



May 7, 2010

#3116075

Ms. Lorena Goerger, Project Manager  
New Mexico Environment Department  
Petroleum Storage Tank Bureau  
1301 Siler Road  
Building B  
Santa Fe, NM 87507

**RE: GROUND WATER MONITORING REPORT FOR CONOCO MINI MART,  
3837 HIGHWAY 64, CHAMA, NEW MEXICO  
FACILITY #27498      RID #2316      WPID #3440-2**

Dear Ms. Goerger:

The following is the eighth ground water monitoring report since the UST removal and excavation at the above referenced site. The sampling event was completed on April 6, 2010.

Included with the report are the laboratory analyses for the water samples collected from the monitoring wells associated with the release site.

If you have any questions, please call our office at (505) 325-5667.

Sincerely,

SOUDER, MILLER & ASSOCIATES

A handwritten signature in blue ink that reads "Shawna Chubbuck". The signature is written in a cursive, flowing style.

Shawna Chubbuck  
Staff Scientist

A handwritten signature in blue ink that reads "Reid S. Allan". The signature is written in a cursive, flowing style.

Reid S. Allan, P.G.  
Vice President/Principal Scientist

# APRIL 2009 GROUND WATER MONITORING REPORT

For

**Conoco Mini-Mart**  
**3837 Highway 64**  
**Chama, New Mexico**  
**Facility #27498 RID #2316 WPID #3440-2**

May 7, 2010



**Prepared For:**  
**New Mexico Environment Department**  
**Petroleum Storage Tank Bureau**



**Souder, Miller & Associates**  
*Engineering ♦ Environmental ♦ Surveying*

612 E. Murray Drive ♦ Farmington, NM 87401-6624  
(505) 325-5667 ♦ fax (505) 327-1496 ♦ [www.soudermiller.com](http://www.soudermiller.com)

**COVER PAGE  
FORM 1216  
QUARTERLY MONITORING REPORT**

1. **Site Name:**  
Conoco Mini Mart
2. **Responsible party:**  
State Lead Site
3. **Responsible party mailing address** (list contact person if different):  
2044 Galisteo Street  
Santa Fe, NM 87505
4. **Facility Number:**  
27498
5. **Address/legal description:**  
3837 US Hwy 64, Chama, NM
6. **Author/consulting company:**  
Shawna Chubbuck, Souder, Miller & Associates
7. **Date of report:**  
May 7, 2010
8. **Date of confirmation of release or date PSTB was notified of release:**  
May 16, 1994

## STATEMENT OF FAMILIARITY

I, the undersigned, am personally familiar with the information submitted in this report and the attached documents and attest that it is true and complete.



Shawna Chubbuck  
Staff Scientist



Reid S. Allan  
Principal Scientist

May 7, 2010

## I Introduction

### A. *Scope of Work:*

This report is pursuant to the December 29, 2009, work plan approved by the New Mexico Environment Department (NMED) (WPID# 3440-2). On April 6, 2010, ground water samples were collected from six site monitoring wells: MW-6, MW-7, MW-8, MW-9, MW-11, and MW-12 as shown on Figure 2. The site location is illustrated in Figure 1.

### B. *This quarter's highlights, if any.*

This is the eighth sampling event since the underground storage tank (UST) removal and remedial excavation on the north side of the site. The site excavation removed 1,060 cubic yards of hydrocarbon contaminated soil. UST removal, excavation, backfill, and compaction work was completed from December 11-15, 2006.

Contaminants of concern (COC) are above New Mexico Water Quality Control Commission Regulation (NMWQCCR) standards in monitoring well MW-7 and MW-12. Concentrations of COCs have generally increased since the last sampling event on October 14, 2009. Table 2 summarizes the ground water sample analyses for this sampling event.

Non-aqueous phase hydrocarbon liquid (NAPL) was not present in site monitoring wells.

As reported in the letter report dated April 15, 2010, monitoring wells MW-3, MW-4, MW-5 and MW-10 were decommissioned on April 5, 2010.

## II Activities Performed During This Sampling Event

### A. *Brief description of remediation system and date installed.*

Not applicable.

### B. *Description of activities performed to keep system operating properly including: inspections, maintenance procedures and modifications, if any.*

Not applicable.

### C. *Monitoring activities performed.*

## Organic Contaminant Monitoring

Six site monitoring wells (MW-6, MW-7, MW-8, MW-9, MW-11, and MW-12) at the Conoco Mini Mart site were sampled on April 6, 2010 and analyzed for volatile organics by EPA Method 8260 and polynuclear aromatic hydrocarbons by EPA Method 8310. Figures 4 – 6 are contaminant concentration contour maps. Procedures for sampling the monitoring wells are described in Appendix 1. Laboratory results are included in Appendix 3. Analytical results are provided in Tables 2 and 3.

Monitoring well MW-6 is located east and hydraulically cross-gradient from the contaminant plume, and downgradient of the former USTs. All analyzed organic contaminants of concern were below detection limits.

Monitoring well MW-7 is at the center of the contaminant plume. Benzene (28 µg/L), total xylenes (1400 µg/L) and total naphthalenes (629 µg/L) values exceeded NMWQCCR standards, with benzene decreasing, total xylenes remaining stable and total naphthalenes increasing since the previous monitoring event in October 2009. All other analyzed organic contaminants of concern were below detection limits.

Monitoring well MW-8 is located west and hydraulically cross-gradient from the contaminant plume, and downgradient of the former USTs. All analyzed organic contaminants of concern were below NMWQCC standards, though benzene, toluene, ethylbenzene, total xylenes and total naphthalenes were all detected.

Monitoring well MW-9 is located south and hydraulically down-gradient from the contaminant plume. All analyzed organic contaminants of concern were below detection limits.

Monitoring well MW-11 is located southwest and hydraulically down-gradient from the contaminant plume, and downgradient of the former USTs. All analyzed organic contaminants of concern were below detection limits, except for small concentrations of benzene, ethylbenzene and total xylenes.

Monitoring well MW-12 is located northwest and hydraulically cross-gradient from the contaminant plume, and cross-gradient of the former USTs. Total xylenes (1100 µg/L) and total naphthalenes (146 µg/L) exceeded NMWQCCR standards. These are the highest concentrations measured for either of these contaminants since monitoring began. Toluene and ethylbenzene were also detected but did not exceed NMWQCCR standards. All other analyzed organic contaminants of concern were below detection limits.

## Non-Aqueous Phase Liquid Monitoring

No NAPL was observed in site monitoring wells during this quarterly sampling event.

## Ground Water Measurements

Six site monitoring wells were gauged for depth to water on April 6, 2010. Field notes are included in Appendix 2. The historical ground water elevation data for the site can be found in Table 1. Figure 3 is a potentiometric surface map. In general, the direction of ground water flow is to the southwest at a gradient of 0.021 ft/ft. The ground water flow direction and gradient are consistent with historical monitoring results. Ground water elevations have increased an average of 3.85 feet since the October 2009 sampling event.

### III Summary and Conclusions

A. *Discussion of any trends or changes noted in analytical results or site conditions.*

This report summarizes the eighth sampling event since the UST removal and excavation. Contaminants of concern (total xylenes, and naphthalene) are above the NMWQCCR standards in monitoring wells MW-7 and MW-12, in addition to benzene in MW-7.

Concentrations of COCs in MW-7 have remained fairly consistent, with this monitoring event marking the highest recorded concentration of naphthalenes to date. Concentrations of total xylenes and naphthalenes in MW-12 also reached the highest recorded levels during this monitoring event. Water levels were also among the highest recorded, consistent with the April 2008 monitoring event.

Over time, however, concentrations of COCs have not shown a defined trend, having decreased and increased in individual monitoring wells. It is not yet apparent whether the source area excavation of December 2006 has had a beneficial effect on dissolved phase contaminants of concern.

B. *Ongoing assessment of remediation system.*

Not applicable for this quarterly event.

C. *Recommendations.*

SMA recommends the following:

1. Due to the fact that the soils remaining in place beneath the car wash are above NMED standards for BTEX components and naphthalenes, SMA

- recommends demolition of the car wash and removal of the soils beneath the car wash.
2. SMA recommends continued quarterly monitoring of all site monitoring wells.
  3. Pursuant to 20.5.12.40 NMAC, SMA recommends completion of a more thorough evaluation of the approach to remediation.



## Figures

1. Vicinity Map
2. Site Map
3. Potentiometric Surface Map
4. Benzene Concentration Map
5. Total Xylenes Concentration Map
6. Total Naphthalenes Concentration Map

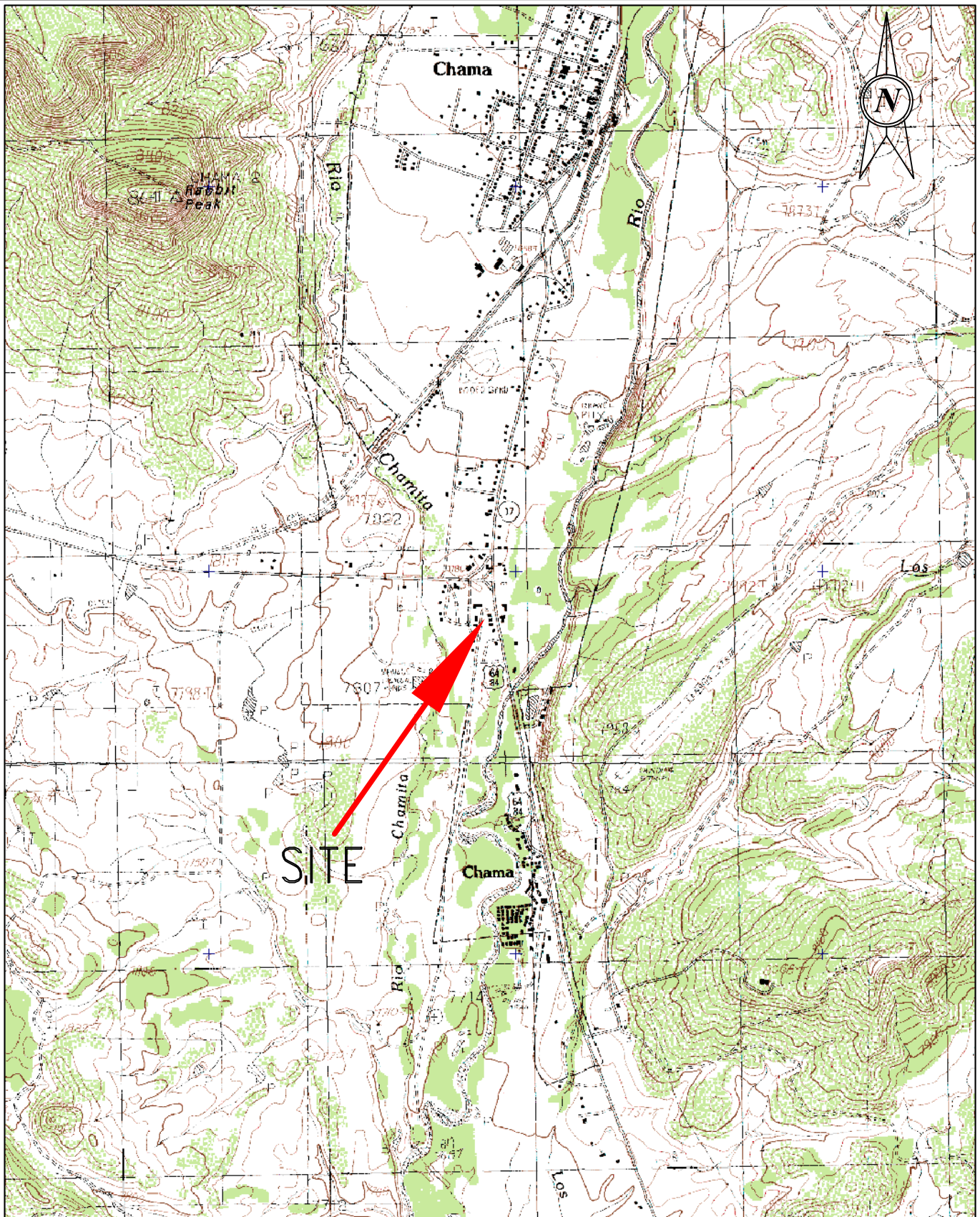
## Tables

1. Summary of Ground Water Elevation Results
2. Summary of Ground Water Sample Analysis (8260)
3. Summary of Ground Water Sample Analysis (8310)

## Appendices

1. Sampling protocol
2. Field notes
3. Laboratory results

## Figures



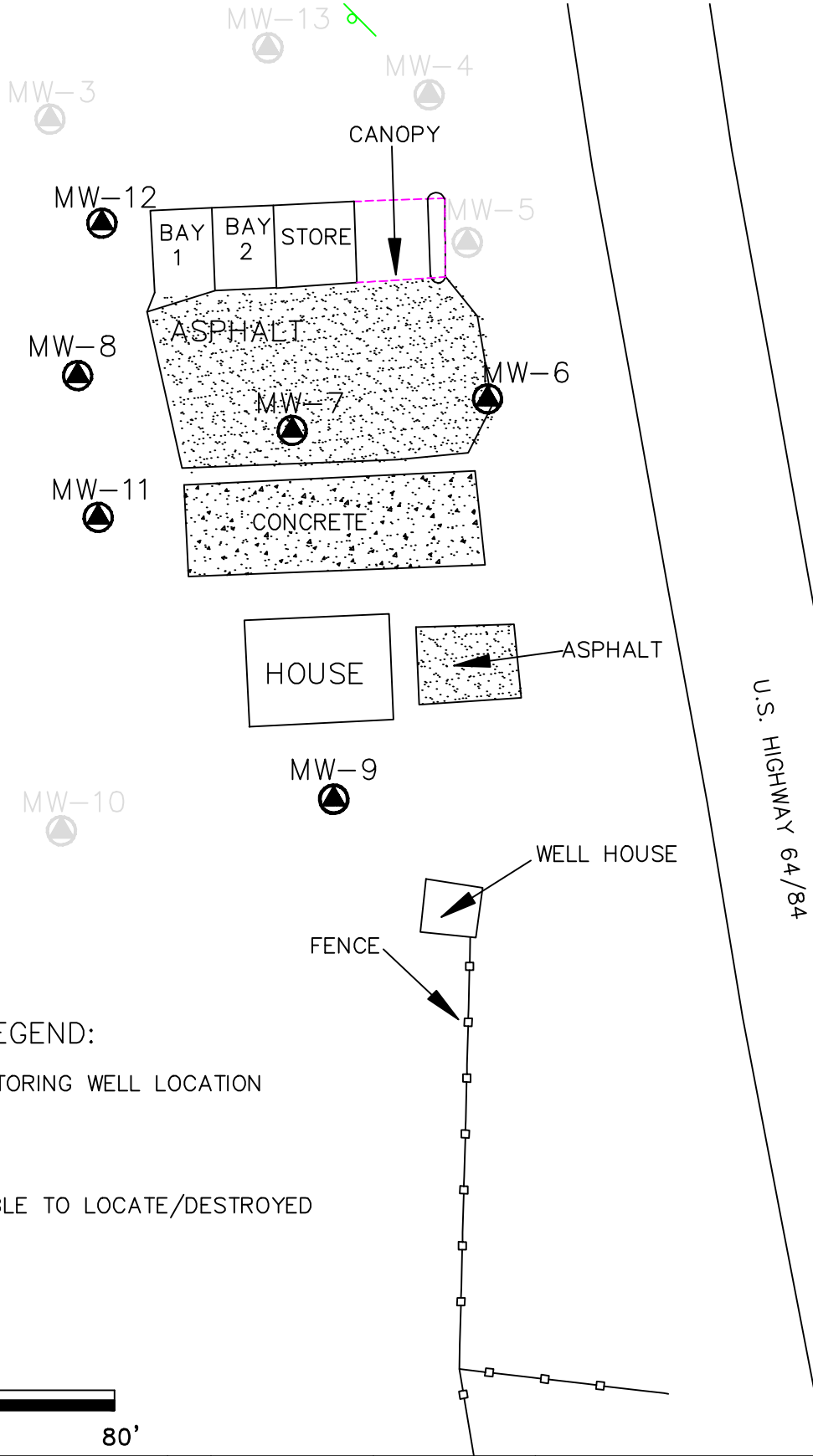
3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 700 ft Scale: 1: 24,000 Detail: 13-0 Datum: WGS84



612 E. Murray Drive  
 Farmington, New Mexico 87401  
 (505) 325-5667  
 Santa Fe - Farmington  
 Albuquerque - Las Cruces

APPROVED: RCA	DATE: 8/8/06
DRAWN BY: TROSS	DATE: 8/8/06
REVISIONS BY:	DATE:
PROJECT NO: 3116075	FIGURE: 1

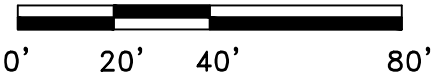
**VICINITY MAP**  
 CONOCO MINI MART  
 3837 HWY 64  
 CHAMA, NEW MEXICO



LEGEND:

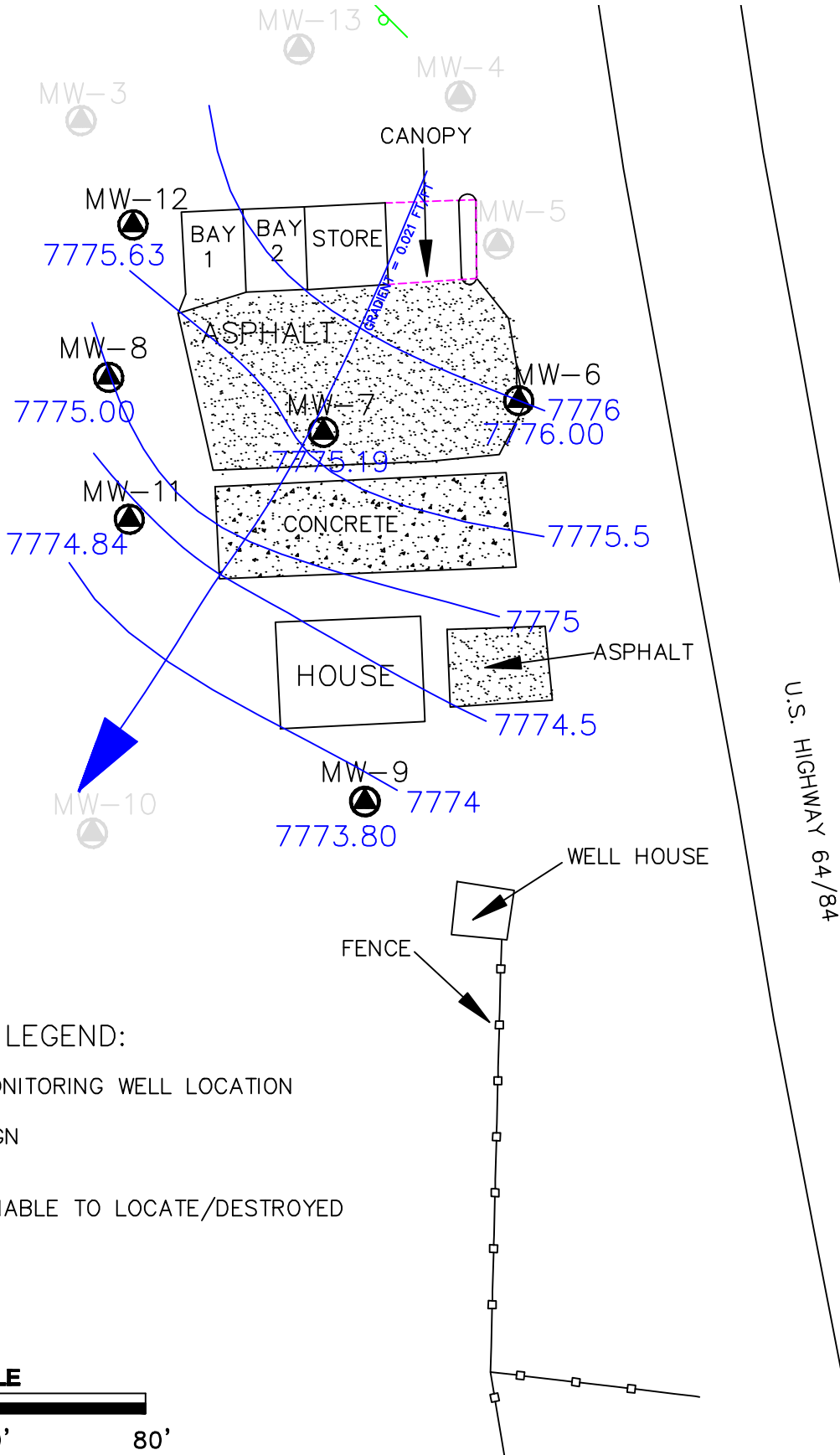
- MW-11 - MONITORING WELL LOCATION
- SIGN
- MW-13 - UNABLE TO LOCATE/DESTROYED

SCALE



REVISED BY: TCR	DATE: 11/19/07
DRAWN BY: TLONG	DATE: 4/25/07
APPROVED: RSA	DATE: 4/25/07
PROJECT NO. 3116075	FIGURE: 2

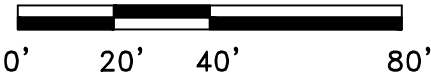
**SITE MAP**  
**CONOCO MINI MART**  
**CHAMA, NEW MEXICO**



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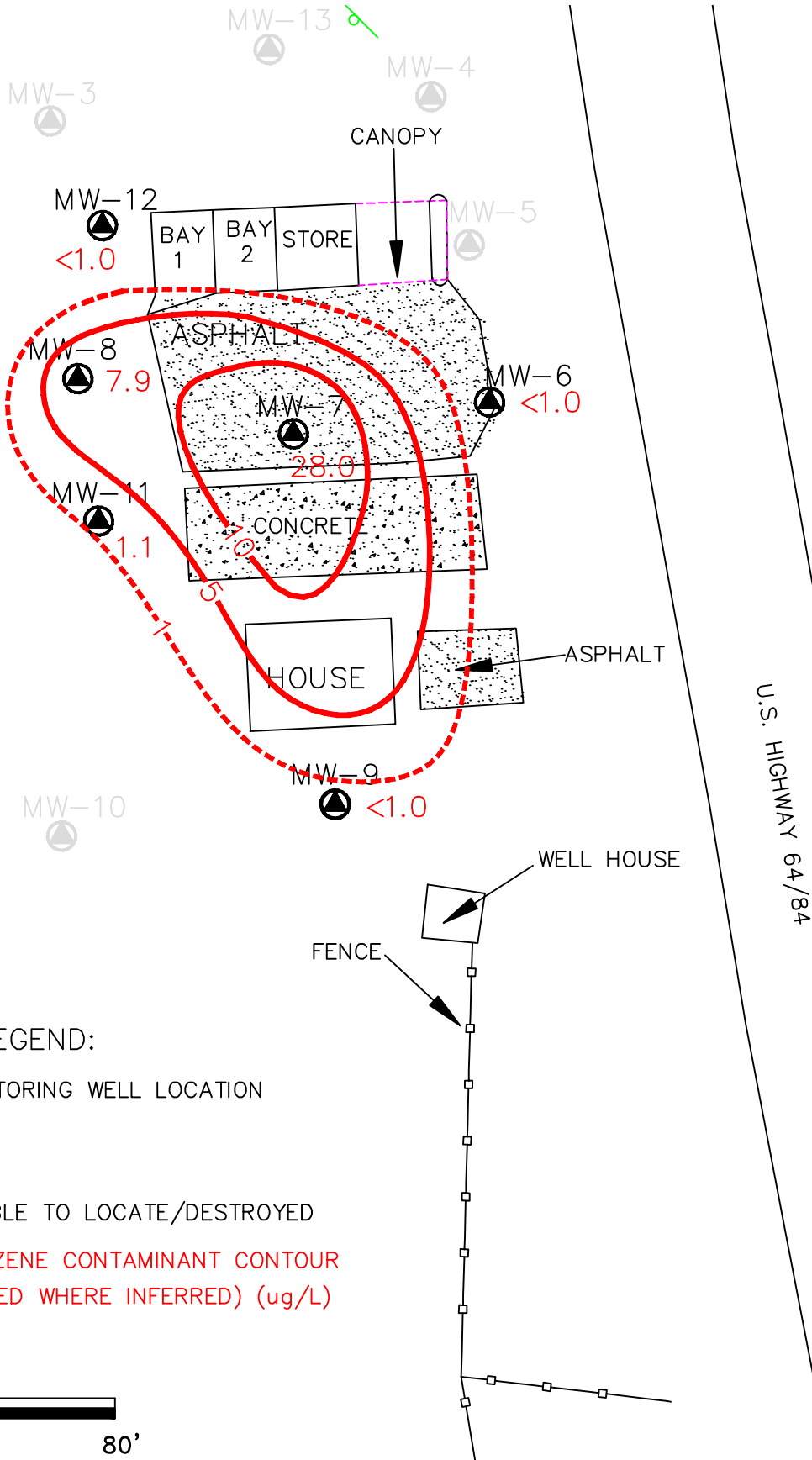
- MW-11 - MONITORING WELL LOCATION
- SIGN
- MW-13 - UNABLE TO LOCATE/DESTROYED

SCALE



REVISED BY: SLC	DATE: 04/28/10
DRAWN BY: TLONG	DATE: 4/25/07
APPROVED: RSA	DATE: 07/18/08
PROJECT NO: 3116075	FIGURE: 3

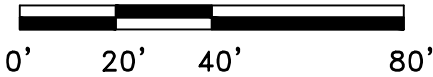
**POTENTIOMETRIC SURFACE  
MAP  
APRIL 6, 2009  
CONOCO MINI MART  
CHAMA, NEW MEXICO**



LEGEND:

- MW-11 - MONITORING WELL LOCATION
- SIGN
- MW-13 - UNABLE TO LOCATE/DESTROYED
- BENZENE CONTAMINANT CONTOUR (DASHED WHERE INFERRED) ( $\mu\text{g/L}$ )

SCALE

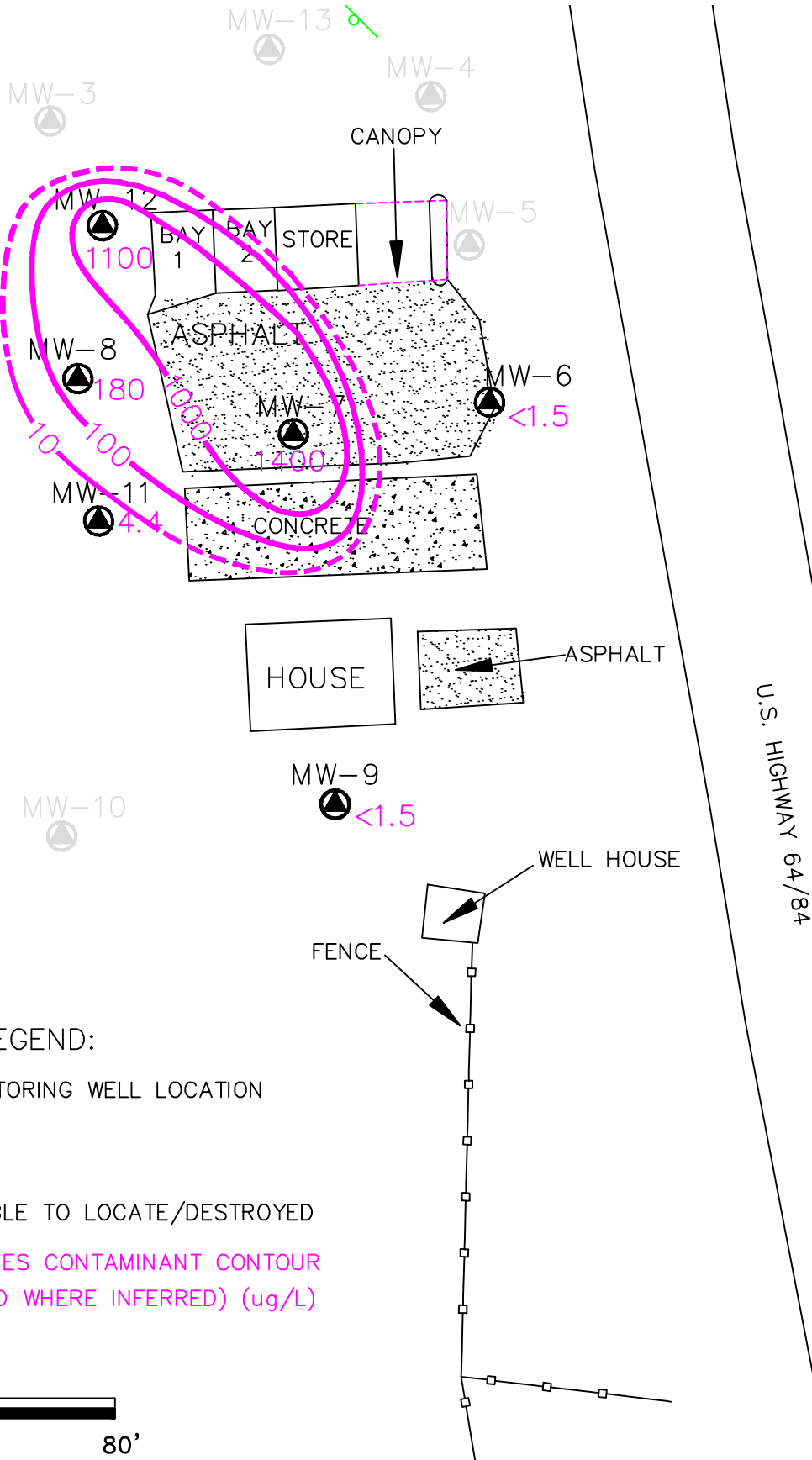


REVISED BY: SLC	DATE: 04/28/10
DRAWN BY: TLONG	DATE: 4/25/07
APPROVED: RSA	DATE: 07/18/08
PROJECT NO: 3116075	FIGURE: 4

**BENZENE CONTAMINANT  
CONCENTRATION MAP  
APRIL 6, 2010  
CONOCO MINI MART  
CHAMA, NEW MEXICO**



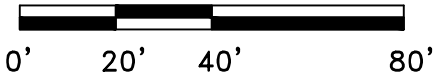




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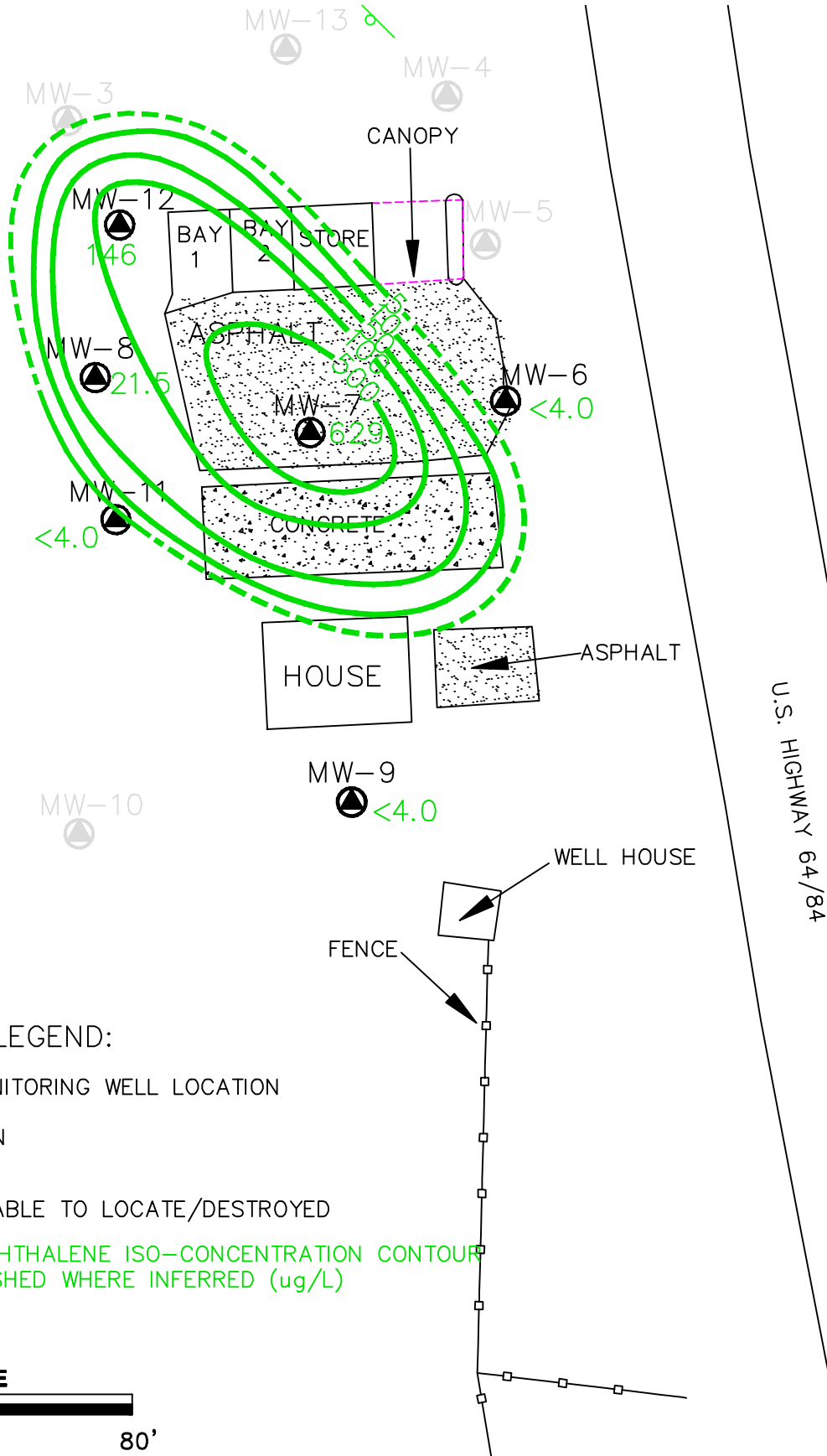
- MW-11 - MONITORING WELL LOCATION
- SIGN
- MW-13 - UNABLE TO LOCATE/DESTROYED
- XYLENES CONTAMINANT CONTOUR (DASHED WHERE INFERRED) (ug/L)

SCALE







REVISED BY: SLC	DATE: 04/28/10
DRAWN BY: TLONG	DATE: 4/25/07
APPROVED: RSA	DATE: 11/19/07
PROJECT NO: 3116075	FIGURE: 5

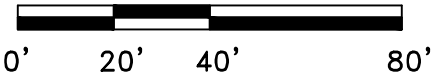
**TOTAL XYLENES CONTAMINANT  
CONCENTRATION MAP  
APRIL 6, 2010  
CONOCO MINI MART  
CHAMA, NEW MEXICO**



LEGEND:

- MW-11  - MONITORING WELL LOCATION
-  - SIGN
- MW-13  - UNABLE TO LOCATE/DESTROYED
-  - NAPHTHALENE ISO-CONCENTRATION CONTOUR (DASHED WHERE INFERRED (ug/L))

SCALE



REVISED BY: SLC	DATE: 04/28/10
DRAWN BY: TLONG	DATE: 4/25/07
APPROVED: RSA	DATE: 07/18/08
PROJECT NO: 3116075	FIGURE: 6



**TOTAL NAPHTHALENES  
CONCENTRATION MAP  
APRIL 6, 2010  
CONOCO MINI MART  
CHAMA, NEW MEXICO**



## Tables

**Table 1**  
**Summary of Groundwater Elevation Results**  
**Conoco Mini Mart**  
**Chama, New Mexico**

(Feet)

Monitoring Well Identification	Date	Total Depth of Well	Top of Casing	Depth to Water	Relative Water Elevation
MW-3	7/8/2005	15.50	7780.16	5.76	7774.40
	7/10/2006	15.00		6.21	7773.95
	4/4/2007	UNABLE TO LOCATE			
	10/25/2007	NOT MEASURED			
	6/1/2009	UNABLE TO LOCATE			
	10/14/2009	WELL DAMAGED, NO WATER			
	4/5/2010	PLUGGED & ABANDONED			
MW-4	7/8/2005	15.50	7779.55	4.40	7775.15
	7/10/2006	14.94		4.58	7774.97
	4/4/2007	14.09		2.96	7776.59
	10/25/2007	NOT MEASURED			
	4/1/2008	NOT MEASURED			
	6/27/2008	NOT MEASURED			
	10/1/2008	NOT MEASURED			
	6/1/2009	NOT MEASURED			
	10/14/2009	14.85		4.64	7774.91
	4/5/2010	PLUGGED & ABANDONED			
MW-5	7/8/2005	15.00	7779.02	5.76	7773.26
	7/10/2006	14.60		5.93	7773.09
	4/4/2007	14.65		3.39	7775.63
	10/25/2007	NOT MEASURED			
	4/1/2008	NOT MEASURED			
	6/27/2008	NOT MEASURED			
	10/1/2008	NOT MEASURED			
	6/1/2009	NOT MEASURED			
	10/14/2009	14.82		5.08	7773.94
	4/5/2010	PLUGGED & ABANDONED			
MW-6	7/8/2005	12.00	7778.61	5.63	7772.98
	7/10/2006	11.30		5.90	7772.71
	4/4/2007	11.30		3.74	7774.87
	10/25/2007	11.29		5.31	7773.30
	4/1/2008	11.34		2.40	7776.21
	6/27/2008	11.45		5.22	7773.39
	10/1/2008	11.42		5.65	7772.96
	6/1/2009	11.50		4.81	7773.80
	10/14/2009	11.48		5.82	7772.79
	4/6/2010	11.50		2.61	7776.00
MW-7	7/8/2005	12.50	7779.28	6.84	7772.44
	7/10/2006	11.90		6.59	7772.69
	4/4/2007	12.00		4.79	7774.49
	10/25/2007	11.95		7.33	7771.95
	4/1/2008	12.13		3.61	7775.67
	6/27/2008	12.12		6.96	7772.32
	10/1/2008	12.14		7.83	7771.45
	6/1/2009	12.10		6.41	7772.87
	10/14/2009	12.15		8.01	7771.27
	4/6/2010	12.20		4.09	7775.19
MW-8	7/8/2005	15.00	7779.64	7.76	7771.88
	7/10/2006	14.85		7.91	7771.73
	4/4/2007	14.95		6.71	7772.93
	10/25/2007	NOT MEASURED			
	4/1/2008	NOT MEASURED			
	6/27/2008	NOT MEASURED			
	10/1/2008	NOT MEASURED			
	6/1/2009	15.00		7.15	7772.49
	10/14/2009	15.03		8.56	7771.08
	4/6/2010	15.05		4.64	7775.00
MW-9	4/4/2007	11.30	7777.49	4.92	7772.57
	10/25/2007	10.52		7.26	7770.23
	4/1/2008	13.14		3.23	7774.26
	6/27/2008	12.86		6.95	7770.54
	10/1/2008	12.96		7.72	7769.77
	6/1/2009	13.65		6.23	7771.26
	10/14/2009	13.35		8.21	7769.28
	4/6/2010	13.80		3.69	7773.80
MW-10	4/4/2007	13.30	7777.61	4.88	7772.73
	10/25/2007	13.17		6.75	7770.86
	4/1/2008	13.40		2.68	7774.93
	6/27/2008	13.40		6.51	7771.10
	10/1/2008	13.40		7.06	7770.55
	6/1/2009	13.40		5.83	7771.78
	10/14/2009	13.43		7.60	7770.01
	4/5/2010	PLUGGED & ABANDONED			
MW-11	4/4/2007	12.00	7778.53	4.74	7773.79
	10/25/2007	14.81		7.83	7770.70
	4/1/2008	11.40		3.04	7775.49
	6/27/2008	11.44		6.76	7771.77
	10/1/2008	11.30		7.31	7771.22
	6/1/2009	11.60		6.19	7772.34
	10/14/2009	11.46		7.82	7770.71
	4/6/2010	12.50		3.69	7774.84
MW-12	4/4/2007	13.55	7780.28	5.75	7774.53
	10/25/2007	12.84		7.60	7772.68
	4/1/2008	12.97		3.93	7776.35
	6/27/2008	13.00		7.38	7772.90
	10/1/2008	12.95		7.81	7772.47
	6/1/2009	13.00		6.98	7773.30
	10/14/2009	13.05		8.03	7772.25
	4/6/2010	13.00		4.65	7775.63
MW-13	4/4/2007	13.55	7780.47	5.99	7774.48
	10/25/2007	14.51		7.57	7772.90
	4/1/2008	13.67		3.54	7776.93
	6/27/2008	13.69		7.10	7773.37
	10/1/2008	13.69		7.69	7772.78
	6/1/2009	UNABLE TO LOCATE			
10/14/2009	PLUGGED & ABANDONED				
AVERAGE DEPTH TO GROUNDWATER	3.90 FEET				
AVERAGE INCREASE IN ELEVATION	3.85 FEET				

**Table 2**  
**Summary of Groundwater Sample Analytical Results**  
**US EPA Method 8260**  
**Conoco Mini Mart**  
**Chama, New Mexico**

Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-3	7/8/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	7/10/2006	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	
	4/4/2007	UNABLE TO LOCATE						
	10/25/2007	NOT SAMPLED						
	4/1/2008	NOT SAMPLED						
	6/27/2008	NOT SAMPLED						
	10/1/2008	NOT SAMPLED						
	6/1/2009	UNABLE TO LOCATE						
	10/14/2009	NOT SAMPLED						
	4/5/2010	ABANDONED						
NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0	30.00
Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-4	7/8/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	7/10/2006	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	
	4/4/2007	<2.5	<2.5	<2.5	<5.0	<5.0	<5.0	
	10/25/2007	NOT SAMPLED						
	4/1/2008	NOT SAMPLED						
	6/27/2008	NOT SAMPLED						
	10/1/2008	NOT SAMPLED						
	6/1/2009	NOT SAMPLED						
	10/14/2009	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.0
	4/6/2010	ABANDONED						
NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0	30.00
Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-5	7/8/2005	<1.0	4.8	210.0	940.0	1154.8	<1.0	
	7/10/2006	<0.5	1.9	142.0	255.5	399.4	1.7	
	4/4/2007	1.9	0.49	195.0	282.9	478.4	<1.0	
	10/25/2007	NOT SAMPLED						
	4/1/2008	NOT SAMPLED						
	6/27/2008	NOT SAMPLED						
	10/1/2008	NOT SAMPLED						
	6/1/2009	NOT SAMPLED						
	10/14/2009	NOT SAMPLED						
	4/5/2010	ABANDONED						
NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0	30.00
Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-6	7/8/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	7/10/2006	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<0.943
	4/4/2007	<2.5	<2.5	<2.5	0.87	0.87	<5.0	<0.980
	10/25/2007	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<6.0
	4/1/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.0
	6/27/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.0
	10/1/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.2
	6/1/2009	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<2.0
	10/14/2009	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<4.0
	4/6/2010	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<4.0
NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0	30.00
Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-7	7/8/2005	700	86	530	1300	2616	<10	
	7/10/2006	50	22	399	1264	1735	17.5	427.6
	4/4/2007	63	12	508	1655	2238	23.3	488.5
	10/25/2007	36	19	480	1400	1935	<25	220.0
	4/1/2008	48	18	530	1500	2096	<25	326.0
	6/27/2008	49	17	680	2500	3246	<25	163.0
	10/1/2008	44	15	590	1500	2149	<25	348.0
	6/1/2009	40	16	550	1500	2106	<10	214.0
	10/14/2009	32	14	610	1400	2056	<5.0	560.0
	4/6/2010	28	11	600	1400	2039	<10	629.0
NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0	30.00



Table 2  
Summary of Groundwater Sample Analytical Results  
US EPA Method 8260  
Conoco Mini Mart  
Chama, New Mexico

Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-8	7/8/2005	<b>49.0</b>	42.0	600.0	<b>1600.0</b>	2291.0	<10	
	7/10/2006	<b>75.8</b>	3.7	425.0	503.0	1007.5	44.3	<b>74.1</b>
	4/4/2007	<b>49.7</b>	7.96	570.0	<b>1126.90</b>	1754.56	80.9	<b>233.70</b>
	10/25/2007	NOT SAMPLED						
	4/1/2008	NOT SAMPLED						
	6/27/2008	NOT SAMPLED						
	10/1/2008	NOT SAMPLED						
	6/1/2009	4.6	<1.0	34.0	10.00	48.60	<1.0	<2.0
	10/14/2009	2.7	<1.0	1.8	<1.5	4.50	<1.0	<4.0
4/6/2010	7.9	1.60	180.0	180.00	369.50	<1.0	21.5	
NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0	30.00

Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-9	4/4/2007	<2.5	<2.5	<2.5	<5.0	<5.0	<5.0	<0.971
	10/25/2007	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<6.0
	4/1/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.0
	6/27/2008	8.2	3.9	50.0	<2.0	62.10	<2.5	5.00
	10/1/2008	<b>11.0</b>	7.5	58.0	61.0	137.50	<2.5	<10
	6/1/2009	<1.0	<1.0	1.8	1.7	3.50	<1.0	<2.0
	10/14/2009	7.9	9.2	56.0	57.0	130.10	<1.0	18.8
	4/6/2010	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<4.0
	NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0

Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-10	4/4/2007	<2.5	<2.5	<2.5	<5.0	<5.0	<5.0	<0.971
	10/25/2007	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<6.0
	4/1/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.0
	6/27/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.0
	10/1/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.2
	6/1/2009	<1.0	<1.0	<1.0	<2.0	<1.0	<2.5	<2.0
	10/14/2009	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<4.0
	4/5/2010	ABANDONED						
	NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0

Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-11	4/4/2007	<b>31.1</b>	16.1	138.0	70.98	256.2	<5.0	<b>52.8</b>
	10/25/2007	<b>21.0</b>	5.4	280.0	13.00	319.4	17.0	14.9
	4/1/2008	<b>11.0</b>	<1.0	24.0	9.10	44.1	<2.5	3.1
	6/27/2008	<b>18.0</b>	<1.0	130.0	8.80	156.8	<2.5	5.5
	10/1/2008	9.2	<1.0	47.0	5.20	61.4	<2.5	<2.2
	6/1/2009	<b>10.0</b>	<1.0	24.0	5.00	39.0	<1.0	<2.0
	10/14/2009	5.6	<1.0	21.0	6.40	33.0	<1.0	<4.0
	4/6/2010	1.1	<1.0	2.1	4.40	7.6	<1.0	<4.0
	NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0

Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-12	4/4/2007	<b>10.9</b>	<2.5	43.5	129.0	183.4	<5.0	<b>39.98</b>
	10/25/2007	1.9	<1.0	35.0	76.0	112.9	2.7	2.1
	4/1/2008	3.2	11.0	150.0	<b>750.0</b>	914.2	2.5	12.0
	6/27/2008	<1.0	1.2	78.0	420.0	499.2	2.5	<b>62.00</b>
	10/1/2008	<1.0	<1.0	12.0	32.0	44.0	<2.5	<10
	6/1/2009	<5.0	<5.0	69.0	200.0	269.0	<5.0	<b>30.30</b>
	10/14/2009	<1.0	<1.0	1.8	<1.5	1.8	<1.0	<4.0
	4/6/2010	<1.0	5.4	280.0	<b>1100.0</b>	1385.4	<1.0	<b>146.0</b>
	NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0

Monitoring Well Identification	Method 8021/8260 (beginning October 2009)							
	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	Total Naphthalenes
MW-13	4/4/2007	<b>19.7</b>	8.36	193.0	380.60	601.7	19.7	
	10/25/2007	1.7	<1.0	36.0	13.00	50.7	<2.5	
	4/1/2008	1.6	<1.0	32.0	89.00	122.6	<2.5	
	6/27/2008	1.5	<1.0	47.0	16.00	64.5	<2.5	
	10/1/2008	1.2	<1.0	21.0	<2.0	22.2	<2.5	
	6/1/2009	UNABLE TO LOCATE						
	10/14/2009	ABANDONED						
	NMWQCC and 20 NMAC 5 Standards		10.0	750.0	750.0	620.0		100.0

Notes:

Data in italics adopted from INTERA report dated 9/7/2005 (analyzed per Method 8260)  
Results in ug/L  
MTBE = Methyl Tertiary Butyl Ether  
**Red** indicates concentration exceeds standard  
NA = Not Analyzed



Table 3  
Summary of Groundwater Sample Analytical Results  
US EPA Method 8310  
Conoco Mini Mart  
Chama, New Mexico

Method 8310														
Monitoring Well Identification	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-1	7/10/2006	<0.943	<0.943	<0.189	<0.0943	<0.0943	<0.132	<0.0943	<0.189	<0.189	<0.472	1.57	<0.472	<0.189
	4/4/2007	DESTROYED DURING TANK PULL												
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00
Method 8310														
Monitoring Well Identification	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-2	7/10/2006											620.00		
	4/4/2007	DESTROYED DURING TANK PULL												
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00
Method 8310														
Monitoring Well Identification	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-3	7/10/2006	<0.943	<0.943	<0.189	<0.0943	<0.0943	<0.132	<0.0943	<0.189	<0.189	<0.472	<0.943	<0.472	<0.189
	4/4/2007	UNABLE TO LOCATE												
	10/25/2007	NOT SAMPLED												
	4/1/2008	NOT SAMPLED												
	6/27/2008	NOT SAMPLED												
	10/1/2008	NOT SAMPLED												
	6/1/2009	UNABLE TO LOCATE												
4/5/2010	PLUGGED & ABANDONED													
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00
Method 8310														
Monitoring Well Identification	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-4	7/10/2006	<1.0	<1.0	<0.2	<0.1	<0.1	<0.14	<0.1	<0.2	<0.2	<0.5	<1.0	<0.5	<0.2
	4/4/2007	<1.00	<1.00	<0.2	<0.1	<0.1	<0.14	<0.1	<0.2	<0.2	<0.5	<1.0	<0.5	<0.2
	10/25/2007	NOT SAMPLED												
	4/1/2008	NOT SAMPLED												
	6/27/2008	NOT SAMPLED												
	10/1/2008	NOT SAMPLED												
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA
4/5/2010	PLUGGED & ABANDONED													
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00
Method 8310														
Monitoring Well Identification	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-5	7/10/2006	<0.952	<0.952	<0.19	<0.0952	<0.0952	<0.133	0.334	<0.19	<0.19	<0.476	96.9	<0.476	<0.19
	4/4/2007	<1.18	<1.18	<0.235	<0.118	<0.118	<0.165	<0.118	<0.235	<0.235	<0.588	104.7	<0.588	<0.235
	10/25/2007	NOT SAMPLED												
	4/1/2008	NOT SAMPLED												
	6/27/2008	NOT SAMPLED												
	10/1/2008	NOT SAMPLED												
4/5/2010	PLUGGED & ABANDONED													
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00
Method 8310														
Monitoring Well Identification	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-6	7/10/2006	<0.943	<0.943	<0.189	<0.0943	<0.0943	<0.132	<0.0943	<0.189	<0.189	<0.472	<0.943	<0.472	<0.189
	4/4/2007	<0.980	<0.980	<0.196	<0.0980	<0.0980	<0.137	<0.0980	<0.196	<0.196	<0.490	<0.980	<0.490	<0.196
	10/25/2007	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	<6.0	<0.60	<0.30
	4/1/2008	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	<2.0	<0.60	<0.30
	6/27/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30
	10/1/2008	<5.6	<0.67	<0.078	<0.078	<0.11	<0.078	<0.22	<0.078	<0.33	<0.89	<2.2	<0.67	<0.33
	6/1/2009	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA	NA
4/6/2010	<2.5	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30	
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00
Method 8310														
Monitoring Well Identification	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-7	7/10/2006	73.00	<0.943	<0.189	<0.0943	12.7	<0.132	<0.0943	<0.189	<0.189	<0.472	427.6	30.6	0.273
	4/4/2007	71.50	<1.25	<0.250	<0.125	<0.125	<0.175	<0.125	<0.250	<0.250	6.68	488.5	19.5	<0.250
	10/25/2007	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	220.0	<0.60	<0.30
	4/1/2008	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	326.0	<0.60	<0.30
	6/27/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	163.0	<0.60	<0.30
	10/1/2008	<25	<3.0	<0.35	<0.35	<0.50	<0.35	<1.0	<0.035	<1.5	<4.0	348.0	<3.0	<1.5
	6/1/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	214.0	<0.60	<0.30
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	560.0	NA	NA
4/6/2010	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	377.0	<0.60	<0.30	
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00

Monitoring Well Identification	Method 8310														
	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene	
MW-8	7/10/2006	5.73	<0.952	<0.190	<0.0952	<0.0952	<0.133	<0.0952	<0.190	<0.190	<0.476	74.1	24.5	<0.190	
	4/4/2007	63.60	<0.980	<0.196	<0.0980	<0.0980	<0.137	<0.0980	<0.196	<0.196	5.44	233.70	36.6	<0.196	
	10/25/2007	NOT SAMPLED													
	4/1/2008	NOT SAMPLED													
	6/27/2008	NOT SAMPLED													
	10/1/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30	
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA	NA	
4/6/2010	<2.5	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	12.30	<0.60	<0.30		
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00	

Monitoring Well Identification	Method 8310													
	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-9	4/4/2007	<0.971	<0.971	<0.194	<0.0971	<0.0971	<0.136	<0.0971	<0.194	<0.194	<0.485	<0.971	<0.485	<0.194
	10/25/2007	<5.0	<0.60	0.05	<0.030	<0.10	<0.020	0.20	<0.040	<0.30	<.80	<6.0	<0.60	<0.30
	4/1/2008	<5.0	<0.60	<0.07	<0.030	<0.10	<0.020	<0.2	<0.040	<0.30	<.80	<2.0	<0.60	<0.30
	6/27/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	5.00	<0.60	<0.30
	10/1/2008	<2.5	<3.0	<0.35	<0.35	<0.50	<0.35	<1.0	<0.035	<1.5	<4.0	<1.0	<3.0	<1.5
	6/1/2009	<2.5	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.80	NA	NA
	4/6/2010	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30
	NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00

Monitoring Well Identification	Method 8310													
	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-10	4/4/2007	<0.971	<0.971	<0.194	<0.0971	<0.0971	<0.136	<0.0971	<0.194	<0.194	<0.485	<0.971	<0.485	<0.194
	10/25/2007	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	<6.0	<0.60	<0.30
	4/1/2008	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	<2.0	<0.60	<0.30
	6/27/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30
	10/1/2008	<5.6	<0.67	<0.078	<0.078	<0.11	<0.078	<0.22	<0.078	<0.33	<0.89	<2.2	<0.67	<0.33
	6/1/2009	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA	NA
	4/5/2010	PLUGGED & ABANDONED												
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00

Monitoring Well Identification	Method 8310													
	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-11	4/4/2007	24.20	<0.971	<0.194	<0.0971	<0.0971	<0.136	<0.0971	<0.190	<0.194	<0.485	52.8	15.2	1.86
	10/25/2007	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	14.9	<0.60	<0.30
	4/1/2008	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	3.1	<0.60	<0.30
	6/27/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	5.5	<0.60	<0.30
	10/1/2008	<5.6	<0.67	<0.078	<0.078	<0.11	<0.078	<0.22	<0.078	<0.33	<0.89	<2.2	<0.67	<0.33
	6/1/2009	<2.5	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA	NA
4/6/2010	<2.5	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	<2.0	<0.60	<0.30	
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00

Monitoring Well Identification	Method 8310													
	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-12	4/4/2007	18.80	<0.990	<0.198	<0.099	<0.099	<0.139	<0.099	<0.198	<0.198	<0.495	39.98	18.1	<0.198
	10/25/2007	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	2.1	<0.60	<0.30
	4/1/2008	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	12.0	<0.60	<0.30
	6/27/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	62.00	0.83	<0.30
	10/1/2008	<2.5	<3.0	<0.35	<0.35	<0.50	<0.35	<1.0	<0.035	<1.5	<4.0	<1.0	<3.0	<1.5
	6/1/2009	<2.5	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	30.30	<0.60	<0.30
	10/14/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.0	NA	NA
	4/6/2010	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	1.50	92.00	<0.60	<0.30
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00

Monitoring Well Identification	Method 8310													
	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Total Naphthalenes	Phenanthrene	Pyrene
MW-13	4/4/2007	16.90	<1.18	<0.235	<0.118	<0.118	<0.165	<0.118	<0.235	<0.235	<0.588	69.6	<0.588	<0.235
	10/25/2007	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	2.2	<0.60	<0.30
	4/1/2008	<5.0	<0.60	<0.050	<0.030	<0.10	<0.020	<0.20	<0.040	<0.30	<0.80	<2.0	<0.60	<0.30
	6/27/2008	<5.0	<0.60	<0.070	<0.070	<0.10	<0.070	<0.20	<0.070	<0.30	<0.80	12.80	<0.60	<0.30
	10/1/2008	<5.6	<0.67	<0.078	<0.078	<0.11	<0.078	<0.22	<0.078	<0.33	<0.89	<2.2	<0.67	<0.33
	6/1/2009	UNABLE TO LOCATE												
10/14/2009	PLUGGED & ABANDONED													
NMWQCC Standard		2200.00	11000.00	1.20	0.70	1.20	1.20	117.00	0.12	1460.00	1460.00	30.00	1100.00	1100.00

Notes:

Methods 8310 results in ug/L  
 Red indicates concentration exceeds standard  
 NA = Not Analyzed

**Appendix 1**  
**Sampling Protocol**

Ground water samples were collected as established in the New Mexico Underground Storage Tank Bureau Guidelines for Corrective Action promulgated March 2000.

Water levels were measured prior to sample collection using a cleaned water level probe beginning with least contaminated, or clean monitoring wells to the most contaminated monitoring wells. Water levels of each monitoring well were recorded in field form. The water level probe was rinsed three times with distilled water prior to measuring water level in each monitoring well.

Monitoring wells were purged of three well bore volumes or until the well went dry prior to sampling. Samples collected for Method 8260 were collected in 40 ml vials, preserved with mercuric chloride, labeled with the date, time, monitoring well number, and the name of the sampler, and stored on ice. Samples collected for Method 8310 were collected in 1 L amber bottles, labeled with the date, time, monitoring well number and the name of the sampler, and stored on ice. Samples collected for Method 6010 were collected in 125 mL polypropylene bottles, labeled with the date, time, monitoring well number and the name of the sampler, and stored on ice.

Sample numbers were recorded on chain of custody forms and field notebook prior to delivery to the analyzing laboratory.



**Appendix 2**  
**Field Notes, Copies**











**WELL PURGE RECORD**

JOB NAME: <u>ConocoMinerals</u>	DATE: <u>4-6-10</u>	TIME: <u>1020</u>
JOB #: <u>3116075</u>	SMA Representative: <u>SLC/TV</u>	

MONITORING WELL: 7  
 SAMPLING METHOD: USEPA SW846  
 FIELD CONDITIONS: Cold, Windy

DECONTAMINATION METHOD: \_\_\_\_\_ SINGLE USE BAILER, FIELD EQUIPMENT: ALCANOX  
 WASH, TRIPLE DI WATER RINSE \_\_\_\_\_

**Total Depth of well:** 122 feet  
**Depth to water before purging:** 4.09 feet

Height of Water Column in Feet	Well PVC Diameter		1 Volume in Gallons	Minimum Purge Volumes	Volume to Purge in Gallons
	2-inch	4-inch			
8.11	0.163	0.653	132	3	4

*Handwritten mark*

TIME	VOLUME PURGED	pH	SPECIFIC CONDUCTIVITY	TEMP IN °C	DISOLVED OXYGEN	TURBIDITY	COMMENTS
1141	10	8.70	0.73	58			
1143	20	8.29	0.69	60			grey, smells
1144	30	8.01	0.69	63			like product
1146	40	7.73	0.70	65			



**Appendix 3**  
**Laboratory Results**



COVER LETTER

Monday, April 19, 2010

Shawna Chubbuck  
Souder, Miller and Associates  
612 E Murray Dr.  
Farmington, NM 87401

TEL: (505) 325-5667

FAX (505) 327-1496

RE: Conoco Mini Mart

Order No.: 1004140

Dear Shawna Chubbuck:

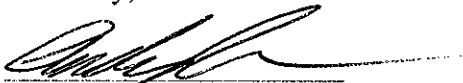
Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 4/8/2010 for the analyses presented in the following report.

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

Reporting limits are determined by EPA methodology.

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

Sincerely,



Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901

AZ license # AZ0682

ORELAP Lab # NM100001

Texas Lab# T104704424-08-TX



# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-01

**Client Sample ID:** MW9  
**Collection Date:** 4/6/2010 11:04:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8310: PAHS</b>						Analyst: <b>SCC</b>
Naphthalene	ND	2.0		µg/L	1	4/16/2010 3:17:51 PM
1-Methylnaphthalene	ND	2.0		µg/L	1	4/16/2010 3:17:51 PM
2-Methylnaphthalene	ND	2.0		µg/L	1	4/16/2010 3:17:51 PM
Acenaphthylene	ND	2.5		µg/L	1	4/16/2010 3:17:51 PM
Acenaphthene	ND	5.0		µg/L	1	4/16/2010 3:17:51 PM
Fluorene	ND	0.80		µg/L	1	4/16/2010 3:17:51 PM
Phenanthrene	ND	0.60		µg/L	1	4/16/2010 3:17:51 PM
Anthracene	ND	0.60		µg/L	1	4/16/2010 3:17:51 PM
Fluoranthene	ND	0.30		µg/L	1	4/16/2010 3:17:51 PM
Pyrene	ND	0.30		µg/L	1	4/16/2010 3:17:51 PM
Benz(a)anthracene	ND	0.070		µg/L	1	4/16/2010 3:17:51 PM
Chrysene	ND	0.20		µg/L	1	4/16/2010 3:17:51 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/16/2010 3:17:51 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/16/2010 3:17:51 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	4/16/2010 3:17:51 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	4/16/2010 3:17:51 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	4/16/2010 3:17:51 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	4/16/2010 3:17:51 PM
Surr: Benzo(e)pyrene	76.0	28.3-111		%REC	1	4/16/2010 3:17:51 PM

## EPA METHOD 8260B: VOLATILES

Analyst: **DAM**

Benzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Toluene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Ethylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Naphthalene	ND	2.0		µg/L	1	4/9/2010 4:06:36 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2010 4:06:36 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2010 4:06:36 PM
Acetone	ND	10		µg/L	1	4/9/2010 4:06:36 PM
Bromobenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Bromoform	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Bromomethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
2-Butanone	ND	10		µg/L	1	4/9/2010 4:06:36 PM
Carbon disulfide	ND	10		µg/L	1	4/9/2010 4:06:36 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Chlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM

### Qualifiers:

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-01

**Client Sample ID:** MW9  
**Collection Date:** 4/6/2010 11:04:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						Analyst: DAM
Chloroethane	ND	2.0		µg/L	1	4/9/2010 4:06:36 PM
Chloroform	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Chloromethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2010 4:06:36 PM
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Dibromomethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2010 4:06:36 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
2-Hexanone	ND	10		µg/L	1	4/9/2010 4:06:36 PM
Isopropylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2010 4:06:36 PM
Methylene Chloride	ND	3.0		µg/L	1	4/9/2010 4:06:36 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Styrene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2010 4:06:36 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 19-Apr-10

CLIENT: Souder, Miller and Associates  
 Lab Order: 1004140  
 Project: Conoco Mini Mart  
 Lab ID: 1004140-01

Client Sample ID: MW9  
 Collection Date: 4/6/2010 11:04:00 AM  
 Date Received: 4/8/2010  
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						Analyst: DAM
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2010 4:06:36 PM
Vinyl chloride	ND	1.0		µg/L	1	4/9/2010 4:06:36 PM
Xylenes, Total	ND	1.5		µg/L	1	4/9/2010 4:06:36 PM
Surr: 1,2-Dichloroethane-d4	88.2	54.6-141		%REC	1	4/9/2010 4:06:36 PM
Surr: 4-Bromofluorobenzene	107	60.1-133		%REC	1	4/9/2010 4:06:36 PM
Surr: Dibromofluoromethane	112	78.5-130		%REC	1	4/9/2010 4:06:36 PM
Surr: Toluene-d8	102	79.5-126		%REC	1	4/9/2010 4:06:36 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-02

**Client Sample ID:** MW11  
**Collection Date:** 4/6/2010 11:19:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: SCC
<b>EPA METHOD 8310: PAHS</b>						
Naphthalene	ND	2.0		µg/L	1	4/16/2010 3:39:07 PM
1-Methylnaphthalene	ND	2.0		µg/L	1	4/16/2010 3:39:07 PM
2-Methylnaphthalene	ND	2.0		µg/L	1	4/16/2010 3:39:07 PM
Acenaphthylene	ND	2.5		µg/L	1	4/16/2010 3:39:07 PM
Acenaphthene	ND	5.0		µg/L	1	4/16/2010 3:39:07 PM
Fluorene	ND	0.80		µg/L	1	4/16/2010 3:39:07 PM
Phenanthrene	ND	0.60		µg/L	1	4/16/2010 3:39:07 PM
Anthracene	ND	0.60		µg/L	1	4/16/2010 3:39:07 PM
Fluoranthene	ND	0.30		µg/L	1	4/16/2010 3:39:07 PM
Pyrene	ND	0.30		µg/L	1	4/16/2010 3:39:07 PM
Benz(a)anthracene	ND	0.070		µg/L	1	4/16/2010 3:39:07 PM
Chrysene	ND	0.20		µg/L	1	4/16/2010 3:39:07 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/16/2010 3:39:07 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/16/2010 3:39:07 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	4/16/2010 3:39:07 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	4/16/2010 3:39:07 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	4/16/2010 3:39:07 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	4/16/2010 3:39:07 PM
Surr: Benzo(e)pyrene	68.8	28.3-111		%REC	1	4/16/2010 3:39:07 PM
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	1.1	1.0		µg/L	1	4/9/2010 4:34:45 PM
Toluene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Ethylbenzene	2.1	1.0		µg/L	1	4/9/2010 4:34:45 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2,4-Trimethylbenzene	6.1	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,3,5-Trimethylbenzene	4.4	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Naphthalene	ND	2.0		µg/L	1	4/9/2010 4:34:45 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2010 4:34:45 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2010 4:34:45 PM
Acetone	ND	10		µg/L	1	4/9/2010 4:34:45 PM
Bromobenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Bromoform	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Bromomethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
2-Butanone	ND	10		µg/L	1	4/9/2010 4:34:45 PM
Carbon disulfide	ND	10		µg/L	1	4/9/2010 4:34:45 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Chlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-02

**Client Sample ID:** MW11  
**Collection Date:** 4/6/2010 11:19:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Chloroethane	ND	2.0		µg/L	1	4/9/2010 4:34:45 PM
Chloroform	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Chloromethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2010 4:34:45 PM
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Dibromomethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2010 4:34:45 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
2-Hexanone	ND	10		µg/L	1	4/9/2010 4:34:45 PM
Isopropylbenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2010 4:34:45 PM
Methylene Chloride	ND	3.0		µg/L	1	4/9/2010 4:34:45 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Styrene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2010 4:34:45 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-02

**Client Sample ID:** MW11  
**Collection Date:** 4/6/2010 11:19:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2010 4:34:45 PM
Vinyl chloride	ND	1.0		µg/L	1	4/9/2010 4:34:45 PM
Xylenes, Total	4.4	1.5		µg/L	1	4/9/2010 4:34:45 PM
Surr: 1,2-Dichloroethane-d4	88.3	54.6-141		%REC	1	4/9/2010 4:34:45 PM
Surr: 4-Bromofluorobenzene	107	60.1-133		%REC	1	4/9/2010 4:34:45 PM
Surr: Dibromofluoromethane	113	78.5-130		%REC	1	4/9/2010 4:34:45 PM
Surr: Toluene-d8	98.4	79.5-126		%REC	1	4/9/2010 4:34:45 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-03

**Client Sample ID:** MW7  
**Collection Date:** 4/6/2010 11:46:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: SCC
<b>EPA METHOD 8310: PAHS</b>						
Naphthalene	180	4.0		µg/L	2	4/16/2010 8:20:59 PM
1-Methylnaphthalene	47	2.0		µg/L	1	4/16/2010 4:00:27 PM
2-Methylnaphthalene	150	4.0		µg/L	2	4/16/2010 8:20:59 PM
Acenaphthylene	ND	2.5		µg/L	1	4/16/2010 4:00:27 PM
Acenaphthene	ND	5.0		µg/L	1	4/16/2010 4:00:27 PM
Fluorene	ND	0.80		µg/L	1	4/16/2010 4:00:27 PM
Phenanthrene	ND	0.60		µg/L	1	4/16/2010 4:00:27 PM
Anthracene	ND	0.60		µg/L	1	4/16/2010 4:00:27 PM
Fluoranthene	ND	0.30		µg/L	1	4/16/2010 4:00:27 PM
Pyrene	ND	0.30		µg/L	1	4/16/2010 4:00:27 PM
Benz(a)anthracene	ND	0.070		µg/L	1	4/16/2010 4:00:27 PM
Chrysene	ND	0.20		µg/L	1	4/16/2010 4:00:27 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/16/2010 4:00:27 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/16/2010 4:00:27 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	4/16/2010 4:00:27 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	4/16/2010 4:00:27 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	4/16/2010 4:00:27 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	4/16/2010 4:00:27 PM
Surr: Benzo(e)pyrene	57.1	28.3-111		%REC	1	4/16/2010 4:00:27 PM

## EPA METHOD 8260B: VOLATILES

Analyst: DAM

Benzene	28	10		µg/L	10	4/9/2010 5:03:09 PM
Toluene	11	10		µg/L	10	4/9/2010 5:03:09 PM
Ethylbenzene	600	10		µg/L	10	4/9/2010 5:03:09 PM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2,4-Trimethylbenzene	870	10		µg/L	10	4/9/2010 5:03:09 PM
1,3,5-Trimethylbenzene	420	10		µg/L	10	4/9/2010 5:03:09 PM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Naphthalene	360	20		µg/L	10	4/9/2010 5:03:09 PM
1-Methylnaphthalene	69	40		µg/L	10	4/9/2010 5:03:09 PM
2-Methylnaphthalene	200	40		µg/L	10	4/9/2010 5:03:09 PM
Acetone	ND	100		µg/L	10	4/9/2010 5:03:09 PM
Bromobenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Bromodichloromethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Bromoform	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Bromomethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
2-Butanone	ND	100		µg/L	10	4/9/2010 5:03:09 PM
Carbon disulfide	ND	100		µg/L	10	4/9/2010 5:03:09 PM
Carbon Tetrachloride	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Chlorobenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM

### Qualifiers:

\* Value exceeds Maximum Contaminant Level  
 E Estimated value  
 J Analyte detected below quantitation limits  
 NC Non-Chlorinated  
 PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits



# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-03

**Client Sample ID:** MW7  
**Collection Date:** 4/6/2010 11:46:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						Analyst: DAM
Chloroethane	ND	20		µg/L	10	4/9/2010 5:03:09 PM
Chloroform	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Chloromethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
2-Chlorotoluene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
4-Chlorotoluene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
cis-1,2-DCE	ND	10		µg/L	10	4/9/2010 5:03:09 PM
cis-1,3-Dichloropropene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	4/9/2010 5:03:09 PM
Dibromochloromethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Dibromomethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2-Dichlorobenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,3-Dichlorobenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,4-Dichlorobenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Dichlorodifluoromethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,1-Dichloroethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,1-Dichloroethene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2-Dichloropropane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,3-Dichloropropane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
2,2-Dichloropropane	ND	20		µg/L	10	4/9/2010 5:03:09 PM
1,1-Dichloropropene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Hexachlorobutadiene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
2-Hexanone	ND	100		µg/L	10	4/9/2010 5:03:09 PM
Isopropylbenzene	46	10		µg/L	10	4/9/2010 5:03:09 PM
4-Isopropyltoluene	37	10		µg/L	10	4/9/2010 5:03:09 PM
4-Methyl-2-pentanone	ND	100		µg/L	10	4/9/2010 5:03:09 PM
Methylene Chloride	ND	30		µg/L	10	4/9/2010 5:03:09 PM
n-Butylbenzene	35	10		µg/L	10	4/9/2010 5:03:09 PM
n-Propylbenzene	100	10		µg/L	10	4/9/2010 5:03:09 PM
sec-Butylbenzene	16	10		µg/L	10	4/9/2010 5:03:09 PM
Styrene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
tert-Butylbenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	4/9/2010 5:03:09 PM
Tetrachloroethene (PCE)	ND	10		µg/L	10	4/9/2010 5:03:09 PM
trans-1,2-DCE	ND	10		µg/L	10	4/9/2010 5:03:09 PM
trans-1,3-Dichloropropene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,1,1-Trichloroethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,1,2-Trichloroethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Trichloroethene (TCE)	ND	10		µg/L	10	4/9/2010 5:03:09 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level  
 E Estimated value  
 J Analyte detected below quantitation limits  
 NC Non-Chlorinated  
 PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 MCL Maximum Contaminant Level  
 ND Not Detected at the Reporting Limit  
 S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-03

**Client Sample ID:** MW7  
**Collection Date:** 4/6/2010 11:46:00 AM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Trichlorofluoromethane	ND	10		µg/L	10	4/9/2010 5:03:09 PM
1,2,3-Trichloropropane	ND	20		µg/L	10	4/9/2010 5:03:09 PM
Vinyl chloride	ND	10		µg/L	10	4/9/2010 5:03:09 PM
Xylenes, Total	1400	15		µg/L	10	4/9/2010 5:03:09 PM
Surr: 1,2-Dichloroethane-d4	95.5	54.6-141		%REC	10	4/9/2010 5:03:09 PM
Surr: 4-Bromofluorobenzene	105	60.1-133		%REC	10	4/9/2010 5:03:09 PM
Surr: Dibromofluoromethane	128	78.5-130		%REC	10	4/9/2010 5:03:09 PM
Surr: Toluene-d8	93.5	79.5-126		%REC	10	4/9/2010 5:03:09 PM

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-04

**Client Sample ID:** MW6  
**Collection Date:** 4/6/2010 12:15:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: SCC
<b>EPA METHOD 8310: PAHS</b>						
Naphthalene	ND	2.0		µg/L	1	4/16/2010 4:21:43 PM
1-Methylnaphthalene	ND	2.0		µg/L	1	4/16/2010 4:21:43 PM
2-Methylnaphthalene	ND	2.0		µg/L	1	4/16/2010 4:21:43 PM
Acenaphthylene	ND	2.5		µg/L	1	4/16/2010 4:21:43 PM
Acenaphthene	ND	5.0		µg/L	1	4/16/2010 4:21:43 PM
Fluorene	ND	0.80		µg/L	1	4/16/2010 4:21:43 PM
Phenanthrene	ND	0.60		µg/L	1	4/16/2010 4:21:43 PM
Anthracene	ND	0.60		µg/L	1	4/16/2010 4:21:43 PM
Fluoranthene	ND	0.30		µg/L	1	4/16/2010 4:21:43 PM
Pyrene	ND	0.30		µg/L	1	4/16/2010 4:21:43 PM
Benz(a)anthracene	ND	0.070		µg/L	1	4/16/2010 4:21:43 PM
Chrysene	ND	0.20		µg/L	1	4/16/2010 4:21:43 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/16/2010 4:21:43 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/16/2010 4:21:43 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	4/16/2010 4:21:43 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	4/16/2010 4:21:43 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	4/16/2010 4:21:43 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	4/16/2010 4:21:43 PM
Surr: Benzo(e)pyrene	55.1	28.3-111		%REC	1	4/16/2010 4:21:43 PM
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Toluene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Ethylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Naphthalene	ND	2.0		µg/L	1	4/9/2010 5:31:12 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2010 5:31:12 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2010 5:31:12 PM
Acetone	ND	10		µg/L	1	4/9/2010 5:31:12 PM
Bromobenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Bromoform	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Bromomethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
2-Butanone	ND	10		µg/L	1	4/9/2010 5:31:12 PM
Carbon disulfide	ND	10		µg/L	1	4/9/2010 5:31:12 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Chlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-04

**Client Sample ID:** MW6  
**Collection Date:** 4/6/2010 12:15:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						
Chloroethane	ND	2.0		µg/L	1	4/9/2010 5:31:12 PM
Chloroform	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Chloromethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2010 5:31:12 PM
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Dibromomethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2010 5:31:12 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
2-Hexanone	ND	10		µg/L	1	4/9/2010 5:31:12 PM
Isopropylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2010 5:31:12 PM
Methylene Chloride	ND	3.0		µg/L	1	4/9/2010 5:31:12 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
n-Propylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
sec-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Styrene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2010 5:31:12 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-04

**Client Sample ID:** MW6  
**Collection Date:** 4/6/2010 12:15:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2010 5:31:12 PM
Vinyl chloride	ND	1.0		µg/L	1	4/9/2010 5:31:12 PM
Xylenes, Total	ND	1.5		µg/L	1	4/9/2010 5:31:12 PM
Surr: 1,2-Dichloroethane-d4	91.2	54.6-141		%REC	1	4/9/2010 5:31:12 PM
Surr: 4-Bromofluorobenzene	95.9	60.1-133		%REC	1	4/9/2010 5:31:12 PM
Surr: Dibromofluoromethane	109	78.5-130		%REC	1	4/9/2010 5:31:12 PM
Surr: Toluene-d8	95.1	79.5-126		%REC	1	4/9/2010 5:31:12 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-05

**Client Sample ID:** MW12  
**Collection Date:** 4/6/2010 12:38:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: SCC
<b>EPA METHOD 8310: PAHS</b>						
Naphthalene	48	2.0		µg/L	1	4/16/2010 4:47:54 PM
1-Methylnaphthalene	17	2.0		µg/L	1	4/16/2010 4:47:54 PM
2-Methylnaphthalene	27	2.0		µg/L	1	4/16/2010 4:47:54 PM
Acenaphthylene	ND	2.5		µg/L	1	4/16/2010 4:47:54 PM
Acenaphthene	ND	5.0		µg/L	1	4/16/2010 4:47:54 PM
Fluorene	1.5	0.80		µg/L	1	4/16/2010 4:47:54 PM
Phenanthrene	ND	0.60		µg/L	1	4/16/2010 4:47:54 PM
Anthracene	ND	0.60		µg/L	1	4/16/2010 4:47:54 PM
Fluoranthene	ND	0.30		µg/L	1	4/16/2010 4:47:54 PM
Pyrene	ND	0.30		µg/L	1	4/16/2010 4:47:54 PM
Benz(a)anthracene	ND	0.070		µg/L	1	4/16/2010 4:47:54 PM
Chrysene	ND	0.20		µg/L	1	4/16/2010 4:47:54 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/16/2010 4:47:54 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/16/2010 4:47:54 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	4/16/2010 4:47:54 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	4/16/2010 4:47:54 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	4/16/2010 4:47:54 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	4/16/2010 4:47:54 PM
Surr: Benzo(e)pyrene	58.1	28.3-111		%REC	1	4/16/2010 4:47:54 PM
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Toluene	5.4	1.0		µg/L	1	4/9/2010 5:59:18 PM
Ethylbenzene	280	10		µg/L	10	4/12/2010 2:26:27 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2,4-Trimethylbenzene	940	10		µg/L	10	4/12/2010 2:26:27 PM
1,3,5-Trimethylbenzene	310	10		µg/L	10	4/12/2010 2:26:27 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Naphthalene	94	2.0		µg/L	1	4/9/2010 5:59:18 PM
1-Methylnaphthalene	19	4.0		µg/L	1	4/9/2010 5:59:18 PM
2-Methylnaphthalene	33	4.0		µg/L	1	4/9/2010 5:59:18 PM
Acetone	ND	10		µg/L	1	4/9/2010 5:59:18 PM
Bromobenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Bromoform	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Bromomethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
2-Butanone	ND	10		µg/L	1	4/9/2010 5:59:18 PM
Carbon disulfide	ND	10		µg/L	1	4/9/2010 5:59:18 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Chlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

CLIENT: Souder, Miller and Associates  
 Lab Order: 1004140  
 Project: Conoco Mini Mart  
 Lab ID: 1004140-05

Client Sample ID: MW12  
 Collection Date: 4/6/2010 12:38:00 PM  
 Date Received: 4/8/2010  
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						Analyst: DAM
Chloroethane	ND	2.0		µg/L	1	4/9/2010 5:59:18 PM
Chloroform	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Chloromethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2010 5:59:18 PM
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Dibromomethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2010 5:59:18 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
2-Hexanone	ND	10		µg/L	1	4/9/2010 5:59:18 PM
Isopropylbenzene	27	1.0		µg/L	1	4/9/2010 5:59:18 PM
4-Isopropyltoluene	3.3	1.0		µg/L	1	4/9/2010 5:59:18 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2010 5:59:18 PM
Methylene Chloride	ND	3.0		µg/L	1	4/9/2010 5:59:18 PM
n-Butylbenzene	8.1	1.0		µg/L	1	4/9/2010 5:59:18 PM
n-Propylbenzene	130	10		µg/L	10	4/12/2010 2:26:27 PM
sec-Butylbenzene	7.8	1.0		µg/L	1	4/9/2010 5:59:18 PM
Styrene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2010 5:59:18 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-05

**Client Sample ID:** MW12  
**Collection Date:** 4/6/2010 12:38:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2010 5:59:18 PM
Vinyl chloride	ND	1.0		µg/L	1	4/9/2010 5:59:18 PM
Xylenes, Total	1100	15		µg/L	10	4/12/2010 2:26:27 PM
Surr: 1,2-Dichloroethane-d4	94.7	54.6-141		%REC	1	4/9/2010 5:59:18 PM
Surr: 4-Bromofluorobenzene	110	60.1-133		%REC	1	4/9/2010 5:59:18 PM
Surr: Dibromofluoromethane	127	78.5-130		%REC	1	4/9/2010 5:59:18 PM
Surr: Toluene-d8	97.3	79.5-126		%REC	1	4/9/2010 5:59:18 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-06

**Client Sample ID:** MW8  
**Collection Date:** 4/6/2010 12:58:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: SCC
<b>EPA METHOD 8310: PAHS</b>						
Naphthalene	6.4	2.0		µg/L	1	4/16/2010 5:09:10 PM
1-Methylnaphthalene	5.9	2.0		µg/L	1	4/16/2010 5:09:10 PM
2-Methylnaphthalene	ND	2.0		µg/L	1	4/16/2010 5:09:10 PM
Acenaphthylene	ND	2.5		µg/L	1	4/16/2010 5:09:10 PM
Acenaphthene	ND	5.0		µg/L	1	4/16/2010 5:09:10 PM
Fluorene	ND	0.80		µg/L	1	4/16/2010 5:09:10 PM
Phenanthrene	ND	0.60		µg/L	1	4/16/2010 5:09:10 PM
Anthracene	ND	0.60		µg/L	1	4/16/2010 5:09:10 PM
Fluoranthene	ND	0.30		µg/L	1	4/16/2010 5:09:10 PM
Pyrene	ND	0.30		µg/L	1	4/16/2010 5:09:10 PM
Benz(a)anthracene	ND	0.070		µg/L	1	4/16/2010 5:09:10 PM
Chrysene	ND	0.20		µg/L	1	4/16/2010 5:09:10 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	4/16/2010 5:09:10 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	4/16/2010 5:09:10 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	4/16/2010 5:09:10 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	4/16/2010 5:09:10 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	4/16/2010 5:09:10 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	4/16/2010 5:09:10 PM
Surr: Benzo(e)pyrene	80.3	28.3-111		%REC	1	4/16/2010 5:09:10 PM
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Benzene	7.9	1.0		µg/L	1	4/9/2010 6:27:20 PM
Toluene	1.6	1.0		µg/L	1	4/9/2010 6:27:20 PM
Ethylbenzene	180	10		µg/L	10	4/12/2010 2:54:40 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2,4-Trimethylbenzene	190	10		µg/L	10	4/12/2010 2:54:40 PM
1,3,5-Trimethylbenzene	18	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Naphthalene	15	2.0		µg/L	1	4/9/2010 6:27:20 PM
1-Methylnaphthalene	6.5	4.0		µg/L	1	4/9/2010 6:27:20 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	4/9/2010 6:27:20 PM
Acetone	ND	10		µg/L	1	4/9/2010 6:27:20 PM
Bromobenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Bromodichloromethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Bromoform	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Bromomethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
2-Butanone	ND	10		µg/L	1	4/9/2010 6:27:20 PM
Carbon disulfide	ND	10		µg/L	1	4/9/2010 6:27:20 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Chlorobenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-06

**Client Sample ID:** MW8  
**Collection Date:** 4/6/2010 12:58:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8260B: VOLATILES</b>						Analyst: DAM
Chloroethane	ND	2.0		µg/L	1	4/9/2010 6:27:20 PM
Chloroform	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Chloromethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
2-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
4-Chlorotoluene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
cis-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/9/2010 6:27:20 PM
Dibromochloromethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Dibromomethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	4/9/2010 6:27:20 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
2-Hexanone	ND	10		µg/L	1	4/9/2010 6:27:20 PM
Isopropylbenzene	24	1.0		µg/L	1	4/9/2010 6:27:20 PM
4-Isopropyltoluene	1.1	1.0		µg/L	1	4/9/2010 6:27:20 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	4/9/2010 6:27:20 PM
Methylene Chloride	ND	3.0		µg/L	1	4/9/2010 6:27:20 PM
n-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
n-Propylbenzene	67	1.0		µg/L	1	4/9/2010 6:27:20 PM
sec-Butylbenzene	7.3	1.0		µg/L	1	4/9/2010 6:27:20 PM
Styrene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
tert-Butylbenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/9/2010 6:27:20 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
trans-1,2-DCE	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-10

**CLIENT:** Souder, Miller and Associates  
**Lab Order:** 1004140  
**Project:** Conoco Mini Mart  
**Lab ID:** 1004140-06

**Client Sample ID:** MW8  
**Collection Date:** 4/6/2010 12:58:00 PM  
**Date Received:** 4/8/2010  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: DAM
<b>EPA METHOD 8260B: VOLATILES</b>						
Trichlorofluoromethane	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/9/2010 6:27:20 PM
Vinyl chloride	ND	1.0		µg/L	1	4/9/2010 6:27:20 PM
Xylenes, Total	180	15		µg/L	10	4/12/2010 2:54:40 PM
Surr: 1,2-Dichloroethane-d4	97.6	54.6-141		%REC	1	4/9/2010 6:27:20 PM
Surr: 4-Bromofluorobenzene	108	60.1-133		%REC	1	4/9/2010 6:27:20 PM
Surr: Dibromofluoromethane	129	78.5-130		%REC	1	4/9/2010 6:27:20 PM
Surr: Toluene-d8	99.5	79.5-126		%REC	1	4/9/2010 6:27:20 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

## QA/QC SUMMARY REPORT

**Client:** Souder, Miller and Associates  
**Project:** Conoco Mini Mart

**Work Order:** 1004140

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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**Method:** EPA Method 8260B: VOLATILES

<b>Sample ID:</b> 1004140-02a msd	<i>MSD</i>					<b>Batch ID:</b> R38147	<b>Analysis Date:</b> 4/9/2010 7:23:37 PM			
Benzene	19.95	µg/L	1.0	20	1.124	94.1	75.7	118	0.565	15
Toluene	19.80	µg/L	1.0	20	0	99.0	80.1	114	7.36	15
Chlorobenzene	18.59	µg/L	1.0	20	0	92.9	81.5	112	2.25	15
1,1-Dichloroethene	20.27	µg/L	1.0	20	0	101	77.4	132	0.0345	17.8
Trichloroethene (TCE)	19.69	µg/L	1.0	20	0	98.4	61.1	121	5.44	19.8

<b>Sample ID:</b> 5ml rb	<i>MBLK</i>					<b>Batch ID:</b> R38147	<b>Analysis Date:</b> 4/9/2010 9:59:31 AM
Benzene	ND	µg/L	1.0				
Toluene	ND	µg/L	1.0				
Ethylbenzene	ND	µg/L	1.0				
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0				
1,2,4-Trimethylbenzene	ND	µg/L	1.0				
1,3,5-Trimethylbenzene	ND	µg/L	1.0				
1,2-Dichloroethane (EDC)	ND	µg/L	1.0				
1,2-Dibromoethane (EDB)	ND	µg/L	1.0				
Naphthalene	ND	µg/L	2.0				
1-Methylnaphthalene	ND	µg/L	4.0				
2-Methylnaphthalene	ND	µg/L	4.0				
Acetone	ND	µg/L	10				
Bromobenzene	ND	µg/L	1.0				
Bromodichloromethane	ND	µg/L	1.0				
Bromoform	ND	µg/L	1.0				
Bromomethane	ND	µg/L	1.0				
2-Butanone	ND	µg/L	10				
Carbon disulfide	ND	µg/L	10				
Carbon Tetrachloride	ND	µg/L	1.0				
Chlorobenzene	ND	µg/L	1.0				
Chloroethane	ND	µg/L	2.0				
Chloroform	ND	µg/L	1.0				
Chloromethane	ND	µg/L	1.0				
2-Chlorotoluene	ND	µg/L	1.0				
4-Chlorotoluene	ND	µg/L	1.0				
cis-1,2-DCE	ND	µg/L	1.0				
cis-1,3-Dichloropropene	ND	µg/L	1.0				
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0				
Dibromochloromethane	ND	µg/L	1.0				
Dibromomethane	ND	µg/L	1.0				
1,2-Dichlorobenzene	ND	µg/L	1.0				
1,3-Dichlorobenzene	ND	µg/L	1.0				
1,4-Dichlorobenzene	ND	µg/L	1.0				
Dichlorodifluoromethane	ND	µg/L	1.0				
1,1-Dichloroethane	ND	µg/L	1.0				
1,1-Dichloroethene	ND	µg/L	1.0				
1,2-Dichloropropane	ND	µg/L	1.0				
1,3-Dichloropropane	ND	µg/L	1.0				

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

## QA/QC SUMMARY REPORT

Client: Souder, Miller and Associates  
 Project: Conoco Mini Mart

Work Order: 1004140

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260B: VOLATILES

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: 5ml rb		MBLK									
Batch ID: R38147											
Analysis Date: 4/9/2010 9:59:31 AM											
2,2-Dichloropropane	ND	µg/L	2.0								
1,1-Dichloropropene	ND	µg/L	1.0								
Hexachlorobutadiene	ND	µg/L	1.0								
2-Hexanone	ND	µg/L	10								
Isopropylbenzene	ND	µg/L	1.0								
4-Isopropyltoluene	ND	µg/L	1.0								
4-Methyl-2-pentanone	ND	µg/L	10								
Methylene Chloride	ND	µg/L	3.0								
n-Butylbenzene	ND	µg/L	1.0								
n-Propylbenzene	ND	µg/L	1.0								
sec-Butylbenzene	ND	µg/L	1.0								
Styrene	ND	µg/L	1.0								
tert-Butylbenzene	ND	µg/L	1.0								
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0								
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0								
Tetrachloroethene (PCE)	ND	µg/L	1.0								
trans-1,2-DCE	ND	µg/L	1.0								
trans-1,3-Dichloropropene	ND	µg/L	1.0								
1,2,3-Trichlorobenzene	ND	µg/L	1.0								
1,2,4-Trichlorobenzene	ND	µg/L	1.0								
1,1,1-Trichloroethane	ND	µg/L	1.0								
1,1,2-Trichloroethane	ND	µg/L	1.0								
Trichloroethene (TCE)	ND	µg/L	1.0								
Trichlorofluoromethane	ND	µg/L	1.0								
1,2,3-Trichloropropane	ND	µg/L	2.0								
Vinyl chloride	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	1.5								
Sample ID: b1		MBLK									
Batch ID: R38161											
Analysis Date: 4/12/2010 8:42:54 AM											
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
1,2,4-Trimethylbenzene	ND	µg/L	1.0								
1,3,5-Trimethylbenzene	ND	µg/L	1.0								
1,2-Dichloroethane (EDC)	ND	µg/L	1.0								
1,2-Dibromoethane (EDB)	ND	µg/L	1.0								
Naphthalene	ND	µg/L	2.0								
1-Methylnaphthalene	ND	µg/L	4.0								
2-Methylnaphthalene	ND	µg/L	4.0								
Acetone	ND	µg/L	10								
Bromobenzene	ND	µg/L	1.0								
Bromodichloromethane	ND	µg/L	1.0								
Bromoform	ND	µg/L	1.0								
Bromomethane	ND	µg/L	1.0								

## Qualifiers:

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

## QA/QC SUMMARY REPORT

Client: Souder, Miller and Associates  
 Project: Conoco Mini Mart

Work Order: 1004140

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260B: VOLATILES

Sample ID: b1

MBLK

Batch ID: R38161 Analysis Date: 4/12/2010 8:42:54 AM

2-Butanone	ND	µg/L	10
Carbon disulfide	ND	µg/L	10
Carbon Tetrachloride	ND	µg/L	1.0
Chlorobenzene	ND	µg/L	1.0
Chloroethane	ND	µg/L	2.0
Chloroform	ND	µg/L	1.0
Chloromethane	ND	µg/L	1.0
2-Chlorotoluene	ND	µg/L	1.0
4-Chlorotoluene	ND	µg/L	1.0
cis-1,2-DCE	ND	µg/L	1.0
cis-1,3-Dichloropropene	ND	µg/L	1.0
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0
Dibromochloromethane	ND	µg/L	1.0
Dibromomethane	ND	µg/L	1.0
1,2-Dichlorobenzene	ND	µg/L	1.0
1,3-Dichlorobenzene	ND	µg/L	1.0
1,4-Dichlorobenzene	ND	µg/L	1.0
Dichlorodifluoromethane	ND	µg/L	1.0
1,1-Dichloroethane	ND	µg/L	1.0
1,1-Dichloroethene	ND	µg/L	1.0
1,2-Dichloropropane	ND	µg/L	1.0
1,3-Dichloropropane	ND	µg/L	1.0
2,2-Dichloropropane	ND	µg/L	2.0
1,1-Dichloropropene	ND	µg/L	1.0
Hexachlorobutadiene	ND	µg/L	1.0
2-Hexanone	ND	µg/L	10
Isopropylbenzene	ND	µg/L	1.0
4-Isopropyltoluene	ND	µg/L	1.0
4-Methyl-2-pentanone	ND	µg/L	10
Methylene Chloride	ND	µg/L	3.0
n-Butylbenzene	ND	µg/L	1.0
n-Propylbenzene	ND	µg/L	1.0
sec-Butylbenzene	ND	µg/L	1.0
Styrene	ND	µg/L	1.0
tert-Butylbenzene	ND	µg/L	1.0
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0
Tetrachloroethene (PCE)	ND	µg/L	1.0
trans-1,2-DCE	ND	µg/L	1.0
trans-1,3-Dichloropropene	ND	µg/L	1.0
1,2,3-Trichlorobenzene	ND	µg/L	1.0
1,2,4-Trichlorobenzene	ND	µg/L	1.0
1,1,1-Trichloroethane	ND	µg/L	1.0
1,1,2-Trichloroethane	ND	µg/L	1.0

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

**Client:** Souder, Miller and Associates  
**Project:** Conoco Mini Mart

**Work Order:** 1004140

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8260B: VOLATILES</b>											
<b>Sample ID: b1</b>		<i>MBLK</i>		Batch ID: <b>R38161</b>		Analysis Date: 4/12/2010 8:42:54 AM					
Trichloroethene (TCE)	ND	µg/L	1.0								
Trichlorofluoromethane	ND	µg/L	1.0								
1,2,3-Trichloropropane	ND	µg/L	2.0								
Vinyl chloride	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	1.5								
<b>Sample ID: 100ng lcs</b>		<i>LCS</i>		Batch ID: <b>R38147</b>		Analysis Date: 4/9/2010 10:56:13 AM					
Benzene	20.07	µg/L	1.0	20	0	100	82.4	116			
Toluene	21.34	µg/L	1.0	20	0	107	89.5	123			
Chlorobenzene	19.97	µg/L	1.0	20	0	99.9	87.8	120			
1,1-Dichloroethene	22.40	µg/L	1.0	20	0	112	90.3	138			
Trichloroethene (TCE)	21.27	µg/L	1.0	20	0	106	64	129			
<b>Sample ID: 100ng lcs</b>		<i>LCS</i>		Batch ID: <b>R38161</b>		Analysis Date: 4/12/2010 11:09:19 AM					
Benzene	19.10	µg/L	1.0	20	0	95.5	82.4	116			
Toluene	20.21	µg/L	1.0	20	0	101	89.5	123			
Chlorobenzene	18.99	µg/L	1.0	20	0	94.9	87.8	120			
1,1-Dichloroethene	20.22	µg/L	1.0	20	0	101	90.3	138			
Trichloroethene (TCE)	20.11	µg/L	1.0	20	0	101	64	129			
<b>Sample ID: 1004140-02a ms</b>		<i>MS</i>		Batch ID: <b>R38147</b>		Analysis Date: 4/9/2010 6:55:29 PM					
Benzene	20.06	µg/L	1.0	20	1.124	94.7	75.7	118			
Toluene	21.31	µg/L	1.0	20	0	107	80.1	114			
Chlorobenzene	19.01	µg/L	1.0	20	0	95.1	81.5	112			
1,1-Dichloroethene	20.28	µg/L	1.0	20	0	101	77.4	132			
Trichloroethene (TCE)	20.79	µg/L	1.0	20	0	104	61.1	121			

**Qualifiers:**

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

**Client:** Souder, Miller and Associates  
**Project:** Conoco Mini Mart

**Work Order:** 1004140

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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**Method:** EPA Method 8310: PAHs

**Sample ID:** MB-21893

*MBLK*

**Batch ID:** 21893 **Analysis Date:** 4/16/2010 11:58:04 AM

Naphthalene	ND	µg/L	2.0
1-Methylnaphthalene	ND	µg/L	2.0
2-Methylnaphthalene	ND	µg/L	2.0
Acenaphthylene	ND	µg/L	2.5
Acenaphthene	ND	µg/L	5.0
Fluorene	ND	µg/L	0.80
Phenanthrene	ND	µg/L	0.60
Anthracene	ND	µg/L	0.60
Fluoranthene	ND	µg/L	0.30
Pyrene	ND	µg/L	0.30
Benz(a)anthracene	ND	µg/L	0.070
Chrysene	ND	µg/L	0.20
Benzo(b)fluoranthene	ND	µg/L	0.10
Benzo(k)fluoranthene	ND	µg/L	0.070
Benzo(a)pyrene	ND	µg/L	0.070
Dibenz(a,h)anthracene	ND	µg/L	0.070
Benzo(g,h,i)perylene	ND	µg/L	0.080
Indeno(1,2,3-cd)pyrene	ND	µg/L	0.080

**Sample ID:** LCS-21893

*LCS*

**Batch ID:** 21893 **Analysis Date:** 4/16/2010 12:19:21 PM

Naphthalene	52.41	µg/L	2.0	80	0	65.5	20.5	109
1-Methylnaphthalene	51.27	µg/L	2.0	80.2	0	63.9	23.1	116
2-Methylnaphthalene	53.01	µg/L	2.0	80	0	66.3	19.5	112
Acenaphthylene	53.96	µg/L	2.5	80.2	0	67.3	27.5	119
Acenaphthene	55.62	µg/L	5.0	80	0	69.5	31	117
Fluorene	6.420	µg/L	0.80	8.02	0	80.0	17.1	109
Phenanthrene	2.580	µg/L	0.60	4.02	0	64.2	25.5	112
Anthracene	2.700	µg/L	0.60	4.02	0	67.2	25.8	119
Fluoranthene	4.420	µg/L	0.30	8.02	0	55.1	27.2	122
Pyrene	5.130	µg/L	0.30	8.02	0	64.0	24.1	118
Benz(a)anthracene	0.4300	µg/L	0.070	0.802	0	53.6	31.1	125
Chrysene	2.400	µg/L	0.20	4.02	0	59.7	32.8	119
Benzo(b)fluoranthene	0.7500	µg/L	0.10	1.002	0	74.9	24.4	117
Benzo(k)fluoranthene	0.3200	µg/L	0.070	0.5	0	64.0	28.4	132
Benzo(a)pyrene	0.3000	µg/L	0.070	0.502	0	59.8	32.4	119
Dibenz(a,h)anthracene	0.7100	µg/L	0.070	1.002	0	70.9	33.9	120
Benzo(g,h,i)perylene	0.7000	µg/L	0.080	1	0.07	63.0	35.2	113
Indeno(1,2,3-cd)pyrene	1.620	µg/L	0.080	2.004	0	80.8	33.6	115

**Sample ID:** LCSD-21893

*LCSD*

**Batch ID:** 21893 **Analysis Date:** 4/16/2010 12:40:38 PM

Naphthalene	51.38	µg/L	2.0	80	0	64.2	20.5	109	1.98	32.1
1-Methylnaphthalene	51.49	µg/L	2.0	80.2	0	64.2	23.1	116	0.428	32.7
2-Methylnaphthalene	53.22	µg/L	2.0	80	0	66.5	19.5	112	0.395	34
Acenaphthylene	56.75	µg/L	2.5	80.2	0	70.8	27.5	119	5.04	38.8
Acenaphthene	58.92	µg/L	5.0	80	0	73.7	31	117	5.76	38.6
Fluorene	6.580	µg/L	0.80	8.02	0	82.0	17.1	109	2.46	29.3

**Qualifiers:**

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: Souder, Miller and Associates  
 Project: Conoco Mini Mart

Work Order: 1004140

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8310: PAHs											
Sample ID: LCSD-21893											
		LCSD					Batch ID: 21893	Analysis Date: 4/16/2010 12:40:38 PM			
Phenanthrene	2.840	µg/L	0.60	4.02	0	70.6	25.5	112	9.59	25	
Anthracene	2.980	µg/L	0.60	4.02	0	74.1	25.8	119	9.86	23.9	
Fluoranthene	4.960	µg/L	0.30	8.02	0	61.8	27.2	122	11.5	15.7	
Pyrene	5.670	µg/L	0.30	8.02	0	70.7	24.1	118	10.0	15.3	
Benz(a)anthracene	0.4600	µg/L	0.070	0.802	0	57.4	31.1	125	6.74	19	
Chrysene	2.620	µg/L	0.20	4.02	0	65.2	32.8	119	8.76	16.6	
Benzo(b)fluoranthene	0.8400	µg/L	0.10	1.002	0	83.8	24.4	117	11.3	21.7	
Benzo(k)fluoranthene	0.3500	µg/L	0.070	0.5	0	70.0	28.4	132	8.96	19.4	
Benzo(a)pyrene	0.3200	µg/L	0.070	0.502	0	63.7	32.4	119	6.45	16.7	
Dibenz(a,h)anthracene	0.7800	µg/L	0.070	1.002	0	77.8	33.9	120	9.40	17.3	
Benzo(g,h,i)perylene	0.7900	µg/L	0.080	1	0.07	72.0	35.2	113	12.1	18	
Indeno(1,2,3-cd)pyrene	1.760	µg/L	0.080	2.004	0	87.8	33.6	115	8.28	17.7	

## Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name SMA-FARM

Date Received:

4/8/2010

Work Order Number 1004140

Received by: TLS

Sample ID labels checked by:

Initials AS

Checklist completed by:

Signature [Handwritten Signature]

Date 4/8/10

Matrix:

Carrier name: Greyhound

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present  Not Shipped
- Custody seals intact on sample bottles? Yes  No  N/A
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - Preservation labels on bottle and cap match? Yes  No  N/A
- Water - pH acceptable upon receipt? Yes  No  N/A
- Container/Temp Blank temperature? **1.2°** <6° C Acceptable

Number of preserved bottles checked for pH:

<2 >12 unless noted below.

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

# Chain-of-Custody Record

Client: SMA

Mailing Address: 1012 E Murray  
Farmington, NM 87401  
 Phone #: (505) 325-5667

email or Fax#:

QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Project Manager:

Shawna Chubbuck

Sampler: SJC/TLV

On Ice:  Yes  No

Sample Temperature: 12

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No
4-6-10	1104	H <sub>2</sub> O	MW 9	40ml VOA, Biotic	HgCl	1004140
4-6-10	1119	H <sub>2</sub> O	MW 11			1
4-6-10	1146	H <sub>2</sub> O	MW 7			2
4-6-10	1215	H <sub>2</sub> O	MW 6			3
4-6-10	1238	H <sub>2</sub> O	MW 12			4
4-6-10	1258	H <sub>2</sub> O	MW 8			5
4-6-10						6

Date: 4-7-10 Time: 1600  
 Relinquished by: [Signature]  
 Date: 4-18-10 Time: 940  
 Received by: [Signature]

Turn-Around Time:

Standard  Rush

Project Name: Conoco Min. Mart

3116075

Project #:

# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAB)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
					X X X X X X X X				X X X X X X X X		

Remarks: