090644005 H10090644006
H10090671002 H10090672001 H10100033001 H10100033002 H10100033003 H10100033004
H10100034009 H10100034011 H10100037001 H10100037002

METHOD BLANK: 73690

Analysis Date/Time Analyst: 10/04/2010 09:54 LKT

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Ethylbenzene	ug/l	ND		1.0
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
o-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	99.2		74-125
1,2-Dichloroethane-d4 (S)	%	80.9		70-130
Toluene-d8 (S)	%	107		82-118

LABORATORY CONTROL SAMPLE: 73691

Analysis Date/Time Analyst: 10/04/2010 08:56 LKT

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Ethylbenzene	ug/l	20	20.5	103	72-127
Toluene	ug/l	20	21.6	108	74-126
m,p-Xylene	ug/l	40	40.3	101	71-129
o-Xylene	ug/l	20	20.1	100	74-130
Xylenes, Total	ug/l	60	60.33	101	71-130
4-Bromofluorobenzene (S)	%			104	74-125
1,2-Dichloroethane-d4 (S)	%			79.7	70-130
Toluene-d8 (S)	%			102	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73692

73693

Original: H10100033001

MS Analysis Date/Time Analyst: 10/04/2010 13:15 LKT

MSD Analysis Date/Time Analyst: 10/04/2010 13:44 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Ethylbenzene	ug/l	ND	20	19.0	20.1	94.9	100	35-175	5.6	20
Toluene	ug/l	ND	20	21.3	21.8	107	109	70-131	2.2	20
m,p-Xylene	ug/l	ND	40	38.4	40.2	95.9	101	35-175	4.8	20
o-Xylene	ug/l	ND	20	19.0	19.6	94.9	98.1	35-175	3.4	20

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 73692 73693 Original: H10100033001

MS Analysis Date/Time Analyst: 10/04/2010 13:15 LKT

MSD Analysis Date/Time Analyst: 10/04/2010 13:44 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Xylenes, Total	ug/l	ND	60	57.35	59.87	95.6	99.8	35-175	4.3	20
4-Bromofluorobenzene (S)	%	92.7				98.6	103	74-125		
1,2-Dichloroethane-d4 (S)	%	79.8				79.5	78.7	70-130		
Toluene-d8 (S)	%	99.6				99.7	105	82-118		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

QC Batch: MSV/2718

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030

Preparation: 10/07/2010 00:00 by LKT

Associated Lab Samples: H10100034001 H10100034009 H10100034011 H10100037002 H10100047001 H10100047002
H10100048001 H10100048002

METHOD BLANK: 74728

Analysis Date/Time Analyst: 10/07/2010 13:10 LKT

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		1.0
Ethylbenzene	ug/l	ND		1.0
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
o-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	96.8		74-125
1,2-Dichloroethane-d4 (S)	%	74.5		70-130
Toluene-d8 (S)	%	103		82-118

LABORATORY CONTROL SAMPLE: 74729

Analysis Date/Time Analyst: 10/07/2010 12:41 LKT

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	19.1	95.6	74-123
Ethylbenzene	ug/l	20	19.8	99.2	72-127
Toluene	ug/l	20	21.9	109	74-126
m,p-Xylene	ug/l	40	39.9	99.8	71-129
o-Xylene	ug/l	20	19.6	97.8	74-130
Xylenes, Total	ug/l	60	59.5	99.2	71-130
4-Bromofluorobenzene (S)	%			103	74-125
1,2-Dichloroethane-d4 (S)	%			72.9	70-130
Toluene-d8 (S)	%			103	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74730

74731

Original: H10100034001

MS Analysis Date/Time Analyst: 10/07/2010 15:38 LKT

MSD Analysis Date/Time Analyst: 10/07/2010 16:07 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	1.3	20	22.1	21.7	104	102	70-124	1.7	20
Ethylbenzene	ug/l	2.3	20	23.7	23.3	107	105	35-175	1.7	20
Toluene	ug/l	ND	20	22.7	22.3	113	111	70-131	1.9	20

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74730 74731 Original: H10100034001

MS Analysis Date/Time Analyst: 10/07/2010 15:38 LKT

MSD Analysis Date/Time Analyst: 10/07/2010 16:07 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
m,p-Xylene	ug/l	ND	40	41.4	42.1	102	104	35-175	1.5	20
o-Xylene	ug/l	ND	20	20.1	19.7	100	98.7	35-175	1.8	20
Xylenes, Total	ug/l	ND	60	61.54	61.81	103	103	35-175	0.4	20
4-Bromofluorobenzene (S)	%	98.8				102	100	74-125		
1,2-Dichloroethane-d4 (S)	%	72.8				74.2	73.3	70-130		
Toluene-d8 (S)	%	103				101	101	82-118		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

QC Batch: MSV/2720 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 5030 Preparation: 10/08/2010 00:00 by LKT
Associated Lab Samples: H10100034002 H10100034003 H10100034012

METHOD BLANK: 74847

Analysis Date/Time Analyst: 10/08/2010 10:06 LKT

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		1.0
Ethylbenzene	ug/l	ND		1.0
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
o-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	99.2		74-125
1,2-Dichloroethane-d4 (S)	%	72.4		70-130
Toluene-d8 (S)	%	108		82-118

LABORATORY CONTROL SAMPLE: 74848

Analysis Date/Time Analyst: 10/08/2010 09:08 LKT

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	21.0	105	74-123
Ethylbenzene	ug/l	20	21.5	108	72-127
Toluene	ug/l	20	23.9	120	74-126
m,p-Xylene	ug/l	40	43.2	108	71-129
o-Xylene	ug/l	20	21.6	108	74-130
Xylenes, Total	ug/l	60	64.81	108	71-130
4-Bromofluorobenzene (S)	%			105	74-125
1,2-Dichloroethane-d4 (S)	%			72.6	70-130
Toluene-d8 (S)	%			105	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74849 74850 Original: H10100034002

MS Analysis Date/Time Analyst: 10/08/2010 18:44 LKT

MSD Analysis Date/Time Analyst: 10/08/2010 19:12 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	22.8	23.0	114	115	70-124	0.9	20
Ethylbenzene	ug/l	ND	20	21.9	21.9	109	110	35-175	0.2	20
Toluene	ug/l	ND	20	23.6	23.7	118	118	70-131	0.4	20
m,p-Xylene	ug/l	ND	40	43.7	43.3	109	108	35-175	0.8	20

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74849 74850 Original: H10100034002

MS Analysis Date/Time Analyst: 10/08/2010 18:44 LKT

MSD Analysis Date/Time Analyst: 10/08/2010 19:12 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
o-Xylene	ug/l	ND	20	21.0	20.9	105	104	35-175	0.6	20
Xylenes, Total	ug/l	ND	60	64.7	64.22	108	107	35-175	0.7	20
4-Bromofluorobenzene (S)	%	90.8				98.5	96.4	74-125		
1,2-Dichloroethane-d4 (S)	%	74.5				74.3	73.4	70-130		
Toluene-d8 (S)	%	99.8				99.2	97.6	82-118		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

QC Batch: MSV/2724 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 5030 Preparation: 10/09/2010 00:00 by LKT
Associated Lab Samples: H10090779031 H10090779033 H10100034004

METHOD BLANK: 74884

Analysis Date/Time Analyst: 10/09/2010 11:57 LKT

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		1.0
Ethylbenzene	ug/l	ND		1.0
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
o-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	92.2		74-125
1,2-Dichloroethane-d4 (S)	%	72.4		70-130
Toluene-d8 (S)	%	101		82-118

LABORATORY CONTROL SAMPLE: 74885

Analysis Date/Time Analyst: 10/09/2010 10:57 LKT

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	19.9	99.7	74-123
Ethylbenzene	ug/l	20	19.5	97.7	72-127
Toluene	ug/l	20	20.9	105	74-126
m,p-Xylene	ug/l	40	38.5	96.2	71-129
o-Xylene	ug/l	20	18.3	91.7	74-130
Xylenes, Total	ug/l	60	56.81	94.7	71-130
4-Bromofluorobenzene (S)	%			98.1	74-125
1,2-Dichloroethane-d4 (S)	%			71.8	70-130
Toluene-d8 (S)	%			100	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74886 74887 Original: H10100034004

MS Analysis Date/Time Analyst: 10/09/2010 18:38 LKT

MSD Analysis Date/Time Analyst: 10/09/2010 19:07 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	22.6	23.0	113	115	70-124	1.5	20
Ethylbenzene	ug/l	ND	20	21.7	21.9	108	110	35-175	1.3	20
Toluene	ug/l	ND	20	23.2	23.5	116	117	70-131	1.0	20
m,p-Xylene	ug/l	ND	40	42.4	43.4	106	108	35-175	2.4	20

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74886 74887 Original: H10100034004

MS Analysis Date/Time Analyst: 10/09/2010 18:38 LKT

MSD Analysis Date/Time Analyst: 10/09/2010 19:07 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
o-Xylene	ug/l	ND	20	20.2	20.6	101	103	35-175	1.8	20
Xylenes, Total	ug/l	ND	60	62.6	64.0	104	107	35-175	2.2	20
4-Bromofluorobenzene (S)	%	95.1				99.3	99.6	74-125		
1,2-Dichloroethane-d4 (S)	%	70.7				70.6	69.9 *	70-130		
Toluene-d8 (S)	%	102				98.9	99.5	82-118		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

QC Batch: MSV/2728

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030

Preparation: 10/10/2010 00:00 by LKT

Associated Lab Samples: H10090779023 H10090779024 H10090779025 H10090779027 H10100034005 H10100034006
H10100034007 H10100034008 H10100034010

METHOD BLANK: 74967

Analysis Date/Time Analyst: 10/10/2010 13:16 LKT

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		1.0
Ethylbenzene	ug/l	ND		1.0
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
o-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	108		74-125
1,2-Dichloroethane-d4 (S)	%	108		70-130
Toluene-d8 (S)	%	96.8		82-118

LABORATORY CONTROL SAMPLE: 74968

Analysis Date/Time Analyst: 10/10/2010 12:45 LKT

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	16.6	82.8	74-123
Ethylbenzene	ug/l	20	17.5	87.6	72-127
Toluene	ug/l	20	17.1	85.5	74-126
m,p-Xylene	ug/l	40	36.3	90.6	71-129
o-Xylene	ug/l	20	18.5	92.4	74-130
Xylenes, Total	ug/l	60	54.74	91.2	71-130
4-Bromofluorobenzene (S)	%			118	74-125
1,2-Dichloroethane-d4 (S)	%			112	70-130
Toluene-d8 (S)	%			93.3	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74969

74970

Original: H10100034008

MS Analysis Date/Time Analyst: 10/10/2010 15:19 LKT

MSD Analysis Date/Time Analyst: 10/10/2010 15:49 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	16.7	16.3	83.6	81.4	70-124	2.6	20
Ethylbenzene	ug/l	ND	20	17.4	18.0	86.8	89.9	35-175	3.5	20
Toluene	ug/l	ND	20	17.3	17.4	86.3	87.1	70-131	0.9	20

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74969

74970

Original: H10100034008

MS Analysis Date/Time Analyst: 10/10/2010 15:19 LKT

MSD Analysis Date/Time Analyst: 10/10/2010 15:49 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
m,p-Xylene	ug/l	ND	40	34.6	37.8	86.5	94.4	35-175	8.8	20
o-Xylene	ug/l	ND	20	18.3	18.9	91.6	94.3	35-175	2.9	20
Xylenes, Total	ug/l	ND	60	52.92	56.63	88.2	94.4	35-175	6.8	20
4-Bromofluorobenzene (S)	%	107				115	112	74-125		
1,2-Dichloroethane-d4 (S)	%	98.7				108	110	70-130		
Toluene-d8 (S)	%	103				96.5	101	82-118		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

QC Batch: MSV/2740

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030

Preparation: 10/11/2010 00:00 by LKT

Associated Lab Samples: H10090779026 H10090779028 H10090779029 H10090779030 H10090779032 H10100034010
H10100191001 H10100191002 H10100191003 H10100191004 H10100191005 H10100191006
H10100192001

METHOD BLANK: 75121

Analysis Date/Time Analyst: 10/11/2010 14:12 LKT

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	109		74-125
1,2-Dichloroethane-d4 (S)	%	89.4		70-130
Toluene-d8 (S)	%	96.8		82-118

LABORATORY CONTROL SAMPLE: 75122

Analysis Date/Time Analyst: 10/11/2010 13:11 LKT

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Toluene	ug/l	20	19.3	96.7	74-126
m,p-Xylene	ug/l	40	42.2	105	71-129
Xylenes, Total	ug/l	60	63.69	106	71-130
4-Bromofluorobenzene (S)	%			114	74-125
1,2-Dichloroethane-d4 (S)	%			90.5	70-130
Toluene-d8 (S)	%			91.8	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 75123

75124

Original: H10090779029

MS Analysis Date/Time Analyst: 10/11/2010 17:16 LKT

MSD Analysis Date/Time Analyst: 10/11/2010 17:47 LKT

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Toluene	ug/l	13	20	30.9	30.7	89.5	88.5	70-131	0.6	20
m,p-Xylene	ug/l	32	40	71.5	69.8	98.1	93.8	35-175	2.4	20
Xylenes, Total	ug/l	34.1	60	94.49	92.81	101	97.8	35-175	1.8	20
4-Bromofluorobenzene (S)	%	105				104	106	74-125		
1,2-Dichloroethane-d4 (S)	%	94.8				91.5	85.7	70-130		
Toluene-d8 (S)	%	92.7				93.0	95.1	82-118		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

QC Batch: GCVW/2155 Analysis Method: SW-846 8015B GRO Gas
QC Batch Method: SW-846 5030 Preparation: 10/06/2010 00:00 by GCV
Associated Lab Samples: H10100034010

METHOD BLANK: 74347

Analysis Date/Time Analyst: 10/06/2010 05:13 NNM

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Gasoline Range Organics	mg/l	ND		0.10
4-Bromofluorobenzene (S)	%	101		50-158
1,4-Difluorobenzene (S)	%	98.9		60-155

LABORATORY CONTROL SAMPLE: 74348

Analysis Date/Time Analyst: 10/06/2010 05:41 NNM

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Gasoline Range Organics	mg/l	1.0	0.984	98.4	70-130
4-Bromofluorobenzene (S)	%			104	50-158
1,4-Difluorobenzene (S)	%			105	60-155

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 74349 74350 Original: H10100153001

MS Analysis Date/Time Analyst: 10/06/2010 13:34 NNM

MSD Analysis Date/Time Analyst: 10/06/2010 14:01 NNM

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Gasoline Range Organics	mg/l	ND	1.0	0.91	0.87	91.0	87.0	36-160	4.4	36
4-Bromofluorobenzene (S)	%	ND				104	103	50-158		
1,4-Difluorobenzene (S)	%	ND				103	105	60-155		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



Legend

(S) - Indicates analyte is a surrogate

Qualifier	Qualifier Description
*	Recovery/RPD value outside QC limits
+	DCS Concentration
B	Analyte detected in the Method Blank
C	MTBE results were not confirmed by GCMS
D	Recovery out of range due to dilution
E	Results exceed calibration range
H	Exceeds holding time
I	Estimated value, between MDL and PQL (Florida)
J	Estimated value
JN	The analysis indicates the presence of an analyte
MI	Matrix Interference
N	Recovery outside of control limits
NC	Not Calculable (Sample Duplicate)
NC	Not Calculated - Sample concentration > 4 times the spike
ND	Not Detected at reporting Limits
P	Pesticide dual column results, greater than 25%
Q	Received past holding time
TNTC	Too numerous to count
U	Not Detected at reporting Limits



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: H10100034 : Hampton No. 4M

Project Number: Hampton No. 4M

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
H10100034009	MW-12	SW-846 5030	MSV/2690	SW-846 8260B	MSV/2691
H10100034011	Duplicate	SW-846 5030	MSV/2690	SW-846 8260B	MSV/2691
H10100034010	MW-16	SW-846 8015B GRO Gas	GCVW/2155	SW-846 8015B GRO Gas	GCVW/2156
H10100034001	MW-7	SW-846 5030	MSV/2718	SW-846 8260B	MSV/2719
H10100034009	MW-12	SW-846 5030	MSV/2718	SW-846 8260B	MSV/2719
H10100034011	Duplicate	SW-846 5030	MSV/2718	SW-846 8260B	MSV/2719
H10100034002	MW-11	SW-846 5030	MSV/2720	SW-846 8260B	MSV/2721
H10100034003	TMW-1	SW-846 5030	MSV/2720	SW-846 8260B	MSV/2721
H10100034012	Trip Blank	SW-846 5030	MSV/2720	SW-846 8260B	MSV/2721
H10100034004	Seep	SW-846 5030	MSV/2724	SW-846 8260B	MSV/2725
H10100034005	MW-5	SW-846 5030	MSV/2728	SW-846 8260B	MSV/2729
H10100034006	MW-9	SW-846 5030	MSV/2728	SW-846 8260B	MSV/2729
H10100034007	MW-15	SW-846 5030	MSV/2728	SW-846 8260B	MSV/2729
H10100034008	MW-1	SW-846 5030	MSV/2728	SW-846 8260B	MSV/2729
H10100034010	MW-16	SW-846 5030	MSV/2728	SW-846 8260B	MSV/2729
H10100034010	MW-16	SW-846 5030	MSV/2740	SW-846 8260B	MSV/2741



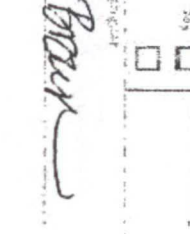
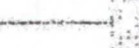
Sample Receipt Checklist

WorkOrder:	H10100034	Received By	LOG
Date and Time	10/01/2010 09:30	Carrier Name:	FEDEXS
Temperature:	2.5°C	Chilled By:	Water Ice

1. Shipping container/cooler in good condition? YES
2. Custody seals intact on shipping container/cooler? YES
3. Custody seals intact on sample bottles? Not Present
4. Chain of custody present? YES
5. Chain of custody signed when relinquished and received? YES
6. Chain of custody agrees with sample labels? YES
7. Samples in proper container/bottle? NO
A 16OZ plastic unpreserved was received for MW-16 for the DRO analysis. The 16OZ is only approximately half full. DRO analysis was placed on hold pending instruction from PM.
8. Samples containers intact? YES
9. Sufficient sample volume for indicated test? YES
10. All samples received within holding time? YES
11. Container/Temp Blank temperature in compliance? YES
12. Water - VOA vials have zero headspace? YES
13. Water - Preservation checked upon receipt(except VOA*)? Not Applicable

*VOA Preservation Checked After Sample Analysis

SPL Representative:	ERC	Contact Date & Time:	10/05/2010
Client Name Contacted:	Kelly Blanchard		
Client Instructions:	Sent email asking for additional volume. Per client, don't worry about DRO.		

		Analysis Request and Chain of Custody Record		 H10100034							
Company Name Tetra Tech / Conoco Phillips Contact Kelly Blanchard Address 5121 Indian School Rd. NE, Ste. 200 Phone/Fax (505) 237-8440 / (505) 237-8666 E-mail Address kelly.blanchard@tetratech.com Invoice To Purchase Order No. Project Name/No. Hampton #4M Site Address		Sampling Event Description Priority ☐ Semi-Annual ☐ WC Waste Char ☐ Other (specify below) ☐		REQUESTED ANALYSIS							
Sampled By C. Brown DATE TIME		QA/QC Level Trip ☐ L.A. ☐ STD ☐ CP ☐ Wet ☐ Soil ☐ Sludge ☐ Other ☐		Number Containers Container Type Preservative BTEX - 8260							
MU-7	9.28.10	1445	X	3	var	HCl	X				
MU-11	9.28.10	1415	X	3	var	HCl	X				
MU-1	9.28.10	1245	X	3	var	HCl	X				
Deep	9.28.10	1225	X	3	var	HCl	X				
MU-5	9.28.10	1200	X	3	var	HCl	X				
MU-9	9.28.10	1045	X	3	var	HCl	X				
MU-15	9.28.10	0925	X	3	var	HCl	X				
MU-1	9.28.10	0905	X	3	var	HCl	X				
MU-12	9.28.10	1125	X	3	var	HCl	X				
MU-16	9.29.10	0920	X	3	var	HCl	X				
TAT 24 hr ☐ 72 hr ☐ 5 days ☐ 10 days ☐ Other ☐		Comments		Chain of Custody Received by: _____ Date: _____ Analyzed by: _____ Date: _____ Released by: _____ Date: _____ P.M. Review: _____							

Company Name: Tetra Tech / Conoco Phillips

Contact: Kelly Blanchard

Address: 6121 Indian School Rd. NE, Ste. 200

Phone/Fax: (505) 237-9449 / (505) 237-9686

Email Address: kelly.blanchard@tetratech.com

Invoice To:

Purchase Order No:

Project Name/No: Hampton #44A

Site Address:

Sampled By: L. Brown

Sampling Event Description

Quantity: ☐

Scum Arrival: ☐

W/C Waste Char: ☐

Other (describe below): ☐

QA/QC Level:

Temp: ☐ **LA3:** ☐

STD: ☐ **CP:** ☐

Water: ☐ **Soil:** ☐ **Sludge:** ☐ **Other:** ☐

DATE	TIME	WATER	SOIL	SLUDGE	OTHER	Number Containers	Container Type	Preservative	BTX - 8260	TPH/DRO/TPH/GRO
9/28/10	1130	X				3	WATER	HCL	X	
9/30/10	0940	X				2	WATER	HCL	X	
9/29/10	0920	X				1	WATER	N/A		X

Special Instructions:

AT: ☐ **BT:** ☐ **CD:** ☐ **GD:** ☐ **OW:** ☐

Special Processing Requirements (Specify):

Ref: Case 100

Printed By:

DATE: 9/30/10

TIME: 1100

RECEIVED BY:

PRINTED BY:

PM REVIEW:

REQUESTED ANALYSIS:

ANALYST: Amanda Vickman



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Certificate of Analysis

January 6, 2011

Workorder: H10120368

Kelly Blanchard
Tetra Tech
6121 Indian School Road NE
Suite 200
Albuquerque, NM 87110

Project: COP - Hampton 4M
Project Number: COP - Hampton 4M
Site: COP - Hampton 4M
PO Number: ENFOS
NELAC Cert. No.: T104704205-09-3

This Report Contains A Total Of 14 Pages

Excluding Any Attachments



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Certificate of Analysis

January 6, 2011

Workorder: H10120368

Kelly Blanchard
Tetra Tech
6121 Indian School Road NE
Suite 200
Albuquerque, NM 87110

Project: COP - Hampton 4M
Project Number: COP - Hampton 4M
Site: COP - Hampton 4M
PO Number: ENFOS
NELAC Cert. No.: T104704205-09-3

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

Received Trip Blank not listed on chain. The trip blank was logged in with analysis.

II: ANALYSES AND EXCEPTIONS:

Per the Conoco Phillips TSM Revision 0, a copy of the internal chain of custody is to be included in final data package. However, due to LIMS limitations, this cannot be provided at this time.

SW8015 - Diesel Range Organics analysis:

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not analyzed with Batch ID: EXTO/2572. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

III. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg/kg-dry " or " ug/kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.



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Certificate of Analysis

January 6, 2011

Workorder: H10120368

Kelly Blanchard
Tetra Tech
6121 Indian School Road NE
Suite 200
Albuquerque, NM 87110

Project: COP - Hampton 4M
Project Number: COP - Hampton 4M
Site: COP - Hampton 4M
PO Number: ENFOS
NELAC Cert. No.: T104704205-09-3

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

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Erica Cardenas, Senior Project Manager

Enclosures



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SAMPLE SUMMARY

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

Lab ID	Sample ID	Matrix	COC ID	Date/Time Collected	Date/Time Received
H10120368001	MW-16	Water		12/15/2010 12:26	12/17/2010 09:05
H10120368002	Trip Blank	Water		12/15/2010 00:00	12/17/2010 09:05



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ANALYTICAL RESULTS

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

Lab ID: H10120368001

Date/Time Received: 12/17/2010 09:05 Matrix: Water

Sample ID: MW-16

Date/Time Collected: 12/15/2010 12:26

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 3093 SW-846 8260B on 12/27/2010 20:57 by JMC

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	5200		250	32	250			3093
Ethylbenzene	1100		250	120	250			3093
Toluene	13000		250	34	250			3093
m,p-Xylene	13000		250	140	250			3093
o-Xylene	1500		250	86	250			3093
Xylenes, Total	14500		250	86	250			3093
4-Bromofluorobenzene (S)	92.5 %		74-125		250			3093
1,2-Dichloroethane-d4 (S)	94.5 %		70-130		250			3093
Toluene-d8 (S)	108 %		82-118		250			3093

Gasoline Range Organics (GRO)

Analysis Desc: SW-846 8015B GRO Gas

SW-846 8015B GRO Gas Analytical Batches:

Batch: 2360 SW-846 8015B GRO Gas on 12/28/2010 10:39 by NNM

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	mg/l	Qual					Prep	Analysis
Gasoline Range Organics	75		10	1.7	100			2360
1,4-Difluorobenzene (S)	101 %		60-155		100			2360
4-Bromofluorobenzene (S)	102 %		50-158		100			2360

SEMIVOLATILE HYDROCARBONS

Analysis Desc: SW-846 8015B Fuels

Preparation Batches:

Batch: 2572 SW-846 3510C on 12/20/2010 12:37 by A_G

Analytical Batches:

Batch: 2251 SW-846 8015B Fuels on 12/20/2010 22:21 by NDW

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	mg/l	Qual					Prep	Analysis
Diesel Range Organics (DRO)	31		4.8	1.4	20		2572	2251
n-Pentacosane (S)	0 %	D*	20-150		20		2572	2251



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ANALYTICAL RESULTS

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

Lab ID: H10120368002

Date/Time Received: 12/17/2010 09:05 Matrix: Water

Sample ID: Trip Blank

Date/Time Collected: 12/15/2010 00:00

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 3093 SW-846 8260B on 12/27/2010 21:26 by JMC

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		1.0	0.13	1			3093
Ethylbenzene	ND		1.0	0.48	1			3093
Toluene	ND		1.0	0.13	1			3093
m,p-Xylene	ND		1.0	0.58	1			3093
o-Xylene	ND		1.0	0.35	1			3093
Xylenes, Total	ND		1.0	0.35	1			3093
4-Bromofluorobenzene (S)	86.8 %		74-125		1			3093
1,2-Dichloroethane-d4 (S)	96.5 %		70-130		1			3093
Toluene-d8 (S)	116 %		82-118		1			3093



QUALITY CONTROL DATA

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

QC Batch: MSV/3092 Analysis Method: SW-846 8260B
QC Batch Method: SW-846 5030 Preparation: 12/27/2010 00:00 by JMC
Associated Lab Samples: H10120367001 H10120367003 H10120368001 H10120368002 H10120377001 H10120377002
H10120377006

METHOD BLANK: 87809

Analysis Date/Time Analyst: 12/27/2010 18:32 JMC

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		1.0
Ethylbenzene	ug/l	ND		1.0
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
o-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	89.2		74-125
1,2-Dichloroethane-d4 (S)	%	100		70-130
Toluene-d8 (S)	%	105		82-118

LABORATORY CONTROL SAMPLE: 87810

Analysis Date/Time Analyst: 12/27/2010 18:03 JMC

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	18.2	91.2	74-123
Ethylbenzene	ug/l	20	19.4	96.9	72-127
Toluene	ug/l	20	19.7	98.4	74-126
m,p-Xylene	ug/l	40	40.3	101	71-129
o-Xylene	ug/l	20	20.1	101	74-130
Xylenes, Total	ug/l	60	60.42	101	71-130
4-Bromofluorobenzene (S)	%			96.2	74-125
1,2-Dichloroethane-d4 (S)	%			95.4	70-130
Toluene-d8 (S)	%			105	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 87811

87812

Original: H10120367001

MS Analysis Date/Time Analyst: 12/27/2010 19:29 JMC

MSD Analysis Date/Time Analyst: 12/27/2010 19:59 JMC

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	18.7	17.9	93.7	89.4	70-124	4.8	20
Ethylbenzene	ug/l	ND	20	19.6	20.0	98.1	100	35-175	1.8	20
Toluene	ug/l	ND	20	19.4	19.8	96.9	98.9	70-131	2.1	20

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 87811 87812 Original: H10120367001

MS Analysis Date/Time Analyst: 12/27/2010 19:29 JMC

MSD Analysis Date/Time Analyst: 12/27/2010 19:59 JMC

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
m,p-Xylene	ug/l	ND	40	38.7	39.3	96.6	98.4	35-175	1.8	20
o-Xylene	ug/l	ND	20	19.8	19.7	99.1	98.7	35-175	0.5	20
Xylenes, Total	ug/l	ND	60	58.48	59.08	97.5	98.5	35-175	1.0	20
4-Bromofluorobenzene (S)	%	90.3				90.6	93.6	74-125		
1,2-Dichloroethane-d4 (S)	%	95.8				96.3	97.5	70-130		
Toluene-d8 (S)	%	118				98.8	102	82-118		

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QUALITY CONTROL DATA

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

QC Batch: GCVW/2359 Analysis Method: SW-846 8015B GRO Gas
QC Batch Method: SW-846 5030 Preparation: 12/28/2010 00:00 by GCV
Associated Lab Samples: H10120368001

METHOD BLANK: 88114

Analysis Date/Time Analyst: 12/28/2010 02:06 NNM

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Gasoline Range Organics	mg/l	ND		0.10
4-Bromofluorobenzene (S)	%	99.8		50-158
1,4-Difluorobenzene (S)	%	96.8		60-155

LABORATORY CONTROL SAMPLE: 88115

Analysis Date/Time Analyst: 12/28/2010 02:34 NNM

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Gasoline Range Organics	mg/l	1.0	1.01	101	70-130
4-Bromofluorobenzene (S)	%			100	50-158
1,4-Difluorobenzene (S)	%			101	60-155

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 88116 88117 Original: H10120558001

MS Analysis Date/Time Analyst: 12/28/2010 08:45 NNM

MSD Analysis Date/Time Analyst: 12/28/2010 09:13 NNM

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Gasoline Range Organics	mg/l	9.6	25	28.5	28.2	75.7	74.4	36-160	1.2	36
4-Bromofluorobenzene (S)	%	ND				101	101	50-158		
1,4-Difluorobenzene (S)	%	ND				106	106	60-155		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

QC Batch: EXTO/2572 Analysis Method: SW-846 8015B Fuels
QC Batch Method: SW-846 3510C Preparation: 12/20/2010 12:36 by A_G
Associated Lab Samples: H10120368001

METHOD BLANK: 86985

Analysis Date/Time Analyst: 12/20/2010 22:01 NDW

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Diesel Range Organics (DRO)	mg/l	ND		0.10
n-Pentacosane (S)	%	79.4		20-150

LABORATORY CONTROL SAMPLE & LCSD: 86986 86987

LCS Analysis Date/Time Analyst: 12/20/2010 22:21 NDW

LCSD Analysis Date/Time 12/20/2010 22:41 NDW

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD
Diesel Range Organics (DRO)	mg/l	1.0	0.832	0.808	83.2	80.8	21-150	2.9	40
n-Pentacosane (S)	%				72.8	74.5	20-150		

QC results presented in the QC Control Data have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



Legend

(S) - Indicates analyte is a surrogate

Qualifier	Qualifier Description
*	Recovery/RPD value outside QC limits
+	DCS Concentration
B	Analyte detected in the Method Blank
C	MTBE results were not confirmed by GCMS
D	Recovery out of range due to dilution
E	Results exceed calibration range
H	Exceeds holding time
I	Estimated value, between MDL and PQL (Florida)
J	Estimated value
JN	The analysis indicates the presence of an analyte
MI	Matrix Interference
N	Recovery outside of control limits
NC	Not Calculable (Sample Duplicate)
NC	Not Calculated - Sample concentration > 4 times the spike
ND	Not Detected at reporting Limits
P	Pesticide dual column results, greater than 25%
Q	Received past holding time
TNTC	Too numerous to count
U	Not Detected at reporting Limits



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: H10120368 : COP - Hampton 4M

Project Number: COP - Hampton 4M

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
H10120368001	MW-16	SW-846 3510C	EXTO/2572	SW-846 8015B Fuels	GCSV/2251
H10120368001	MW-16	SW-846 5030	MSV/3092	SW-846 8260B	MSV/3093
H10120368002	Trip Blank	SW-846 5030	MSV/3092	SW-846 8260B	MSV/3093
H10120368001	MW-16	SW-846 8015B GRO Gas	GCVW/2359	SW-846 8015B GRO Gas	GCVW/2360



Sample Receipt Checklist

WorkOrder:	H10120368	Received By	LOG
Date and Time	12/17/2010 09:05	Carrier Name:	FEDEXS
Temperature:	3.5/3.5/3.5/3.0/4.0/4.0/4.0°C	Chilled By:	Water Ice

1. Shipping container/cooler in good condition? YES
2. Custody seals intact on shipping container/cooler? YES
3. Custody seals intact on sample bottles? Not Present
4. Chain of custody present? YES
5. Chain of custody signed when relinquished and received? YES
6. Chain of custody agrees with sample labels?
Received Trip Blank but not listed on chain, logged in with analysis. NO
7. Samples in proper container/bottle? YES
8. Samples containers intact? YES
9. Sufficient sample volume for indicated test? YES
10. All samples received within holding time? YES
11. Container/Temp Blank temperature in compliance? YES
12. Water - VOA vials have zero headspace? YES
13. Water - Preservation checked upon receipt(except VOA*)? YES

*VOA Preservation Checked After Sample Analysis

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Client Instructions:

☐ 459 Hughes Drive
Traverse City MI 49686 (231) 947-5777

APPENDIX C
SOIL EXCAVATION MAPS

Hampton #4M Site Diagram

