

**AP - 056**

**STAGE 1  
REPORTS**

**4/16/2008**



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April 16, 2008

Mr. Glenn Von Gonten  
New Mexico Oil Conservation Division  
1220 South St Francis Drive  
Santa Fe, New Mexico 87505

**Subject: Interim Investigation Report**

Mark Owen #9 Reserve Pit – AP No. 53  
Eunice, New Mexico

Dear Mr. Von Gonten:

Please find enclosed the interim investigation report for the Mark Owen #9 Reserve Pit (AP No. 53) in Eunice, New Mexico. This report summarizes the results of the recent soil and groundwater investigation, including monitoring well installation and sampling. The results of the interim investigation indicate that the release from the reserve pit has been effectively delineated, and Chevron is prepared to proceed with the activities proposed in the Revised Stage 1 Abatement Plan (submitted March 13, 2007), upon NMOCD approval.

Please contact me at (713) 372-1046 should you have any questions or concerns.

Sincerely,

Matthew P. Hudson

cc: Tom Larson – Conestoga-Rovers & Associates

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AP 056



## INTERIM INVESTIGATION REPORT

**CHEVRON U.S.A., INC.  
MARK OWEN #9 RESERVE PIT (AP #53)  
NW/4 OF SE/4 (J) SECTION 34, T-21-S; R-37-E  
LEA COUNTY, NEW MEXICO**

**Prepared For:**

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**MARCH 12, 2008  
REF. NO. 046121 (4)**

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## **1.0 INTRODUCTION**

A Revised Stage 1 Abatement Plan for the Mark Owen #9 Reserve Pit was submitted on behalf of Chevron Environmental Company (CEMC) by Conestoga-Rovers & Associates (CRA) to the New Mexico Oil Conservation Division (NMOCD) in a correspondence dated March 13, 2007. The NMOCD has not yet provided a written response to the March 2007 submittal that included data from soil and groundwater investigation and remedial activities performed at the site (by Environmental Plus, Inc.) in 2006. Consequently, an investigation was performed at the site in October 2007 to collect current information associated with the indicated May 2006 release of drilling fluids from the reserve pit into the surrounding soils and groundwater.

CRA contacted Mr. Glenn von Gonten with the NMOCD in Santa Fe, New Mexico on January 15, 2008, regarding his recommendation associated with the submittal of the October 2007 investigation data to the agency. At that time, the current status of the March 2007 Revised Stage 1 Abatement Plan (AP) was also discussed and Mr. von Gonten reported that the revised AP had not been reviewed and that an AP number, AP#53, had been assigned to the site. He stated that a separate document, an Interim Investigation Report – could be submitted to the agency summarizing the results of the October 2007 investigation.

The legal description of the Site is the NW/4 of the SE/4 of Section 34, Township 21 South, Range 37 East, Lea County, New Mexico (FIGURE 1). The Site is situated immediately southeast of the town of Eunice, New Mexico and is associated with a release of fluids from the reserve pit utilized in the drilling of the Mark Owen #9 oil well by Chevron in 2005. Global Positioning System (GPS) coordinates for the site are Latitude 32° 25'56.49" North and Longitude 103° 08' 46.27 West. The O-GRID number assigned to the Site is reported as #4323. According to the Form C-141 filed for the release (APPENDIX A), the release was verbally reported to the agency in Santa Fe on May 11, 2006 with a written letter of acknowledgement to Mr. Wayne Price on May 19, 2006. The Mark Owen #9 well site is currently operated by Chevron USA.

The purpose of this Interim Investigation Report is to summarize the results of the October 2007 site investigation activities that included the installation of seven borings around the perimeter of the Owen #9 reserve pit. Four of the borings were converted into groundwater monitoring wells that were sampled on November 1, 2007. This report includes boring/monitor well logs, tabulation of soil and groundwater analytical data, groundwater gradient and chloride concentration (in groundwater) maps as well as cross sections of the reverse pit and surrounding areas. CRA understands that this information can be utilized by the NMOCD in concert with the evaluation of the Revised Stage 1 AP report already submitted.

## **2.0 REGULATORY FRAMEWORK AND SITE CLASSIFICATION**

The NMOCD has regulatory jurisdiction over oil and gas production operations including crude oil pipeline spills and closure activities in the State of New Mexico. This project is conducted under the regulatory jurisdiction of the NMOCD, which requires the vadose zone shall be abated so that water contaminants in the vadose zone will not, with reasonable probability, contaminate groundwater or surface water (toxic pollutants as defined in 20.6.2.7 New Mexico Administration Code; NMAC, shall not be present) through leaching, percolation, or other transport mechanisms (19.15.1.19 NMAC, Subsection B, Paragraphs 1 and 2). The NMOCD hydrocarbon soil remediation levels are determined by ranking criteria on a site-by-site basis, which is outlined in the NMOCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993. The ranking criteria are based on three site characteristics: depth to groundwater, wellhead protection, and distance to surface water.

**Site Ranking Criteria and Scoring**

CHARACTERISTIC	SELECTION	SCORE
Depth to Groundwater	<50 feet	20
Wellhead Protection Area	>1,000 feet	0
Distance to Surface Water	>1,000 feet	0

**Total Score= 20**

Groundwater information obtained from the Site indicates that the depth-to-groundwater at the Site is approximately 30-feet below ground surface (bgs) in the Tertiary Ogallala Formation. Information collected as part of this soil assessment illustrated that total petroleum hydrocarbon concentrations above regulatory levels were detected in the soil borings at depths ranging from 10-30 feet bgs. Based on these Site characteristics and associated NMOCD-ranking criteria presented in the table below, the following soil hydrocarbon recommended remediation action levels are applicable at the Site: benzene- 10 parts-per-million (ppm), BTEX - 50 ppm and TPH- 100 ppm. Analytical results for soil data are reported in mg/Kg, which are equivalent to the ppm reporting units. Note that the depth to groundwater characteristic is defined by the NMOCD as "the vertical distance from the lowermost contaminants to the seasonal high water elevation of the groundwater."

**Soil Recommended Remediation Action Levels**

Contaminant of Concern	>19 Score	10-19 Score	0-9 Score
Benzene (mg/Kg)	10	10	10
Total BTEX (mg/Kg)	50	50	50
TPH (mg/Kg)	100	1,000	5,000

There are no specified chloride soil cleanup standards in the NMOCD's 1993 guidance. The New Mexico Water Quality Control Commission (NMWQCC) has specified in NMAC 20.6.2.3103 A and B numerical groundwater Human Health Standards and Other Standards for Domestic Water Supply, respectively, for various contaminants and compounds. Applicable groundwater standards have been referenced in the groundwater tables associated with this investigation (TABLES III & IV).

### **3.0 SOIL AND GROUNDWATER INVESTIGATION ACTIVITIES**

Seven soil borings, of which four were converted into groundwater monitoring wells, were installed at the release site in October 2007 to evaluate the horizontal and vertical extent of impacted soils and groundwater associated with the indicated release of drilling fluids from the Owen #9 reserve pit. The respective locations are presented in FIGURE 2.

#### **3.1 FIELD METHODOLOGIES**

Prior to mobilizing the drilling equipment to the Site, the boring location areas were marked and a utility notification made at least 48-hour prior to mobilization. A post-hole digger was utilized to clear each boring location to a depth of approximately 5-feet bgs and approximately 10-inches in diameter.

An air-rotary rig, operated by a licensed State of New Mexico water well driller (White Drilling of Clyde, Texas), was utilized to advance the borings to depths ranging from 30 to 57-feet bgs) to assess the nature and extent of hydrocarbon and chloride impacted soils at the release site. The soil sampling plan included the collection of soil samples in five-foot intervals. Soil samples were field screened with a photo-ionization detector (PID) to measure the relative concentration of volatile organic compounds (VOCs) of the samples using the "heated headspace method." Soil samples collected for laboratory analysis were based on field observations and VOC measurements. The field geologist recorded the subsurface lithology and sample data on soil boring logs. The selected soil samples from each boring were shipped to TestAmerica, Inc of Houston, Texas using EPA-approved chain-of-custody procedures and analyzed for total petroleum hydrocarbons by (TPH) by EPA Method 8015 modified for diesel range organics (DRO) and gasoline range organics (GRO) and analysis of benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8021B. Soil samples were also analyzed for chlorides by SW-846 Method 9056.

The groundwater monitoring well construction and spacing were designed for soil and groundwater remedial evaluations as well as for monitoring purposes. The four monitoring wells were terminated within the top 1-2 feet of the underlying Triassic ("redbed") Formation approximately 50 feet below the ground surface. General well specifications included: four-inch diameter PVC casing/screens with gravel-packed screened intervals (35 feet of screen) to straddle the soil/groundwater interface, bentonite seals above the gravel pack, and above ground surface completions with concrete pads. The drill cuttings were stockpiled along southeast corner of the reserve pit. The wells were developed by bailing and purge water was containerized in properly labeled, 55-gallon, steel, DOT approved drums.

#### **3.2 SOIL ASSESSMENT RESULTS**

Seven soil borings penetrated the vadose zone interval as part of the investigation activities performed October 22-24, 2007 at the Site. The soil intervals are generally described as surficial loose sand section in the top 2' to 4' bgs (Quaternary eolian deposits), underlain by the Tertiary Ogallala Formation comprised of sands, silts with

varying amounts of indurated calcium carbonate stringers that are poorly to very well consolidated. The Ogallala Formation is approximately 50 feet thick at the site with the top of the groundwater occurring approximately 30' bgs. Four borings penetrated the top 1-2 feet of the Triassic redbeds (clay) at depths ranging from 50-57' bgs.

TABLE I - Soil Analytical Summary presents soil data collected from the seven soil borings installed in the October drilling program. Samples were generally analyzed from the 9-10'; 19-20' and 29-30' intervals in each boring. Samples were evaluated for TPH (GRO/DRO), BTEX and Chloride concentrations and compared to NMOCD Recommended Remediation Action Levels (RRALs) as appropriate. There are no NMOCD numerical RRALs for chlorides in soils. The TPH RRAL of 100 mg/kg in SB-1/MW-1 (9-10') was exceeded with a concentration of 220 mg/kg. This location appears to be isolated and may be associated with flowlines in the vicinity. As shown on TABLE I - TPH RRALs were also exceeded in the capillary fringe interval in SB-5/MW-2, SB-6/MW-3 and SB-7/MW-4. No other NMOCD RRALs (inc. BTEX) were exceeded in the samples analyzed.

FIGURE 3 presents two cross sections of four soil borings located around the perimeter of the reserve pit excavation. The illustration demonstrates elevated chloride concentrations are limited to the area around SB-7/MW-4. The maximum chloride soil concentration at this location ws 1,080 mg/kg in the 19-20 foot interval – with chloride concentrations decreasing to 217 mg/kg in the 29-30 foot sample. Chloride impacted soils do not appear to be present at the other three boring locations depicted on the cross sections. There are no NMOCD numerical RRALs for chlorides in soils.

Certified laboratory analytical reports are included in APPENDIX B. Soil boring logs - presenting lithologic descriptions, PID readings and analytical results are found in APPENDIX C.

### 3.3 GROUNDWATER ASSESSMENT RESULTS

Four soil borings were converted into four-inch groundwater monitoring wells (MW-1, MW-2, MW-3 and MW-4) at each location utilizing 35 feet of screen and PVC casing to three feet above the ground surface. The wells have above-ground surface completions with protective bollards at this oil well location. Groundwater was encountered approximately 30 feet bgs with the base of the uppermost groundwater bearing unit at approximately 50 feet bgs. Logs and details soil boring and monitoring well construction details are included in APPENDIX C and New Mexico Office of the State Engineer Well Records are provided in APPENDIX D.

Depth to groundwater and related measurements and information pertaining to the monitoring wells are presented in TABLE II – Groundwater Gauging Summary. A Topographic Survey of Monitor Wells and Soil Bore Locations, utilized to calculate top of casing (TOC) elevations and depth to groundwater elevations, is presented in APPENDIX E. The survey was performed by West Company of Midland, Inc. on December 10, 2007.

The November 2007 Groundwater Gradient Map (FIGURE 4), depicts groundwater direction and elevation information based on data collected from the November 1, 2007 groundwater monitoring event. The map shows a Site groundwater gradient toward the south at rate of approximately 0.004 feet/foot (1.5'/365').

Groundwater samples were collected after three wetted monitor well casings were removed from the wellbore to obtain representative samples of the Ogallala aquifer. Samples from each of the four monitoring wells (and one duplicate) were shipped to TestAmerica, Inc of Houston, Texas using EPA-approved chain-of-custody procedures. The water samples were analyzed for total petroleum hydrocarbons by (TPH) by EPA Method 8015 modified for diesel range organics (DRO) and gasoline range organics (GRO) and analysis of benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8021B. Additionally, samples were analyzed for RCRA 8 Metals by EPA Methods 6010B/7470A and groundwater quality (total alkalinity, chloride, sulfate and total dissolved solids) by EPA Methods 160.1, 300.0 and 310.1. The November 2007 Chloride Concentration Map (FIGURE 5) shows an interpretation of the extent of chloride concentrations above the NMWQCC (NMAC 20.6.2.3103B – Other Standards for Domestic Water Supply) groundwater protection standard of 250 mg/L from the November 1, 2007 sampling event. The areal extent of the chloride impacted groundwater above the regulatory standard is estimated at approximately 300 feet long by 180 feet wide. Two wells exhibited chloride and TDS concentrations above the applicable NMWQCC standard, MW-1 at 332 mg/L and 1,010 mg/L and MW-4 at 6,360 mg/L and 12,100 mg/L, respectively. MW-2 and MW-3 were analyzed to have groundwater concentrations below the NMWQCC Domestic Water Supply Standard.

All four monitoring wells exhibited BTEX and RCRA 8 metals concentrations below NMWQCC (NMAC 20.6.2.3103A – Human Health) standards. The groundwater analytical summaries (including comparisons to applicable NMWQCC standards) are provided in TABLES III and IV. Certified laboratory reports and chain-of-custody documentation for the groundwater samples are presented in APPENDIX B.

## **4.0 SUMMARY OF FINDINGS**

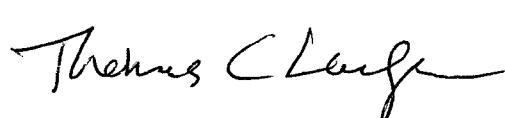
Based on soil and groundwater assessment activities performed by CRA at the Site in October and November, 2007, the summary of findings include the following:

- A release of an unknown quantity of brine water from the Mark Owen #9 reserve pit was reported to the NMOCD subsequent to pit sampling activities on May 11, 2006. The release impacted groundwater as reported on NMOCD Form C-141. The release occurred on property owned by Mr. Bill Stephens.
- CRA/CEMC has yet to receive comments on a Revised Stage 1 AP Plan (AP#53) that was submitted to the NMOCD on March 13, 2007. Consequently, a Site investigation was performed in October 2007 and a groundwater sampling event conducted on November 1, 2007.
- Per NMOCD's direction on January 15, 2008 – this Interim Investigation Report has been prepared to present the results of the fourth quarter 2007 investigation and sampling events. CEMC understands this information can be used to supplement the information and activities presented in the Revised Stage 1 AP.
- Seven soil borings of which four were converted into groundwater monitoring wells were installed at the release site in October 2007 to evaluate the horizontal and vertical extent of impacted soils and groundwater.
- The soil intervals at the Site are generally described as loose sand section in the top 2 feet bgs underlain by a caliche, silt and sand interval (Ogallala Formation) to approximately 50 feet below the ground surface. Groundwater was encountered approximately 30' bgs in the vicinity of the reserve pit. A red clay interval (Triassic redbeds) was encountered directly below the Ogallala Formation. The Triassic lithology serves as an aquiclude in this area.
- The cross sections bisecting the reserve pit illustrate that the vertical and horizontal extent of elevated chloride soil impacts appear to be limited to the immediate area northwest of the reserve pit.
- There are no NMOCD numerical RRALs for chlorides in soils. Based on the soil assessment activities previously performed (see Revised Stage 1 AP) and the October 2007 investigation – the vertical and horizontal extent of elevated chloride impacted soil have been effectively delineated.
- The TPH RRAL of 100 mg/kg in SB-1/MW-1 (9-10') was exceeded with a concentration of 220 mg/kg. This location appears to be isolated from the reserve pit and may be associated with flowlines in the vicinity. Based on the soil assessment activities, additional assessment and remedial activities are indicated in this area. These tasks may be performed independent or concurrent with proposed soil remediation activities submitted as part of the Revised Stage 1 AP. The remedial activities most likely would involve excavation and hauling of soil to NMOCD-permitted facility and confirmation sampling - standard crude oil cleanup.

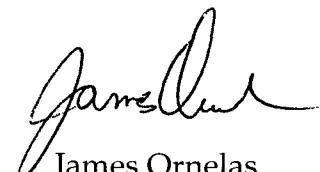
- As shown on TABLE I - TPH Soil RRALs were also exceeded in the capillary fringe interval in SB-5/MW-2, SB-6/MW-3 and SB-7/MW-4. However, BTEX and the GRO TPH analytes were not detected above method detection limits. It is noted that data collected from the four groundwater monitoring wells sampled in November 1, 2007 did not detect BTEX above the laboratory detection limit and detected TPH only in MW-2 (1.8 mg/L).
- Based on data collected from the November 1, 2007 groundwater monitoring event the Site groundwater gradient is toward the south at rate of approximately 0.004 feet/foot (1.5'/365').
- The areal extent of the interpreted chloride impacted groundwater above the applicable regulatory standard of 250 mg/L is estimated at approximately 300 feet long by 180 feet wide. Two wells exhibited chloride and TDS concentrations above the applicable groundwater standards, MW-1 at 332 mg/L and 1,010 mg/L and MW-4 at 6,360 mg/L and 12,100 mg/L, respectively.
- All four monitoring wells exhibited BTEX, Sulfate, and RCRA 8 metals concentrations below their respective NMWQCC standards.

Based on the findings of the Interim Investigation Report, the vertical and horizontal extent of impacted soil and groundwater from the release of fluids from the Owen #9 reserve pit have been effectively delineated. CRA requests on behalf of CEMC, that the findings of this Interim Investigation Report be taken into consideration with the Revised Stage 1 AP submitted to the NMOCD on March 13, 2007. Pending NMOCD directives, CEMC is prepared to move forward with proposed Stage 1 AP activities and associated conditions as warranted.

All of Which is Respectfully Submitted,  
**CONESTOGA-ROVERS & ASSOCIATES**



Thomas C. Larson  
 Senior Project Geologist



James Ornelas  
 Senior Project Manager

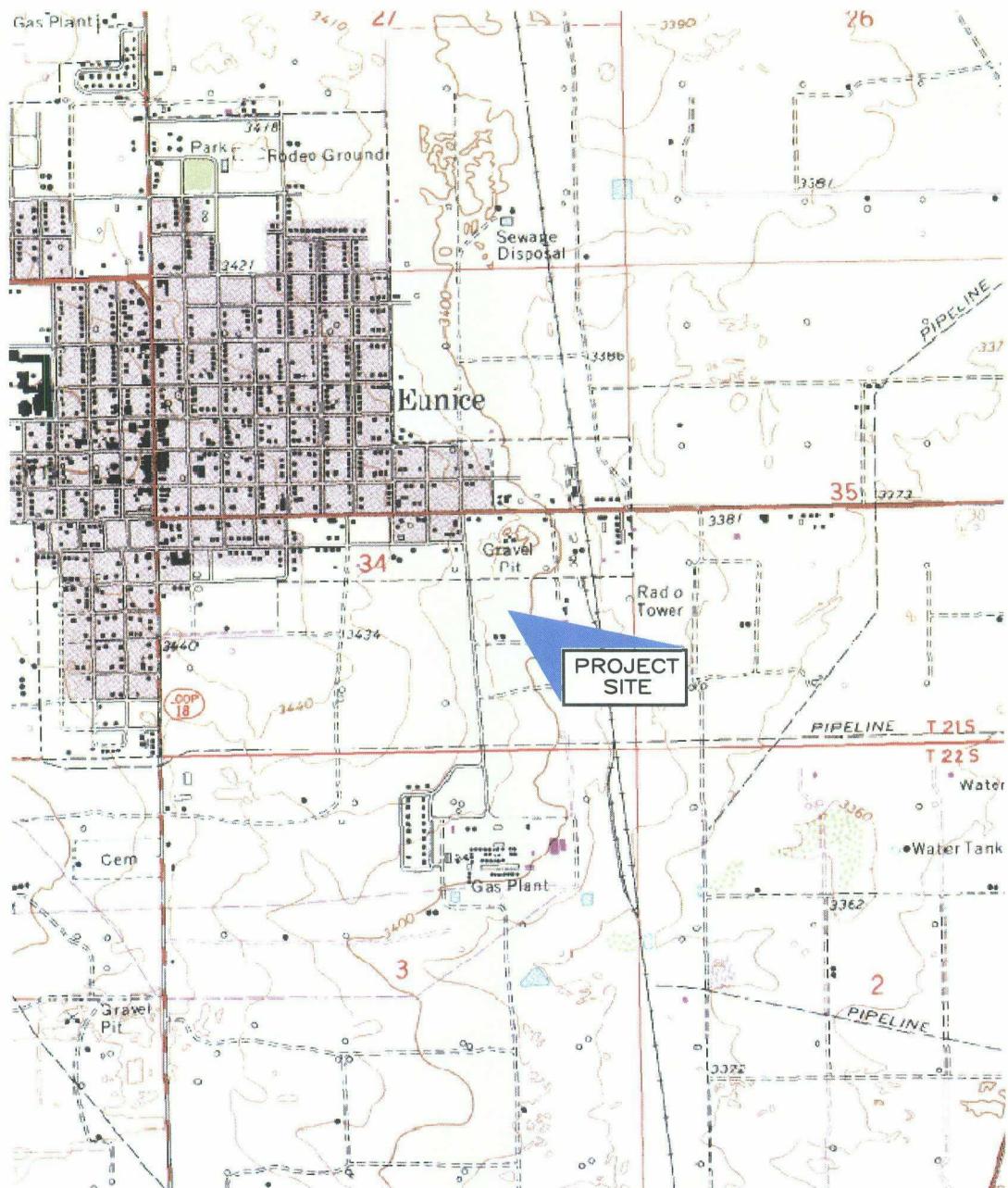
# **FIGURES**

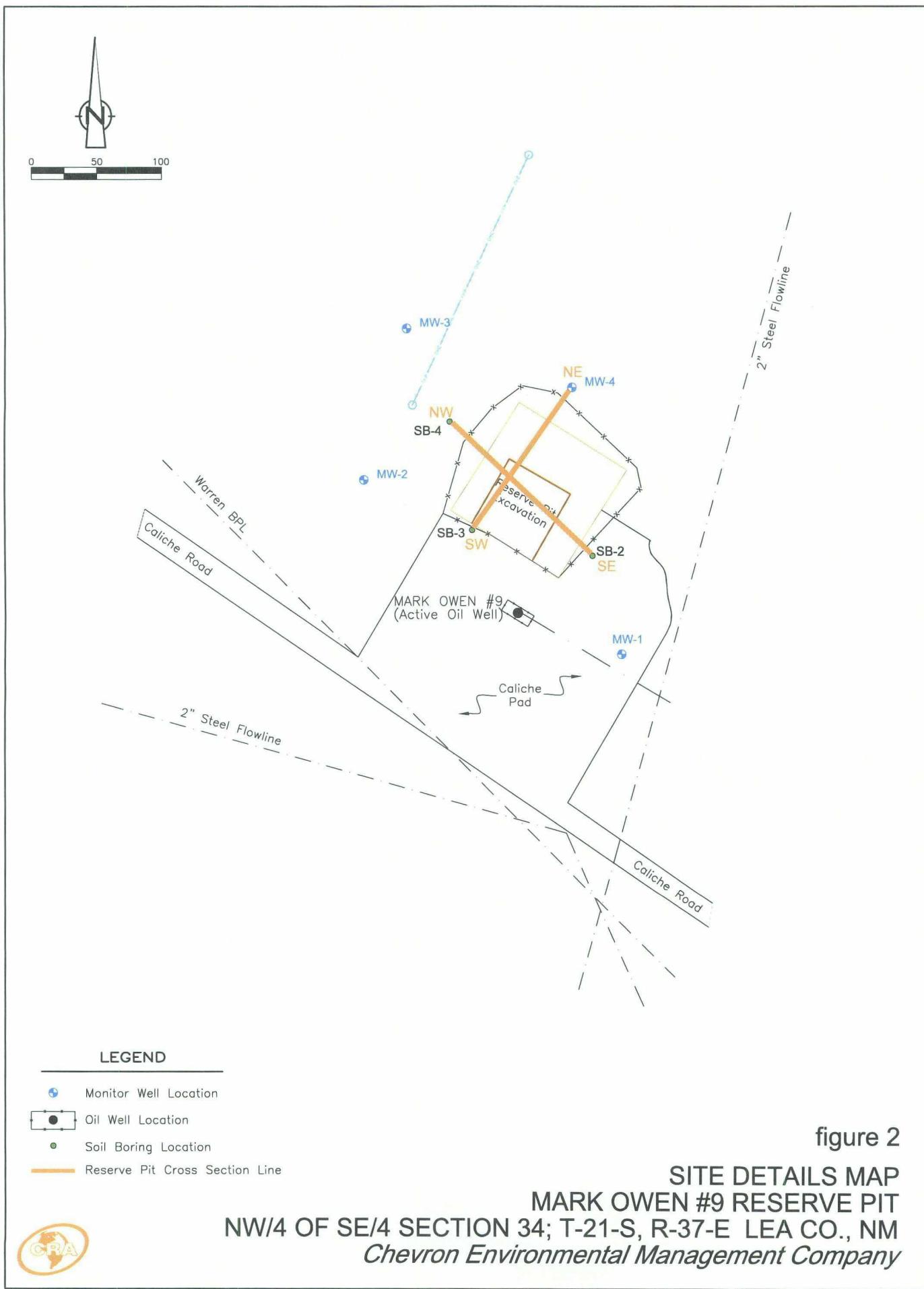
EUNICE QUADRANGLE  
NEW MEXICO

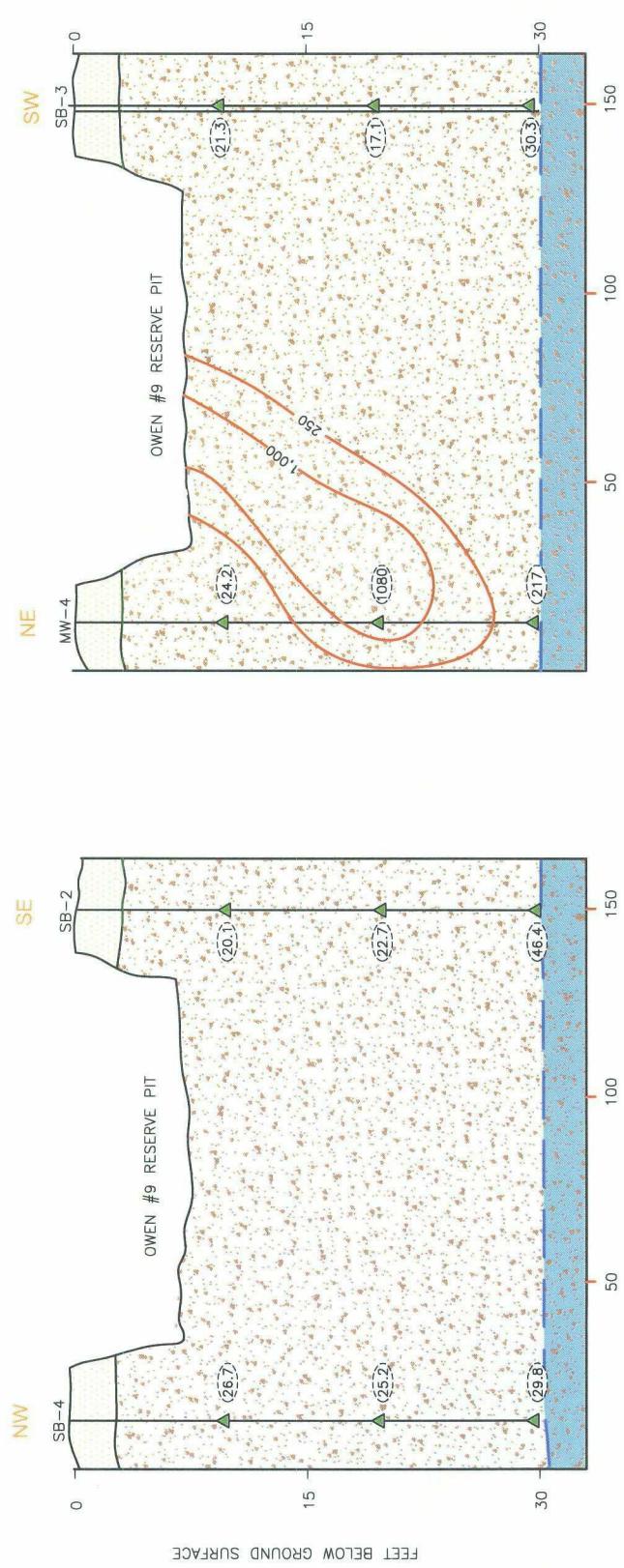
LAT= 32° 25' 56.9" N  
LONG= 103° 08' 47.9" W



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FLOOR SURFACE

## LEGEND

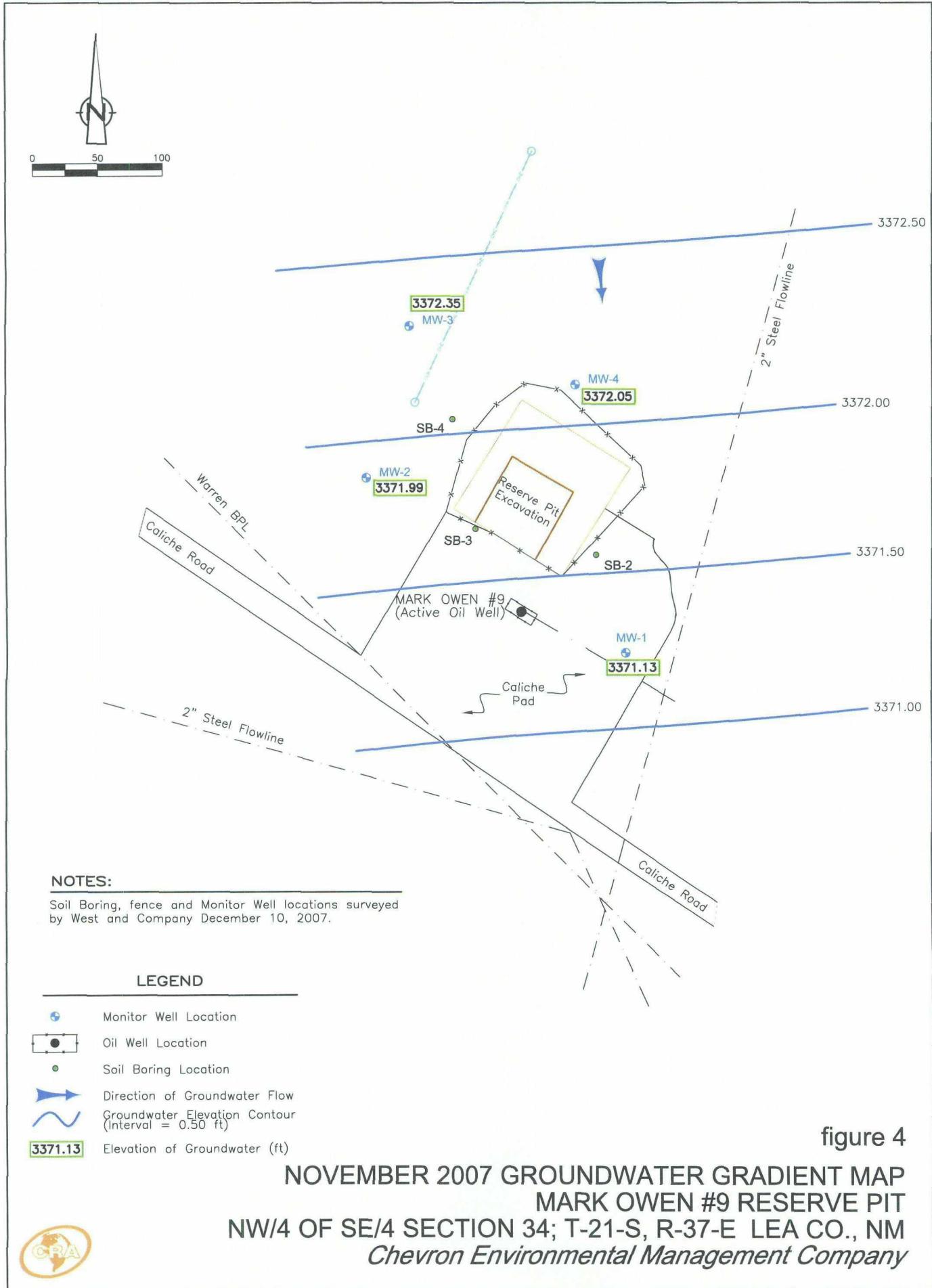
- |  |   |  |                      |
|--|---|--|----------------------|
|  | Quaternary eolian sand deposits: red-brown, unconsolidated, fine grained                                    |  |                      |
|  | Tertiary Ogallala Formation: sands, silts, indurated calcium carbonate (caliche), poor to well consolidated |  |                      |
|  | Groundwater   |  |                      |
|  | Chloride Contour (mg/kg)<br>Interval variable 1,000 - 250 in soils<br>(20.1)                                | Chloride analytical concentration in soils (mg/kg) | Soil Sample Location |
|  | Groundwater (potentiometric) surface; measured or inferred  |  |                      |

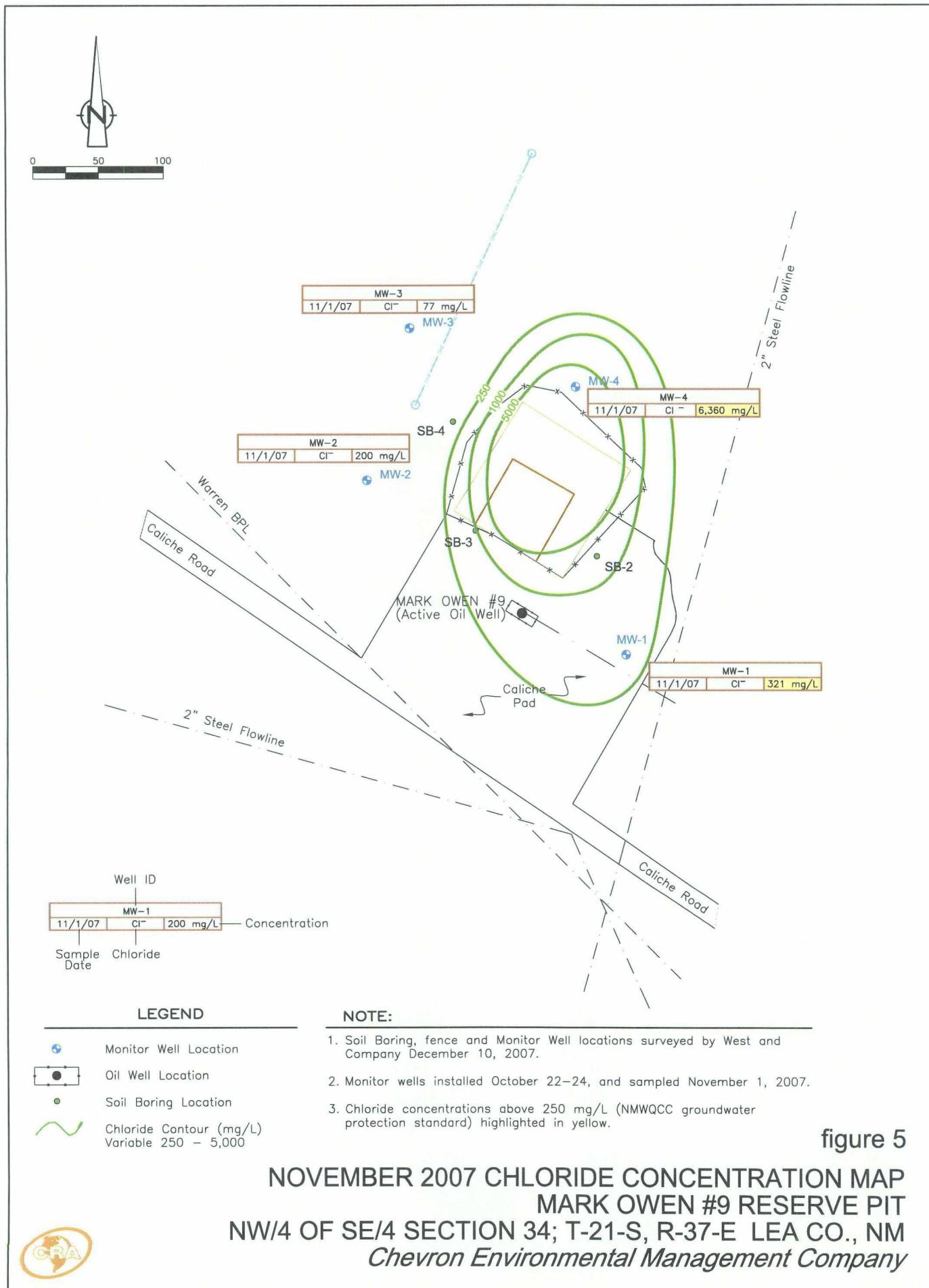
## NOTES.

1. Line of Sections presented in FIGURE 2.
  2. Borings/wells installed in October 2007.

RESERVE PIT CROSS SECTIONS  
MARK OWEN #9 RESERVE PIT  
NW/4 OF SE/4 SECTION 34; T-21-S, R-37-E LEA CO., NM  
*Chevron Environmental Management Company*







## **TABLES**

TABLE I

**SUMMARY OF SOIL ANALYTICAL DATA – BTEX/TPH/CHLORIDES**  
**Owen #9 Assessment**  
**Eunice, NM**

SAMPLE ID	DATE	DEPTH (feet)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	XYLEMES (mg/Kg)	TOTAL BTEX (mg/Kg)	CHLORIDE (mg/Kg)	TPH (8015 Modified)		
									GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH (GRO/DRO) (mg/Kg)
<b>New Mexico Oil Conservation Division Recommended Remediation Action Levels (Total Ranking Score &gt;19)</b>											
		10	—	—	—	—	50.0	—	—	—	100 mg/Kg
<b>Soil Boring Samples</b>											
SB-1/MW-1 9-10'	10/22/2007	9-10	<0.00248	<0.00683	<0.00592	<0.001819	BDL	74.4	0.324J	220	220
SB-1/MW-1 19-20'	10/22/2007	19-20	<0.00254	<0.00699	<0.00607	<0.001869	BDL	302	0.392J	<1.25	<1.25
SB-1/MW-1 29-30'	10/22/2007	29-30	<0.00229	<0.0063	<0.00547	<0.0168	BDL	168	0.317J	<1.13	<1.13
SB-2 9-10'	10/23/2007	9-10	<0.00241	<0.00663	<0.00575	<0.01766	BDL	20.1	0.399J	<1.19	<1.19
SB-2 19-20'	10/23/2007	19-20	<0.00238	<0.00656	<0.00569	<0.01747	BDL	22.7	0.423J	<1.18	<1.18
SB-2 29-30	10/23/2007	29-30	<0.00247	<0.00681	<0.00591	<0.01815	BDL	46.4	0.361J	<1.22	<1.22
SB-3 9-10'	10/23/2007	9-10	<0.00216	<0.00594	<0.00515	<0.01582	BDL	21.3	0.397J	78	78
SB-3 19-20'	10/23/2007	19-20	<0.00215	<0.00592	0.01010J	0.02010J	BDL	17.1	0.306J	<1.06	<1.06
SB-3 29-30'	10/23/2007	29-30	<0.00258	0.00717J	<0.00616	<0.0189	BDL	30.3	0.314J	16	16
SB-4 9-10'	10/23/2007	9-10	<0.00223	<0.00613	<0.00532	<0.01634	BDL	26.7	0.372J	13	13
SB-4 19-20	10/23/2007	19-20	<0.00255	<0.00704	<0.0061	<0.01874	BDL	25.2	0.334J	<1.26	<1.26
SB-4 30-31'	10/23/2007	30-31	<0.00239	<0.00631	<0.00828J	<0.01755	BDL	29.8	0.354J	<1.18	<1.18
SB-5/MW-2 9-10'	10/23/2007	9-10	<0.00229	<0.00631	<0.00547	<0.01680	BDL	12	0.368J	<1.13	<1.13
SB-5/MW-2 19-20'	10/23/2007	19-20	<0.00225	<0.00689	<0.00598	<0.01836	BDL	20.9	0.331J	<1.24	<1.24
SB-5/MW-3 33-34'	10/23/2007	33-34	<0.00216	<0.00596	<0.00517	<0.01589	BDL	35	0.330J	320	320
SB-6/MW-3 9-10'	10/24/2007	9-10	<0.00222	<0.00612	<0.00531	<0.01631	BDL	20.5	0.241J	<1.1	<1.1
SB-6/MW-3 19-20'	10/24/2007	19-20	<0.00209	<0.00574	<0.00498	<0.01531	BDL	14.1	0.315J	<1.03	<1.03
SB-6/MW-3 31-32'	10/24/2007	31-32	<0.00233	<0.00697	<0.00604	<0.01856	BDL	43.1	0.330J	250	250
SB-7/MW-4 9-10'	10/24/2007	9-10	<0.00258	<0.00711	<0.00617	<0.01895	BDL	24.2	0.352J	26	26
SB-7/MW-4 19-20'	10/24/2007	19-20	<0.00206	<0.00569	<0.00493	<0.01516	BDL	1080	0.358J	15	15
SB-7/MW-4 29-30'	10/24/2007	29-30	<0.00263	<0.00726	<0.00629	<0.01933	BDL	217	0.389J	410	410

## Notes:

BTEX analysis by EPA Method 8021.

TPH analysis by EPA Method 8015 Modified.

Chloride analysis by SW-846 Method 9056.

Bold concentrations above lab reporting limits.

Highlighted Concentrations above NMOCD RALs.

BDL - below laboratory detection limits

J = estimated value between RL &amp; MDL

TABLE II

**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**OWEN #9 RESERVE PIT RELEASE**  
**NW/4, SE/4, SECTION 34, TOWNSHIP 21 SOUTH, RANGE 37 EAST**  
**LEA COUNTY, NEW MEXICO**

WELL TOC elev <sup>1</sup>	DATE	Well Diameter (inches)	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Depth to LNAPL (ft below TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL <sup>2</sup> )	Screen interval (bgs <sup>3</sup> )
MW-01 3,403.68	11/1/2007	4	54.00	32.55	---	---	3371.13	16'-51'
					---	---		
					---	---		
MW-02 3,408.23	11/1/2007	4	60.00	36.24	---	---	3371.99	22'-57"
					---	---		
					---	---		
MW-03 3,407.04	11/1/2007	4	56.50	34.69	---	---	3372.35	19'-54"
					---	---		
					---	---		
MW-04 3,404.74	11/1/2007	4	54.00	32.69	---	---	3372.05	16'-51'
					---	---		
					---	---		

Notes:

<sup>1</sup>TOC - Top of Casing<sup>2</sup>MSL - Mean Sea Level<sup>3</sup>BGS - Below ground surface

Professional Survey conducted by West Company of Midland, Inc. on December 10, 2007.

**TABLE III**  
**GROUNDWATER ANALYTICAL SUMMARY**  
**OWEN #9 ASSESSMENT**  
**EUNICE, NEW MEXICO**

Sample ID	Sample Date	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TPH		
						GRO	DRO	Total
New Mexico Water Quality Control Commission Standard								
		0.01	0.75	0.75	0.62	---	---	---
MW-1	11/1/07	<0.00006	<0.0001	<0.00012	<0.00021	<0.02014	<0.36	<0.38014
MW-2	11/1/07	<0.00006	0.00035J	<0.00012	<0.00021	<0.02014	<b>1.8</b>	<b>1.82014</b>
MW-3	11/1/07	<0.00006	0.0005J	<0.00012	<0.00021	<0.02014	<0.36	<0.38014
MW-4	11/1/07	<0.00006	0.00052J	<0.00012	<0.00021	<0.02014	<0.36	<0.38014
DUP	11/1/07	<0.00006	0.00054J	<0.00012	<0.00021	<0.02014	<0.36	<0.38014

**Notes:**

- 1) **Bold** concentrations above lab reporting limits.
- 2) BTEX analysis by EPA Method 8021B
- 3) TPH (GRO/DRO) analysis by EPA Method 8015 Modified.
- 4) Results shown in mg/L.
- 5) J = estimated value between RL & MDL

**TABLE IV**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA - METALS AND GROUNDWATER QUALITY**  
**OWEN #9 ASSESSMENT**  
**EUNICE, NEW MEXICO**

Sample I.D. No.	Date	RCRA Metals						Groundwater Quality						
		Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	Total Alkalinity (CaCO <sub>3</sub> ) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	
<b>NMWQCC Human Health Standards for Groundwater<sup>1</sup></b>														
<b>NMWQCC Other Standards for Domestic Water Supply<sup>2</sup></b>														
MW-1	11/01/07	0.1 mg/L	1.0 mg/L	0.01 mg/L	0.05 mg/L	0.05 mg/L	0.002 mg/L	0.05 mg/L	0.05 mg/L	250 mg/L	600 mg/L	1000 mg/L		
MW-2	11/01/07	0.0144B	0.0839	<0.00073	<0.00155	<0.0021	<0.000053	0.00752B	<0.00125	201 321	84.4	1,010		
MW-3	11/01/07	0.0123B	0.0979	<0.00073	<0.00155	<0.0021	<0.000053	0.00403B	<0.00125	187	200	72.4	698	
MW-4	11/01/07	0.0185B	0.102	<0.00073	<0.00155	<0.0021	<0.000053	0.00282B	<0.00125	212	77	40.6	476	
DUP	11/01/07	0.0203	0.117	<0.00073	<0.00155	<0.00205	<0.0021	<0.000053	0.00425B	<0.00125	193	6,360	180	
		0.0176B	0.116	<0.00073				0.00246B	<0.00125	193	6,170	189	12,100 12,800	

**Notes:**

1) RCRA Metals Analysis by EPA Methods 6010B and 7470A.

2) Groundwater Quality by EPA Methods 160.1, 300.0, and 310.1.

3) Bold concentrations above lab reporting limits.

4) Highlighted concentrations above NMWQCC Other Standards for Domestic Water Supply.

5) <sup>1</sup> NMWQCC Human Health Standards Per NMAC 20.6.2.3103A6) <sup>2</sup> NMWQCC Other Standards for Domestic Water Supply Per NMAC 20.6.2.3103B

7) B = estimated value between RL &amp; MDL

# **APPENDICES**

## **APPENDIX A**

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

State of New Mexico  
 Energy Minerals and Natural Resources  
 Oil Conservation Division  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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

## Release Notification and Corrective Action

### OPERATOR

Initial Report

Final Report

Name of Company CHEVRON	Contact Larry Williams	
Address P.O. Box 1949 Eunice NM. 88231	Telephone No. 505-394-1247 (office), 505-390-7165 (cell)	
Facility Name- Mark Owen #9	Facility Type - Oil well	
Surface Owner- Bill Stevens	Mineral Owner - Bill Stevens	Lease No.

### LOCATION OF RELEASE API # 30-025-37189

Unit Letter J	Section 34	Township 21S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea

Latitude\_32-25'-56.9"N      Longitude\_103-08'47.9"W

### NATURE OF RELEASE

Type of Release- Drilling Water	Volume of Release Unknown BW	Volume Recovered- 0
Source of Release- Drilling pit	Date and Hour of Occurrence- Unknown	Date and Hour of Discovery 05/11/2006
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Verbal to Santa Fe With letter of acknowledgement from Wayne Price	
By Whom? Larry Williams	Date and Hour 05/11/2007 verbal Written 05/19/06	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

After removing all drilling mud and cuttings from drilling pit, sampling was done to determine if soil had been contaminated. After using track hoe to check for chlorides, it was determined that we need to do borings to determine the depth of contamination in the pit. On the return side of the pit we found that we had chloride contamination at ground water of 1,711mg/kg. At that time EPI notified NMOCD in Santa Fe of possible ground water impact with chlorides.

Describe Area Affected and Cleanup Action Taken.\* Drilling pits. Turned over to CEMC with Chevron to do final clean up and summit work plan.

Chlorides 22,000 ppm      Ground water 35 to 40 feet

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

### OIL CONSERVATION DIVISION

Signature:	Approved by District Supervisor:	
Printed Name: Larry Williams		
Title: Operations Rep	Approval Date:	Expiration Date:
E-mail Address: LCWL@chevron.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 11/26/2007      Phone: 505-394-1247		

\* Attach Additional Sheets If Necessary

## **APPENDIX B**

STL

## ANALYTICAL REPORT

JOB NUMBER: 344439  
Project ID: MARK OWEN 9

Prepared For:

Conestoga-Rovers and Associates  
2270 Springlake Road  
Suite 800  
Dallas, TX 75234

Attention: Arthur Greeley

Date: 11/06/2007



Signature



Date

Name: Sachin G. Kudchadkar

TestAmerica Laboratories, Inc  
6310 Rothway Drive  
Houston, TX 77040

Title: Project Manager III

PHONE: 713-690-4444

E-Mail: sachin.kudchadkar@testamericainc.com

TOTAL NO. OF PAGES 49

# STL

11/06/2007

Arthur Greeley  
Conestoga-Rovers and Associates  
2270 Springlake Road  
Suite 800  
Dallas, TX 75234

Reference:

Project : MARK OWEN 9  
Project No. : 344439  
Date Received : 10/26/2007  
TestAmerica Job : 344439

Dear Arthur Greeley:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

- |                      |                      |
|----------------------|----------------------|
| 1. SB-1/MW-1 9-10'   | 2. SB-1/MW-1 19-20'  |
| 3. SB-1/MW-1 29-30'  | 4. SB-2 9-10'        |
| 5. SB-2 19-20'       | 6. SB-2 29-30'       |
| 7. SB-3 9-10'        | 8. SB-3 19-20'       |
| 9. SB-3 29-30'       | 10. SB-4 9-10'       |
| 11. SB-4 19-20'      | 12. SB-4 30-31'      |
| 13. SB-5/MW-2 9-10'  | 14. SB-5/MW-2 19-20' |
| 15. SB-5/MW-2 33-34' | 16. SB-6/MW-3 9-10'  |
| 17. SB-6/MW-3 19-20' | 18. SB-6/MW-3 31-32' |
| 19. SB-7/MW-4 9-10'  | 20. SB-7/MW-4 19-20' |
| 21. SB-7/MW-4 29-30' | 22. TRIP BLANK       |

All holding times were met for the tests performed on these samples.

Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

The test results in this report meet all QC requirements for TestAmerica Houston's QC limits. Any exceptions to these QC requirements will be noted and included in a case narrative as a part of this report.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting TestAmerica to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

**STL**

We look forward to working with you on future projects.

Sincerely,



Sachin G. Kudchadkar  
Project Manager

## SAMPLE INFORMATION

Date: 11/06/2007

Job Number.: 344439  
 Customer...: Conestoga-Rovers and Associates  
 Attn.....: Arthur Greeley

Project Number.....: 99007656  
 Customer Project ID....: MARK OWEN 9  
 Project Description....: Mark Owen 9

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
344439-1	SB-1/MW-1 9-10'	Soil	10/22/2007	12:30	10/26/2007	10:22
344439-2	SB-1/MW-1 19-20'	Soil	10/22/2007	12:50	10/26/2007	10:22
344439-3	SB-1/MW-1 29-30	Soil	10/22/2007	14:20	10/26/2007	10:22
344439-4	SB-2 9-10'	Soil	10/23/2007	08:40	10/26/2007	10:22
344439-5	SB-2 19-20'	Soil	10/23/2007	09:00	10/26/2007	10:22
344439-6	SB-2 29-30'	Soil	10/23/2007	09:20	10/26/2007	10:22
344439-7	SB-3 9-10'	Soil	10/23/2007	10:30	10/26/2007	10:22
344439-8	SB-3 19-20'	Soil	10/23/2007	10:50	10/26/2007	10:22
344439-9	SB-3 29-30'	Soil	10/23/2007	11:20	10/26/2007	10:22
344439-10	SB-4 9-10'	Soil	10/23/2007	12:20	10/26/2007	10:22
344439-11	SB-4 19-20'	Soil	10/23/2007	12:40	10/26/2007	10:22
344439-12	SB-4 30-31'	Soil	10/23/2007	13:00	10/26/2007	10:22
344439-13	SB-5/MW-2 9-10'	Soil	10/23/2007	15:00	10/26/2007	10:22
344439-14	SB-5/MW-2 19-20'	Soil	10/23/2007	15:20	10/26/2007	10:22
344439-15	SB-5/MW-2 33-34'	Soil	10/23/2007	15:50	10/26/2007	10:22
344439-16	SB-6/MW-3 9-10'	Soil	10/24/2007	08:40	10/26/2007	10:22
344439-17	SB-6/MW-3 19-20'	Soil	10/24/2007	09:00	10/26/2007	10:22
344439-18	SB-6/MW-3 31-32'	Soil	10/24/2007	09:40	10/26/2007	10:22
344439-19	SB-7/MW-4 9-10'	Soil	10/24/2007	12:40	10/26/2007	10:22
344439-20	SB-7/MW-4 19-20'	Soil	10/24/2007	13:00	10/26/2007	10:22
344439-21	SB-7/MW-4 29-30'	Soil	10/24/2007	13:30	10/26/2007	10:22
344439-22	TRIP BLANK	Water	10/24/2007	00:00	10/26/2007	10:22

Job Number: 344439

Date: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OIEN 9

Customer Sample ID: SB-1/MW-1 9-10-1  
 Date Sampled.....: 10/22/2007  
 Time Sampled.....: 12:30  
 Sample Matrix.....: Soil

Laboratory Sample ID: 344439-1  
 Date Received.....: 10/26/2007  
 Time Received.....: 10:22

ATTN: Arthur Greeley

LABORATORY TEST RESULTS

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	80.7				0.01	1	%	187988	10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	19.3				0.01	1	%	187988	10/26/07 1700	enc
SW-846 9056	Chloride, Soil*	74.4			6.28	5.0	1	mg/kg	188474	11/03/07 1655	sur
SW-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.48 6.83 5.92 18.19	U U U U	2.48 6.83 5.92 18.19	12.4 12.4 12.4 37.2	1.0000 1.0000 1.0000 1.0000	ug/kg ug/kg ug/kg ug/kg	188112 188112 188112 188112	10/29/07 1051 10/29/07 1051 10/29/07 1051 10/29/07 1051	mht mht mht mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TIPH as GRO, Soil*	324	U	198.4	1238.76	1.0000	ug/kg	188367	10/30/07 0848	mht	
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*		Complete			1		188312	10/31/07 1100	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	220		6.12	51	5	mg/kg	188490	11/02/07 0930	ps	

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/06/2007
CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK OWN D		ATTN: Arthur Greeley						
Customer Sample ID: SB-1/MW-1 19-20 Date Sampled.....: 10/22/2007 Time Sampled.....: 12:50 Sample Matrix.....: Soil	Laboratory Sample ID: 344439-2 Date Received.....: 10/26/2007 Time Received.....: 10:22									
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
SM-2540 G Mod.	% Solids, Soil	78.8			0.01	1	%	187988	10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	21.2			0.01	1	%	187988	10/26/07 1700	enc
SW-846 9056	Chloride, Soil*	302		6.43	5.1	1	mg/Kg	188474	11/03/07 1742	sur
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.54	U U U U	2.54	12.7	1.0000	ug/Kg	188386	10/31/07 1137	mht
	Toluene, Soil*	6.99	U U U U	6.99	12.7	1.0000	ug/Kg	188386	10/31/07 1137	mht
	Ethylbenzene, Soil*	6.07	U U U U	6.07	12.7	1.0000	ug/Kg	188386	10/31/07 1137	mht
	Xylenes (total), Soil*	18.63	U U U U	18.63	38.1	1.0000	ug/Kg	188386	10/31/07 1137	mht
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	392	J	203.3	1268.86	1.0000	ug/Kg	188367	10/30/07 0932	mht
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1		188312	10/31/07 1100	mra
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.25	U	1.25	11	1	mg/Kg	188490	11/01/07 1806	jps

\* In Description = Dry Wgt.

## LABORATORY TEST RESULTS

Date: 11/06/2007

Job Number: 344439

CUSTOMER: Conestoga-Powers and Associates  
 PROJECT: MARK OWN 9  
 ATTN: Arthur Greetley

Customer Sample ID: SB-1/MU-1 29-30  
 Date Sampled.....: 10/22/2007  
 Time Sampled.....: 14:20  
 Sample Matrix.....: Soil

Laboratory Sample ID: 344439-3  
 Date Received.....: 10/26/2007  
 Time Received.....: 10:22  
 Sample Matrix.....: Soil

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	87.4				0.01	1	%	187988	10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	12.6				0.01	1	%	187988	10/26/07 1700	enc
SH-846 9056	Chloride, Soil*	168		5.80	4.6	1	mg/Kg	188474		11/03/07 1758	sur
SH-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.29 6.30 5.47 16.80	U U U U	2.29 6.30 5.47 16.80	11.4 11.4 11.4 34.3	1.0000 1.0000 1.0000 1.0000	ug/Kg ug/Kg ug/Kg ug/Kg	188386 188386 188386 188386	10/31/07 1157 10/31/07 1157 10/31/07 1157 10/31/07 1157	mht mht mht mht	
SH-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	317	J	183.3	1144.15	1.0000	ug/Kg	188367		10/30/07 0957	mht
SH-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*							188312		10/31/07 1100	mra
SH-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.13	U	1.13	9.5	1	mg/Kg	188490		11/01/07 1849	jps

\* In Description = Dry Wgt.

## LABORATORY TEST RESULTS

Date: 11/06/2007

Customer: Conestoga-Rovers and Associates

PROJECT: MARK OWN 9

ATTN: Arthur Greenley

Customer Sample ID: SB-2 9-10  
 Date Sampled.....: 10/23/2007  
 Time Sampled.....: 08:40  
 Sample Matrix.....: Soil

Laboratory Sample ID: 344439-4  
 Date Received.....: 10/26/2007  
 Time Received.....: 10:22

TEST METHOD	PARAMETER TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE / TIME	TECH
SM-2540 G Mod.	% Solids, Soil	83.1				0.01	1	%	187988	10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	16.9				0.01	1	%	187988	10/26/07 1700	enc
SW-846 9056	Chloride, Soil*	20.1			6.10	4.8	1	mg/Kg	188474	11/03/07 1814	sur
SW-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.41 6.63 5.75 17.66	U U U U	2.41 6.63 5.75 17.66	12.0 12.0 12.0 36.1	1.0000 1.0000 1.0000 1.0000	ug/Kg ug/Kg ug/Kg ug/Kg	188386 188386 188386 188386	10/31/07 1217 10/31/07 1217 10/31/07 1217 10/31/07 1217	mht mht mht mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	399	J	192.8	1203.28	1.0000	ug/Kg	188367	10/30/07 1021	mht	
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1		188312	10/31/07 1100	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.19	U	1.19	10	1	mg/Kg	188490	11/01/07 1933	jps	

\* In Description = Dry Wgt.

## LABORATORY TEST RESULTS

Date: 11/06/2007

Job Number: 344439

CUSTOMER: Conestoga Rovers and Associates

PROJECT: MARK OWN 9

Customer Sample ID: SB-2 19-20'  
 Date Sampled.....: 10/23/2007  
 Time Sampled.....: 09:00  
 Sample Matrix.....: Soil

Laboratory Sample ID: 344439-5  
 Date Received.....: 10/26/2007  
 Time Received.....: 10:22  
 Sample Matrix.....: Soil

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH ID	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	84.0				0.01	1	%	187988	10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	16.0			0.01	1		%	187988	10/26/07 1700	enc
SH-846 9056	Chloride, Soil*	22.7			6.03	4.8	1	mg/Kg	188474	11/03/07 1829	sur
SH-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.38 6.56 5.69 17.47	U U U U		2.38 6.56 5.69 17.47	11.9 11.9 11.9 35.7	1.0000 1.0000 1.0000 1.0000	ug/Kg ug/Kg ug/Kg ug/Kg	188386 188386 188386 188386	10/31/07 1237 10/31/07 1237 10/31/07 1237 10/31/07 1237	mtt mtt mtt mtt
SH-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	423	J		190.6	1190.04	1.0000	ug/Kg	188367	10/30/07 1045	mtt
SH-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*			Complete			1		188312	10/31/07 1100	mra
SH-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*				1.18	9.9	1	mg/Kg	188490	11/01/07 2143	jps

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date:11/06/2007	
CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK OWNEN 9		ATTN: Arthur Greeley							
Customer Sample ID: SB-2 29-30*		Laboratory Sample ID: 344439-6									
Date Sampled.....: 10/23/2007		Date Received.....: 10/26/2007									
Time Sampled.....: 09:20		Time Received.....: 10:22									
Sample Matrix.....: Soil											
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	80.9			0.01	1	%	187988	10/26/07 1700	enc	
SM-2540 G Mod.	Moisture, Soil	19.1			0.01	1	%	187988	10/26/07 1700	enc	
SW-846 9056	Chloride, Soil*	46.4			6.27	4.9	mg/Kg	188474	11/03/07 1916	sur	
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.47	U		2.47	12.4	1.0000	188386	10/31/07 1310	mht	
	Toluene, Soil*	6.81	U		6.81	12.4	1.0000	188386	10/31/07 1310	mht	
	Ethy lbenzene, Soil*	5.91	U		5.91	12.4	1.0000	188386	10/31/07 1310	mht	
	Xylenes (total), Soil*	18.15	U		18.15	37.1	1.0000	188386	10/31/07 1310	mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	361	J	198.0	1236.16	1.0000	ug/Kg	188367	10/30/07 1109	mht	
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete			1			188312	10/31/07 1100	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.22	U	1.22	10	1	mg/Kg	188490	11/01/07 2355	jps	

\* In Description = Dry Wgt.

Job Number: 344439

L A B O R A T O R Y   T E S T   R E S U L T S

Date: 11/06/2007

CUSTOMER: Conestoga Rovers and Associates

PROJECT: MARK ONE! 9

Customer Sample ID: SB-3 9-10'  
 Date Sampled.....: 10/23/2007  
 Time Sampled.....: 10:30  
 Sample Matrix.....: Soil

Laboratory Sample ID: 344439-7  
 Date Received.....: 10/26/2007  
 Time Received.....: 10:22

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH DT	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	92.8			0.01	1	%	187988	10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	7.21			0.01	1	%	187988	10/26/07 1700	enc
SW-846 9056	Chloride, Soil*	21.3		5.46	4.3	1	mg/Kg	188474	11/03/07 1932	sur
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.16	U	2.16	10.8	1.0000	ug/Kg	188386	10/31/07 1330	mht
	Toluene, Soil*	5.94	U	5.94	10.8	1.0000	ug/Kg	188386	10/31/07 1330	mht
	Ethylbenzene, Soil*	5.15	U	5.15	10.8	1.0000	ug/Kg	188386	10/31/07 1330	mht
	Xylenes (total), Soil*	15.82	U	15.82	32.3	1.0000	ug/Kg	188386	10/31/07 1330	mht
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	397	J	172.7	1077.73	1.0000	ug/Kg	188367	10/31/07 0857	mht
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete			1			188312	10/31/07 1100	mra
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	78		1.07	8.9	1	mg/Kg	188490	11/02/07 0039	jps

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date:11/06/2007	
CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK OWN 9		ATTN: Arthur Greeley							
Customer Sample ID: SB-3 19-20!		Laboratory Sample ID: 344439-8									
Date Sampled.....: 10/23/2007		Date Received.....:	10/26/2007								
Time Sampled.....: 10:50		Time Received.....:	10:22								
Sample Matrix.....: Soil											
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	NDL	RL	DILUTION	UNITS	BATCH DT	DATE/TIME	TECH	
SM-2540 G Mod.	% Solids, Soil	93.1			0.01	1	%	187988	10/26/07 1700	enc	
SM-2540 G Mod.	Moisture, Soil	6.90			0.01	1	%	187988	10/26/07 1700	enc	
SW-846 9056	Chloride, Soil*	17.1		5.45	4.3	1	mg/kg	188474	11/03/07 1948	sur	
SW-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.15 5.92 10.1 20.1	U U J J	2.15 5.92 5.13 15.77	10.7 10.7 10.7 32.2	1.0000 1.0000 1.0000 1.0000	ug/kg ug/kg ug/kg ug/kg	188386 188386 188386 188386	10/31/07 1451 10/31/07 1451 10/31/07 1451 10/31/07 1451	mht mht mht mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	306	J	172.1	1074.09	1.0000	ug/kg	188367	10/31/07 0921	mht	
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*					1		188312	10/31/07 1100	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPh - as Diesel, Soil*	1.06	U	1.06	8.9	1	mg/kg	188490	11/02/07 0122	jps	

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/06/2007		
CUSTOMER: Conestoga Rovers and Associates		PROJECT: MARK ONE II 9		ATTN: Arthur Greeley								
Customer Sample ID: SB-3 29-30 Date Sampled.....: 10/23/2007 Time Sampled.....: 11:20 Sample Matrix.....: Soil						Laboratory Sample ID: 344439-9 Date Received.....: 10/26/2007 Time Received.....: 10:22	sur					
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH	
SM-2540 G Mod.	% Solids, Soil	77.7			0.01	1	%	187988	10/26/07 1700	enc		
SM-2540 G Mod.	Moisture, Soil	22.3			0.01	1	%	187988	10/26/07 1700	enc		
SH-846 9056	Chloride, Soil*	30.3		6.53	5.2	1	mg/Kg	188474	11/03/07 2003			
SH-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.58 7.17 6.16 18.90	U U U U	2.58 7.10 6.16 18.90	12.9 12.9 12.9 38.6	1.0000 1.0000 1.0000 1.0000	ug/Kg ug/Kg ug/Kg ug/Kg	188112 188112 188112 188112	10/29/07 1507 10/29/07 1507 10/29/07 1507 10/29/07 1507	rht rht rht rht		
SH-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	314	J	206.3	1287.78	1.0000	ug/Kg	188367	10/31/07 0956	rht		
SH-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete			1			188312	10/31/07 1100	mra		
SH-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	16		1.27	11	1	mg/Kg	188490	11/01/07 1556	jps		

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/06/2007	
CUSTOMER: Goestenklovers and Associates		PROJECT: MARK OPEN 9		ATTN: Arthur Greeley							
Customer Sample ID: SB-4 9-10 Date Sampled.....: 10/23/2007 Time Sampled.....: 12:20 Sample Matrix.....: Soil						Laboratory Sample ID: 344439-10 Date Received.....: 10/26/2007 Time Received.....: 10:22					
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	TEST FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	89.9			0.01	1	%	187988	10/26/07 1700	enc	
SM-2540 G Mod.	Moisture, Soil	10.1		0.01	1		%	187988	10/26/07 1700	enc	
SW-846 9056	Chloride, Soil*	26.7		5.64	4.5	1	mg/kg	188474	11/03/07 2019	sur	
SW-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.23 6.13 5.32 16.34	U U U U	2.23 6.13 5.32 16.34	11.1 11.1 11.1 33.4	1.0000 1.0000 1.0000 1.0000	ug/kg ug/kg ug/kg ug/kg	188386 188386 188386 188386	10/31/07 1511 10/31/07 1511 10/31/07 1511 10/31/07 1511	mht mht mht mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	372	J	178.3	1112.91	1.0000	ug/kg	188367	10/31/07 1020	mht	
SW-846 3550B	Extraction (Ultrasonic), DRO Ultrasonic Extraction, Soil*				1			188312	10/31/07 1100	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	13		1.10	9.2	1	mg/kg	188490	11/01/07 1639	jps	

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/06/2007					
CUSTOMER: Conestoga Rovers and Associates		PROJECT: MARK ONE! 9		ATTN: Arthur Greeley											
Customer Sample ID:	SB-4 19-20*	Laboratory Sample ID:	344439-11	TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	R	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Date Sampled.....:	10/23/2007	Date Received.....:	10/26/2007	SM-2540 G Mod.	% Solids, Soil	78.3			0.01	1	%	187988	10/26/07 1700	enc	
Time Sampled.....:	12:40	Time Received.....:	10:22	SM-2540 G Mod.	Moisture, Soil	21.7			0.01	1	%	187988	10/26/07 1700	enc	
Sample Matrix.....:	Soil	SW-846 9056	Chloride, Soil*	25.2			6.47	5.1	1		mg/Kg	188474	11/03/07 2035	sur	
SW-846 8021B GC Volatile Organics															
Benzene, Soil*	2.55	U				2.55		12.8	1.0000		ug/Kg	188386	10/31/07 1531	nhnt	
Toluene, Soil*	7.04	U				7.04		12.8	1.0000		ug/Kg	188386	10/31/07 1531	nhnt	
Ethylbenzene, Soil*	6.10	U				6.10		12.8	1.0000		ug/Kg	188386	10/31/07 1531	nhnt	
Xylenes (total), Soil*	18.74	U				18.74		38.3	1.0000		ug/Kg	188386	10/31/07 1531	nhnt	
SH-846 8015B Total Volatile Petroleum Hydrocarbons	334	J				204.6		1276.88	1.0000		ug/Kg	188367	10/31/07 1045	nhnt	
TVPH as GRO, Soil*															
SH-846 3550B Extraction (Ultrasonic) DRO															
Ultrasonic Extraction, Soil*															
SH-846 8015B Total Extractable Petroleum Hydrocarbons															
TEPH - as Diesel, Soil*															

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date:11/06/2007
CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK OWEN 9		ATTN: Arthur Greeley						
Customer Sample ID: SB-4 30-31*		Laboratory Sample ID: 344439-12		Date Received.....:	10/26/2007					enc
Date Sampled.....:	10/23/2007	Date Received.....:		Time Received.....:	10:22					enc
Time Sampled.....:	13:00	Time Received.....:		Sample Matrix.....:	Soil					sur
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT
SM-2540 G Mod.	% Solids, Soil	83.7				0.01	1	%	187988	10/26/07 1700
SM-2540 G Mod.	Moisture, Soil	16.3			0.01	1	%	187988	10/26/07 1700	
SW-846 9056	Chloride, Soil*	29.8			6.06	4.8	1	mg/Kg	188474	11/03/07 2050
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.39	U	U	2.39	12.0	1.0000	ug/Kg	188386	10/31/07 1551
	Toluene, Soil*	6.59	U	J	6.59	12.0	1.0000	ug/Kg	188386	10/31/07 1551
	Ethylbenzene, Soil*	8.28	J	J	5.71	12.0	1.0000	ug/Kg	188386	10/31/07 1551
	Xylenes (total), Soil*	17.55	J	J	17.55	35.9	1.0000	ug/Kg	188386	10/31/07 1551
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	354	J	J	191.5	1195.27	1.0000	ug/Kg	188367	10/31/07 1109
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1			188312	10/31/07 1100
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.18	U		1.18	9.9	1	mg/Kg	188490	11/01/07 1806

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS							Date:11/06/2007				
CUSTOMER:		PROJECT:		ATTN:			ARTHUR GREELEY				
Customer Sample ID: SB-5/MJ-2 9-10 <sup>1</sup>		Laboratory Sample ID: 344439-13					enc				
Date Sampled.....: 10/23/2007		Date Received.....: 10/26/2007					enc				
Time Sampled.....: 15:00		Time Received.....: 10:22					sur				
Sample Matrix.....: Soil											
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RE	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	87.4			0.01	1	%	187988		10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	12.6			0.01	1	%	187988		10/26/07 1700	enc
SW-846 9056	Chloride, Soil*	12.0		5.80	4.6	1	mg/Kg	188474		11/03/07 2106	sur
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.29	U	2.29	11.4	1.0000	ug/Kg	188386	10/31/07 1611	mht	
	Toluene, Soil*	6.31	U	6.31	11.4	1.0000	ug/Kg	188386	10/31/07 1611	mht	
	Ethylbenzene, Soil*	5.47	U	5.47	11.4	1.0000	ug/Kg	188386	10/31/07 1611	mht	
	Xylenes (total), Soil*	16.80	U	16.80	34.3	1.0000	ug/Kg	188386	10/31/07 1611	mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	368	J	183.3	1144.47	1.0000	ug/Kg	188367	10/31/07 1133	mht	
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1		188312	10/31/07 1100	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.13	U	1.13	9.5	1	mg/Kg	188490	11/01/07 1849	ips	

\* In Description = Dry wt.

LABORATORY TEST RESULTS										Date:11/06/2007					
CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK OHENN		ANALYST: Arthur Greeley											
Customer Sample ID: SB-5/MW-2 19-201						Laboratory Sample ID: 344439-14									
Date Sampled.....: 10/23/2007						Date Received.....: 10/26/2007									
Time Sampled.....: 15:20						Time Received.....: 10:22									
Sample Matrix.....: Soil															
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH				
SM-2540 G Mod.	% Solids, Soil	80.0				0.01	1	%	187988	10/26/07 1700	enc				
SM-2540 G Mod.	Moisture, Soil	20.0				0.01	1	%	187988	10/26/07 1700	enc				
SW-846 9056	Chloride, Soil*	20.9		6.34		5.0	1	mg/kg	188474	11/03/07 2256	sur				
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.50	U	6.89	2.50	12.5	1.0000	ug/kg	188386	10/31/07 1631	mht				
	Toluene, Soil*	6.89	U	5.98	6.89	12.5	1.0000	ug/kg	188386	10/31/07 1631	mht				
	Ethylbenzene, Soil*	5.98	U	18.36	5.98	12.5	1.0000	ug/kg	188386	10/31/07 1631	mht				
	Xylenes (total), Soil*	18.36	U		18.36	37.5	1.0000	ug/kg	188386	10/31/07 1631	mht				
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	331	J	200.4	1250.72	1.0000	ug/kg	188367	10/31/07 1158	mht					
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1			188312	10/31/07 1100	mra				
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPEH - as Diesel, Soil*	1.24	U	1.24	10	1	mg/kg	188490	11/01/07 1933	jps					

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/06/2007		
CUSTOMER:		PROJECT:		ATTN:								
Customer Sample ID: SB-5/MH-2 33-34*					Laboratory Sample ID: 344439-15					enc		
Date Sampled.....: 10/23/2007					Date Received.....: 10/26/2007					enc		
Time Sampled.....: 15:50					Time Received.....: 10:22					sur		
Sample Matrix.....: Soil												
TEST /METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAG	NDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH	
SM-2540 G Mod.	% Solids, Soil	92.4				0.01	1	%	187988	10/26/07 1700	enc	
SM-2540 G Mod.	Moisture, Soil	7.62				0.01	1	%	187988	10/26/07 1700	enc	
SW-846 9056	Chloride, Soil*	35.0		5.49	4.3	1	mg/Kg	188474	11/03/07 2311			
SW-846 8021B	GC Volatile Organics Benzene, Soil* Toluene, Soil* Ethylbenzene, Soil* Xylenes (total), Soil*	2.16 5.96 5.17 15.89	U U U U	2.16 5.96 5.17 15.89	10.8 10.8 10.8 32.5	1.0000 1.0000 1.0000 1.0000	ug/Kg ug/Kg ug/Kg ug/Kg	188386 188386 188386 188386	10/31/07 1651 10/31/07 1651 10/31/07 1651 10/31/07 1651	mht mht mht mht		
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil(*)	330	J	173.4	1082.45	1.0000	ug/Kg	188367	10/31/07 1222	mht		
SH-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete			1			188312	10/31/07 1100	mra		
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	320		21.4	180	20	mg/Kg	188490	11/02/07 1013	jps		

\* In Description = Dry wgt.

Job Number: 344439

## L A B O R A T O R Y   T E S T   R E S U L T S

Date: 11/06/2007

CUSTOMER: Cones, Goga, Rovers, and Associates

PROJECT: MARK ONEK 9

ATTN: Arthur Greeley

Customer Sample ID: SB-6/MW-3 9-10  
 Date Sampled.....: 10/24/2007  
 Time Sampled.....: 08:40  
 Sample Matrix.....: Soil

Laboratory Sample ID: 344439-16  
 Date Received.....: 10/26/2007  
 Time Received.....: 10:22

TEST METHOD	PARAMETER TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-2540 G Mod.	% Solids, Soil	90.0			0.01	1	%	187988		10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	9.97			0.01	1	%	187988		10/26/07 1700	enc
SW-846 9056	Chloride, Soil*	20.5		5.63	4.4	1	mg/Kg	188474		11/03/07 2327	sur
SW-846 8021B	GC Volatile Organics										
	Benzene, Soil*	2.22	U	2.22	11.1	1.0000	ug/Kg	188386		10/31/07 1711	mht
	Toluene, Soil*	6.12	U	6.12	11.1	1.0000	ug/Kg	188386		10/31/07 1711	mht
	Ethylbenzene, Soil*	5.31	U	5.31	11.1	1.0000	ug/Kg	188386		10/31/07 1711	mht
	Xylenes (total), Soil*	16.31	U	16.31	33.3	1.0000	ug/Kg	188386		10/31/07 1711	mht
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	241	J	177.9	1110.74	1.0000	ug/Kg	188367		10/31/07 1246	mht
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1		188312		10/31/07 1100	mra
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.10	U	1.10	9.2	1	mg/Kg	188490		11/02/07 0930	jps

\* In Description = Dry Wgt.

## LABORATORY TEST RESULTS

Job Number: 344439

Date: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK O'Brien 9

Customer Sample ID: SB-6/MW-3 19-20  
 Date Sampled.....: 10/26/2007  
 Time Sampled.....: 09:00  
 Sample Matrix.....: Soil

Laboratory Sample ID: 344439-17  
 Date Received .....: 10/26/2007  
 Time Received .....: 10:22

ATTN: Arthur Greeley

TEST / METHOD	PARAMETER / TEST DESCRIPTION	SAMPLE / RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE / TIME	TECH
SM-2540 G Mod.	% Solids, Soil	95.9		0.01	1		%	187988	10/26/07 1700	enc	
SM-2540 G Mod.	Moisture, Soil	4.09		0.01	1		%	187988	10/26/07 1700	enc	
SW-846 9056	Chloride, Soil*	14.1		5.29	4.2	1	mg/kg	188474	11/03/07 2342	sur	
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.09	U	2.09	10.4	1.0000	ug/kg	188386	10/31/07 1731	mht	
	Toluene, Soil*	5.74	U	5.74	10.4	1.0000	ug/kg	188386	10/31/07 1731	mht	
	Ethylbenzene, Soil*	4.98	U	4.98	10.4	1.0000	ug/kg	188386	10/31/07 1731	mht	
	Xylenes (total), Soil*	15.31	U	15.31	31.3	1.0000	ug/kg	188386	10/31/07 1731	mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TPH as GRO, Soil*	315	J	167.0	1042.62	1.0000	ug/kg	188367	10/31/07 1410	mht	
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1		188312	10/31/07 1100	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	1.03	U	1.03	8.6	1	mg/kg	188490	11/01/07 2143	ps	

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/06/2007
CUSTOMER: Corexiga-Rovers and Associates		PROJECT: MARK OWEN 9		ATTN: Arthur Greeley						
Customer Sample ID: SB-6/MW-3 31-32*		Laboratory Sample ID: 344439-18		Date Received.....:	10/26/2007					
Date Sampled.....:	10/24/2007			Time Received.....:	10:22					
Time Sampled.....:	09:40			Sample Matrix.....:	Soil					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
SM-2540 G Mod.	% Solids, Soil	79.1		0.01	1		%	187988	10/26/07 1700	enc
SM-2540 G Mod.	Moisture, Soil	20.9		0.01	1		%	187988	10/26/07 1700	enc
SW-846 9056	Chloride, Soil*	43.1		6.41	5.1		mg/Kg	188474	11/03/07 2358	sur
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.53	U	2.53	12.6	1.0000	ug/Kg	188386	10/31/07 1751	mht
	Toluene, Soil*	6.97	U	6.97	12.6	1.0000	ug/Kg	188386	10/31/07 1751	mht
	Ethylbenzene, Soil*	6.04	U	6.04	12.6	1.0000	ug/Kg	188386	10/31/07 1751	mht
	Xylenes (total), Soil*	18.56	U	18.56	37.9	1.0000	ug/Kg	188386	10/31/07 1751	mht
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	330	J	202.6	1264.41	1.0000	ug/Kg	188367	10/31/07 1434	mht
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete			1			188312	10/31/07 1100	mrta
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPEH - as Diesel, Soil*	250		6.25	52	5	mg/Kg	188490	11/02/07 1013	jps

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/06/2007					
CUSTOMER: Conestoga Rovers and Associates		PROJECT: MARK OPEN 9		ATM: Arthur Greeley											
Customer Sample ID: SB-7/MW-4 9-101						Laboratory Sample ID: 344439-19									
Date Sampled.....: 10/24/2007						Date Received.....: 10/26/2007									
Time Sampled.....: 12:40						Time Received.....: 10:22									
Sample Matrix.....: Soil															
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RE	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH				
SW-2540 G Mod.	% Solids, Soil	77.5				0.01	1	%	187988	10/26/07 1700	enc				
SW-2540 G Mod.	Moisture, Soil	22.5				0.01	1	%	187988	10/26/07 1700	enc				
SW-846 9056	Chloride, Soil*	24.2		6.54	5.2	1	mg/Kg	188474		11/04/07 0014	sur				
SW-846 8021B	GC Volatile Organics														
	Benzene, Soil*	2.58	U	2.58	12.9	1.0000	ug/Kg	188386	10/31/07 1851	mht					
	Toluene, Soil*	7.11	U	7.11	12.9	1.0000	ug/Kg	188386	10/31/07 1851	mht					
	Ethylbenzene, Soil*	6.17	U	6.17	12.9	1.0000	ug/Kg	188386	10/31/07 1851	mht					
	Xylenes (total), Soil*	18.95	U	18.95	38.7	1.0000	ug/Kg	188386	10/31/07 1851	mht					
SW-846 8015B	Total Volatile Petroleum Hydrocarbons														
	TVPH as GRO, Soil*	352	J	206.8	1290.67	1.0000	ug/Kg	188367	10/31/07 1458	mht					
SW-846 3550B	Extraction (Ultrasonic) DRO														
	Ultrasonic Extraction, Soil*	Complete				1		188312	10/31/07 1100	mira					
SW-846 8015B	Total Extractable Petroleum Hydrocarbons														
	TEPH - as Diesel, Soil*	26		1.28	11	1	mg/Kg	188490	11/02/07 0039	jps					

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date:11/06/2007					
CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK CHEN 9		ATTN: Arthur Greeley											
Customer Sample ID: SB-7/MW-4 19-201															
Date Sampled.....: 10/24/2007															
Time Sampled.....: 13:00															
Sample Matrix.....: Soil															
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH				
SM-2540 G Mod.	% Solids, Soil	96.9				0.01	1	%	187988	10/26/07 1700	enc				
SM-2540 G Mod.	Moisture, Soil	3.14			0.01	1	%	187988	10/26/07 1700	enc					
SW-846 9056	Chloride, Soil*	1080		52.3	41	10	mg/Kg	188474	11/04/07 0116	sur					
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.06	U	2.06	10.3	1.0000	ug/Kg	188386	10/31/07 1911	mht					
	Toluene, Soil*	5.69	U	5.69	10.3	1.0000	ug/Kg	188386	10/31/07 1911	mht					
	Ethylbenzene, Soil*	4.93	U	4.93	10.3	1.0000	ug/Kg	188386	10/31/07 1911	mht					
	Xylenes (total), Soil*	15.16	U	15.16	31.0	1.0000	ug/Kg	188386	10/31/07 1911	mht					
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	358	J	165.4	1032.39	1.0000	ug/Kg	188367	10/31/07 1523	mht					
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete			1			188312	10/31/07 1100	mra					
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPEH - as Diesel, Soil*	15		1.02	8.6	1	mg/Kg	188490	11/02/07 0122	jps					

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date:11/06/2007		
CUSTOMER:		PROJECT:		MARK OWNER		ATTN:		ARTHUR Greetley				
Customer Sample ID: SB-7/MW-4 29-30'		Laboratory Sample ID: 364439-21										
Date Sampled.....: 10/24/2007		Date Received.....: 10/26/2007										
Time Sampled.....: 13:30		Time Received.....: 10:22										
Sample Matrix.....: Soil		Sample Matrix.....: Soil										
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-2560 G Mod.	% Solids, Soil	75.9				0.01	1	%	187988	10/26/07 1700	enc	
SM-2560 G Mod.	Moisture, Soil	24.1				0.01	1	%	187988	10/26/07 1700	enc	
SH-846 9056	Chloride, Soil*	217			6.68	5.3	1	mg/Kg	188474	11/04/07 0203	sur	
SW-846 8021B	GC Volatile Organics Benzene, Soil*	2.63	U		2.63	13.2	1.0000	ug/Kg	188386	10/31/07 1931	mht	
	Toluene, Soil*	7.26	U		7.26	13.2	1.0000	ug/Kg	188386	10/31/07 1931	mht	
	Ethy lbenzene, Soil*	6.29	U		6.29	13.2	1.0000	ug/Kg	188386	10/31/07 1931	mht	
	Xylenes (total), Soil*	19.33	U		19.33	39.5	1.0000	ug/Kg	188386	10/31/07 1931	mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Soil*	389	J		210.9	1316.76	1.0000	ug/Kg	188367	10/31/07 1724	mht	
SW-846 3550B	Extraction (Ultrasonic) DRO Ultrasonic Extraction, Soil*	Complete				1			188368	11/01/07 1400	mra	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Soil*	410			13.0	110	10	mg/Kg	188494	11/05/07 1048	jps	

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS						
					Date: 11/06/2007	
CUSTOMER: Conestoga Rovers and Associates		PROJECT: MARK DINEP			ATTN: Arthur Greetley	
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	RL	DILUTION
SW-846 8021B	GC Volatile Organics Benzene, Water Toluene, Water Ethylbenzene, Water Xylenes (total), Water	0.06 0.10 0.12 0.12 0.21	U U U U	0.06 0.10 0.12 0.12 0.21	1.00 1.00 1.00 1.00 3.00	1.0000 1.0000 1.0000 1.0000 1.0000
						ug/L ug/L ug/L ug/L ug/L
						188097 188097 188097 188097 188097
						10/29/07 1958 10/29/07 1958 10/29/07 1958 10/29/07 1958 10/29/07 1958
						mht mht mht mht mht

\* In Description = Dry Wgt.

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Test Method.....: SM-2540 G Mod.

Method Description.: Moisture (Total + Fixed Solids, Ash)

Analyst...: enc

Parameter.....: % Solids

Test Code.: %SOLID

Units.....: %

Batch(s)....: 187988

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
DU	344439-21		75.9795			75.9441	0.0	10.0		10/26/2007	1700
DU	344365-44		67.7435			68.1043	0.5	10.0		10/26/2007	1700
DU	344439-17		95.9500			95.9123	0.0	10.0		10/26/2007	1700
DU	344365-46		57.7839			57.9618	0.3	10.0		10/26/2007	1700
MB	187988--21		0.0000							10/26/2007	1700
MB	187988--21		0.0000							10/26/2007	1700
MB	187988--21		0.0000							10/26/2007	1700
DU	344439-16		89.9830			90.0298	0.1	10.0		10/26/2007	1700
DU	344439-20		96.9955			96.8624	0.1	10.0		10/26/2007	1700

Test Method.....: SW-846 9056

Method Description.: Ion Chromatography Analysis

Analyst...: sur

Parameter.....: Chloride

Test Code.: CHL

Units.....: mg/L

Batch(s)....: 188474

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
ICV		WCS46864A	19.316		20.00		96.6	90.0-110.		11/03/2007	1553
ICB			0							11/03/2007	1608
MB	188474--21		0							11/03/2007	1624
LCS	188474--21	WCS46864A	19.239		20.00		96.2	90.0-110.		11/03/2007	1640
DU	344439-1		5.6092			6.0035	6.8	20		11/03/2007	1711
MS	344439-1	WCS46675	15.336		10.000000	6.0035	93.3	90-110		11/03/2007	1727
CCV		WCS46864A	19.172		20.00		95.9	90.0-110.		11/03/2007	1845
CCB			0							11/03/2007	1901
DU	344439-13		0.9339			1.0476	0.1137	0.5000		11/03/2007	2122
MS	344439-13	WCS46675	9.7611		10.000000	1.0476	87.1	90-110	A	11/03/2007	2137
CCV		WCS46864A	19.150		20.00		95.8	90.0-110.		11/03/2007	2153
CCB			0							11/03/2007	2209
MB	188474--21		0							11/03/2007	2224
LCS	188474--21	WCS46864A	19.046		20.00		95.2	90.0-110.		11/03/2007	2240
CCV		WCS46864A	19.077		20.00		95.4	90.0-110.		11/04/2007	0045
CCB			0							11/04/2007	0101
DU	344439-20		10.494			10.428	0.6	20		11/04/2007	0132
MS	344439-20	WCS46675	20.388		10.000000	10.428	99.6	90-110		11/04/2007	0148
CCV		WCS46864A	19.078		20.00		95.4	90.0-110.		11/04/2007	0219
CCB			0							11/04/2007	0235

Test Method.....: SM-2540 G Mod.

Method Description.: Moisture (Total + Fixed Solids, Ash)

Analyst...: enc

Parameter.....: Moisture

Test Code.: MOIST

Units.....: %

Batch(s)....: 187988

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
DU	344365-46		42.2161			42.0382	0.4	10.0		10/26/2007	1700
DU	344439-16		10.0170			9.9702	0.5	10.0		10/26/2007	1700
DU	344439-17		4.0500			4.0877	0.9	10.0		10/26/2007	1700
DU	344439-21		24.0205			24.0559	0.1	10.0		10/26/2007	1700
DU	344365-44		32.2565			31.8957	1.1	10.0		10/26/2007	1700
DU	344439-20		3.0045			3.1376	4.3	10.0		10/26/2007	1700

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Method Description.: GC Volatile Organics

Units.....: ug/L

Batch(s)....: 188097 188112 188386

Analyst...: mht

LCS	Laboratory Control Sample	BXS101907A	188097-1			10/29/2007	1045
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	48.6534		50.000000		97.3		76-123	
Benzene, Water	51.4373		50.000000		102.9		72-134	
Toluene, Water	54.3904		50.000000		108.8		76-131	
Ethylbenzene, Water	52.5176		50.000000		105.0		75-131	
m,p-Xylene, Water	106.391		100.000000		106.4		75-130	
o-Xylene, Water	51.0309		50.000000		102.1		74-129	
Xylenes (total), Water	157.4219		150.000000		104.9		70-130	
Total BTEX, Water	315.7672		300.000000		105.3		70-130	
Tert-Butyl Methyl Ether Column B, Water	48.8719		50.000000		97.7		76-123	
Benzene Column B, Water	50.0898		50.000000		100.2		72-134	
Toluene Column B, Water	51.0552		50.000000		102.1		76-131	
Ethylbenzene Column B, Water	50.7071		50.000000		101.4		75-131	
m,p-Xylene Column B, Water	104.206		100.000000		104.2		75-130	
o-Xylene Column B, Water	49.1839		50.000000		98.4		74-129	

MB	Method Blank			188097-1			10/29/2007	1124
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	ND							
Benzene, Water	ND							
Toluene, Water	ND							
Ethylbenzene, Water	ND							
m,p-Xylene, Water	ND							
o-Xylene, Water	ND							
Xylenes (total), Water	0.0000							
Total BTEX, Water	0.0000							
Tert-Butyl Methyl Ether Column B, Water	ND							
Benzene Column B, Water	ND							
Toluene Column B, Water	ND							
Ethylbenzene Column B, Water	ND							
m,p-Xylene Column B, Water	ND							
o-Xylene Column B, Water	ND							

MS	Matrix Spike	BXS101907B	344492-1				10/29/2007	1231
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	52.8204		50.000000	ND	106		70-130	
Benzene, Water	55.9194		50.000000	0.64459	111		70-130	
Toluene, Water	57.5880		50.000000	2.46906	110		70-130	
Ethylbenzene, Water	55.7023		50.000000	ND	111		70-130	
m,p-Xylene, Water	113.528		100.000000	0.42046	113		70-130	
o-Xylene, Water	57.4200		50.000000	0.76044	113		70-130	
Xylenes (total), Water	170.9480		150.000000	1.9831	113		70-130	
Total BTEX, Water	340.1577		300.000000	5.1988	112		70-130	
Tert-Butyl Methyl Ether Column B, Water	50.8559		50.000000	ND	102		70-130	
Benzene Column B, Water	53.1905		50.000000	0.71766	105		70-130	

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BXS101907B	344492-1		10/29/2007	1231
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Toluene Column B, Water	51.7688		50.000000	2.49798	99		70-130	
Ethylbenzene Column B, Water	52.8820		50.000000	ND	106		70-130	
m,p-Xylene Column B, Water	107.917		100.000000	0.99922	107		70-130	
-Xylene Column B, Water	54.6324		50.000000	0.98394	107		70-130	

MSD	Matrix Spike Duplicate	BXS101907B	344492-1		10/29/2007	1251
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	55.4102	52.8204	50.000000	ND	111	4.8	70-130	
Benzene, Water	54.3944	55.9194	50.000000	0.64459	107	2.8	70-130	20.0
Toluene, Water	56.2401	57.5880	50.000000	2.46906	108	2.4	70-130	20.0
Ethylbenzene, Water	54.2061	55.7023	50.000000	ND	108	2.7	70-130	20.0
m,p-Xylene, Water	108.228	113.528	100.000000	0.42046	108	4.8	70-130	20.0
-Xylene, Water	52.5607	57.4200	50.000000	0.76044	104	8.8	70-130	20.0
Xylenes (total), Water	160.7887	170.9480	150.000000	1.9831	106	6.1	70-130	20.0
Total BTEX, Water	325.6293	340.1577	300.000000	5.1988	107	4.4	70-130	20.0
Tert-Butyl Methyl Ether Column B, Water	54.9269	50.8559	50.000000	ND	110	7.7	70-130	
Benzene Column B, Water	52.4746	53.1905	50.000000	0.71766	104	1.4	70-130	20.0
Toluene Column B, Water	52.0895	51.7688	50.000000	2.49798	99	0.6	70-130	20.0
Ethylbenzene Column B, Water	52.2840	52.8820	50.000000	ND	105	1.1	70-130	20.0
m,p-Xylene Column B, Water	105.979	107.917	100.000000	0.99922	105	1.8	70-130	20.0
-Xylene Column B, Water	51.7037	54.6324	50.000000	0.98394	101	5.5	70-130	20.0

LCS	Laboratory Control Sample	BXS102307F	188112-1		10/29/2007	0826
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Soil	49.5104		50.000000		99.0		61-125	
Benzene, Soil	49.1829		50.000000		98.4		69-133	
Toluene, Soil	50.0314		50.000000		100.1		70-134	
Ethylbenzene, Soil	52.5412		50.000000		105.1		71-139	
m,p-Xylene, Soil	106.287		100.000000		106.3		72-136	
-Xylene, Soil	52.7997		50.000000		105.6		70-131	
Xylenes (total), Soil	159.0867		150.000000		106.1		70-130	
Total BTEX, Soil	310.8642		300.000000		103.6		70-130	
Tert-Butyl Methyl Ether Column B, Soil	54.9971		50.000000		110.0		61-125	
Benzene Column B, Soil	47.7985		50.000000		95.6		69-133	

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	BXS102307F	188112-1		10/29/2007	0826

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Toluene Column B, Soil	50.0534		50.000000		100.1		70-134	
Ethylbenzene Column B, Soil	50.6927		50.000000		101.4		71-139	
m,p-Xylene Column B, Soil	101.439		100.000000		101.4		72-136	
o-Xylene Column B, Soil	51.5296		50.000000		103.1		70-131	

MB	Method Blank			188112-1			10/29/2007	0906

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Soil	ND							
Benzene, Soil	ND							
Toluene, Soil	ND							
Ethylbenzene, Soil	ND							
m,p-Xylene, Soil	ND							
o-Xylene, Soil	ND							
Xylenes (total), Soil	0.0000							
Total BTEX, Soil	0.0000							
Tert-Butyl Methyl Ether Column B, Soil	ND							
Benzene Column B, Soil	ND							
Toluene Column B, Soil	ND							
Ethylbenzene Column B, Soil	ND							
m,p-Xylene Column B, Soil	ND							
o-Xylene Column B, Soil	ND							

MS	Matrix Spike			BXS102307E	344439-1			10/29/2007	1303

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Soil	42.4947		50.000000	ND	85.0		50.0-150.0	
Benzene, Soil	36.0116		50.000000	ND	72.0		50.0-150.0	
Toluene, Soil	36.4178		50.000000	ND	72.8		50.0-150.0	
Ethylbenzene, Soil	37.5521		50.000000	ND	75.1		50.0-150.0	
m,p-Xylene, Soil	76.4844		100.000000	ND	76.5		50.0-150.0	
o-Xylene, Soil	38.0057		50.000000	ND	76.0		50.0-150.0	
Xylenes (total), Soil	114.4901		150.000000	0.0000	76.3		50.0-150.0	
Total BTEX, Soil	224.5118		300.000000	0.0000	74.8		50.0-150.0	
Tert-Butyl Methyl Ether Column B, Soil	45.4343		50.000000	ND	90.9		50.0-150.0	
Benzene Column B, Soil	34.7517		50.000000	ND	69.5		50.0-150.0	
Toluene Column B, Soil	36.4580		50.000000	ND	72.9		50.0-150.0	
Ethylbenzene Column B, Soil	36.2956		50.000000	ND	72.6		50.0-150.0	
m,p-Xylene Column B, Soil	73.5388		100.000000	ND	73.5		50.0-150.0	
o-Xylene Column B, Soil	37.3609		50.000000	ND	74.7		50.0-150.0	

MSD	Matrix Spike Duplicate			BXS102307E	344439-1			10/29/2007	1211

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Soil	44.3349	42.4947	50.000000	ND	88.7		50-150	
Benzene, Soil	40.8253	36.0116	50.000000	ND	81.7	4.2	20	50-150

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN-9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MSD	Matrix Spike Duplicate	BXS102307E	344439-1		10/29/2007	1211
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Toluene, Soil	41.9989	36.4178	50.000000	ND	84.0		50-150	
Ethylbenzene, Soil	43.6653	37.5521	50.000000	ND	87.3		50-150	
m,p-Xylene, Soil	89.9154	76.4844	100.000000	ND	15.1		20	
o-Xylene, Soil	43.8688	38.0057	50.000000	ND	89.9		50-150	
Xylenes (total), Soil	133.7842	114.4901	150.000000	0.0000	16.1		20	
Total BTEX, Soil	260.2737	224.5118	300.000000	0.0000	87.7		50-150	
Tert-Butyl Methyl Ether Column B, Soil	48.0921	45.4343	50.000000	ND	86.8		50-150	
Benzene Column B, Soil	39.7821	34.7517	50.000000	ND	14.8		20	
Toluene Column B, Soil	41.7547	36.4580	50.000000	ND	79.6		50-150	
Ethylbenzene Column B, Soil	42.3284	36.2956	50.000000	ND	13.5		20	
m,p-Xylene Column B, Soil	85.3296	73.5388	100.000000	ND	84.7		50-150	
o-Xylene Column B, Soil	42.8810	37.3609	50.000000	ND	14.3		20	

LCS	Laboratory Control Sample	BXS102307F	188386-1		10/31/2007	0853
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Soil	46.3145		50.000000		92.6		69-133	
Toluene, Soil	45.4783		50.000000		91.0		70-134	
Ethylbenzene, Soil	46.5314		50.000000		93.1		71-139	
m,p-Xylene, Soil	94.5714		100.000000		94.6		72-136	
o-Xylene, Soil	47.3865		50.000000		94.8		70-131	
Xylenes (total), Soil	142.8557		150.000000		95.2		70-130	
Total BTEX, Soil	281.1799		300.000000		93.7		70-130	
Benzene Column B, Soil	44.4248		50.000000		88.8		69-133	
Toluene Column B, Soil	45.2866		50.000000		90.6		70-134	
Ethylbenzene Column B, Soil	46.4577		50.000000		92.9		71-139	
m,p-Xylene Column B, Soil	94.3736		100.000000		94.4		72-136	
o-Xylene Column B, Soil	48.2843		50.000000		96.6		70-131	

MB	Method Blank		188386-1		10/31/2007	1034
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Soil	ND							
Toluene, Soil	ND							
Ethylbenzene, Soil	ND							
m,p-Xylene, Soil	ND							
o-Xylene, Soil	ND							
Xylenes (total), Soil	0.0000							

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank		188386-1		10/31/2007	1034

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Total BTEX, Soil	0.0000							
Benzene Column B, Soil	ND							
Toluene Column B, Soil	ND							
Ethylbenzene Column B, Soil	ND							
m,p-Xylene Column B, Soil	ND							
o-Xylene Column B, Soil	ND							

MS	Matrix Spike	BXS102307E	344439-2			10/31/2007	1350

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Soil	52.3211		50.000000	ND	104.6		50.0-150.0	
Toluene, Soil	51.9865		50.000000	ND	104.0		50.0-150.0	
Ethylbenzene, Soil	54.1618		50.000000	ND	108.3		50.0-150.0	
m,p-Xylene, Soil	108.832		100.000000	0.42111	108.4		50.0-150.0	
o-Xylene, Soil	53.3549		50.000000	0.27825	106.2		50.0-150.0	
Xylenes (total), Soil	162.1869		150.000000	0.6994	107.7		50.0-150.0	
Total BTEX, Soil	320.6563		300.000000	0.6994	106.7		50.0-150.0	
Benzene Column B, Soil	49.6635		50.000000	ND	99.3		50.0-150.0	
Toluene Column B, Soil	51.1242		50.000000	ND	102.2		50.0-150.0	
Ethylbenzene Column B, Soil	51.7075		50.000000	ND	103.4		50.0-150.0	
m,p-Xylene Column B, Soil	103.019		100.000000	0.35501	102.7		50.0-150.0	
o-Xylene Column B, Soil	51.8174		50.000000	0.27314	103.1		50.0-150.0	

MSD	Matrix Spike Duplicate	BXS102307E	344439-2			10/31/2007	1410

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Soil	49.3836	52.3211	50.000000	ND	98.8		50-150	
					5.8		20	
Toluene, Soil	48.5620	51.9865	50.000000	ND	97.1		50-150	
					6.8		20	
Ethylbenzene, Soil	50.6357	54.1618	50.000000	ND	101.3		50-150	
					6.7		20	
m,p-Xylene, Soil	102.244	108.832	100.000000	0.42111	101.8		50-150	
					6.2		20	
o-Xylene, Soil	50.2547	53.3549	50.000000	0.27825	100.0		50-150	
					6.0		20	
Xylenes (total), Soil	152.4987	162.1869	150.000000	0.6994	101.2		50-150	
					6.2		20	
Total BTEX, Soil	302.1241	320.6563	300.000000	0.6994	100.5		50-150	
					6.0		20	
Benzene Column B, Soil	47.9377	49.6635	50.000000	ND	95.9		50-150	
					3.5		20	
Toluene Column B, Soil	49.6061	51.1242	50.000000	ND	99.2		50-150	
					3.0		20	
Ethylbenzene Column B, Soil	49.9770	51.7075	50.000000	ND	100.0		50-150	
					3.4		20	
m,p-Xylene Column B, Soil	99.7631	103.019	100.000000	0.35501	99.4		50-150	
					3.2		20	
o-Xylene Column B, Soil	50.2290	51.8174	50.000000	0.27314	99.9		50-150	
					3.1		20	

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8015B                          Units.....: ug/L                          Analyst...: mht  
 Method Description.: Total Volatile Petroleum Hydrocarbons                          Batch(s)...: 188367

LCS	Laboratory Control Sample	BXS101907F	188367-1		10/30/2007	0759
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Soil	282.996		250.000000		113.2		49-151	

LCS	Laboratory Control Sample	BXS101907F	188367-2		10/31/2007	1636
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Soil	231.952		250.000000		92.8		49-151	

MB	Method Blank		188367-1		10/30/2007	0823
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Soil	11.2905							

MB	Method Blank		188367-2		10/31/2007	1700
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Soil	ND							

MS	Matrix Spike	BX091307A	344439-1		10/30/2007	1134
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Soil	302.378		250.000000	13.0608	115.7		50.0-150.0	

MS	Matrix Spike	BX091307A	344439-21		10/31/2007	174B
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Soil	255.071		250.000000	14.7733	96.1		50.0-150.0	

MSD	Matrix Spike Duplicate	BX091307A	344439-1		10/30/2007	1456
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Soil	258.246	302.378	250.000000	13.0608	98.1		50-150	

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

**CUSTOMER:** Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ACTIN

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
MSD	Matrix Spike Duplicate	BX091307A	344439-21			10/31/2007 1813	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
TVPH as GRO, Soil	277.863	255.071	250.000000	14.7733	105.2 8.6	50-150 20	

Test Method.....: SW-846 8015B

Units.....: mg/L

Analyst...: jps

**Method Description:-** Total Extractable Petroleum Hydrocarbons **Batch(s)....:** 188490 188494

LCS	Laboratory Control Sample	GC101207	188312			11/01/2007 1639
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
TEPH - as Diesel, Soil	989.51		1000.000000		99.0	- 70-130
MB	Method Blank	GC091507	188312			11/01/2007 1556

TEPH - as Diesel, Soil	ND						
MS	Matrix Spike	GC100107	344439-4			11/01/2007	2016
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits F
TEPH - as Diesel, Soil	1118.91		1000.000000	ND	112		70-130

MSD	Matrix Spike Duplicate	GC100107	344439-4				11/01/2007	2059
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
TEPH - as Diesel, Soil		1066.95	1118.91	1000.000000	ND	107 4.8	70-130 30.0	

LCS	Laboratory Control Sample	GC101207	188368			11/02/2007 1500			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TEPH - as Diesel, Soil		1001.76		1000.000000		100.2		70-130	
MB	Method Blank	GC091507	188368			11/02/2007 1424			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TEPH - as Diesel, Soil		ND							

## QUALITY CONTROL RESULTS

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	GC100107	34443-1		11/02/2007	2309
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
TEPH - as Diesel, Soil	4910.29		1000.000000	2509.53	240	70-130
MSD	Matrix Spike Duplicate	GC100107	34443-1		11/02/2007	2353
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
TEPH - as Diesel, Soil	4268.64	4910.29	1000.000000	2509.53	176 14.0	70-130 30.0

## S U R R O G A T E   R E C O V E R I E S   R E P O R T

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Method.....: Total Extractable Petroleum Hydrocarbons  
Batch(s).....: 188490Method Code...: 8015D  
Test Matrix...: SoilPrep Batch....: 188312  
Equipment Code: EXTGC01

Lab ID	DT	Sample ID	Date	OTERPH
344439- 1		SB-1/MW-1 9-10'	11/02/2007	105
344439- 2		SB-1/MW-1 19-20'	11/01/2007	102
344439- 3		SB-1/MW-1 29-30	11/01/2007	103
344439- 4		SB-2 9-10'	11/01/2007	107
344439- 4 MS		SB-2 9-10'	11/01/2007	115
344439- 4 MSD		SB-2 9-10'	11/01/2007	103
344439- 5		SB-2 19-20'	11/01/2007	101
344439- 6		SB-2 29-30'	11/01/2007	102
344439- 7		SB-3 9-10'	11/02/2007	92
344439- 8		SB-3 19-20'	11/02/2007	104
344439- 9		SB-3 29-30'	11/01/2007	94
344439- 10		SB-4 9-10'	11/01/2007	100
344439- 11		SB-4 19-20'	11/01/2007	102
344439- 12		SB-4 30-31'	11/01/2007	98
344439- 13		SB-5/MW-2 9-10'	11/01/2007	96
344439- 14		SB-5/MW-2 19-20'	11/01/2007	101
344439- 15		SB-5/MW-2 33-34'	11/02/2007	102
344439- 16		SB-6/MW-3 9-10'	11/02/2007	108
344439- 17		SB-6/MW-3 19-20'	11/01/2007	96
344439- 18		SB-6/MW-3 31-32'	11/02/2007	94
344439- 19		SB-7/MW-4 9-10'	11/02/2007	110
344439- 20		SB-7/MW-4 19-20'	11/02/2007	95
188312--21 LCS			11/01/2007	106
188312--21 MB			11/01/2007	108

Test	Test Description	Limits
OTERPH	o-Terphenyl	60 - 140

Method.....: Total Extractable Petroleum Hydrocarbons  
Batch(s).....: 188494Method Code...: 8015D  
Test Matrix...: SoilPrep Batch....: 188368  
Equipment Code: EXTGC01

Lab ID	DT	Sample ID	Date	OTERPH
344439- 21		SB-7/MW-4 29-30'	11/05/2007	101
344643- 1 MS		RON-1-SED2	11/02/2007	92
344643- 1 MSD		RON-1-SED2	11/02/2007	93
188368--21 LCS			11/02/2007	111
188368--21 MB			11/02/2007	102

Test	Test Description	Limits
OTERPH	o-Terphenyl	60 - 140

## SURROGATE RECOVERIES REPORT

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: 483648

PROJECT: MARK CHEN-9

ATTN: Arthur Greeley

Method.....: Total Volatile Petroleum Hydrocarbons	Method Code...: 8015G	Prep Batch....:
Batch(s).....: 188367	Test Matrix...: Soil	Equipment Code: BTEX07

Lab ID	DT	Sample ID	Date	ATFT	BFB
188367-	1	LCS	10/30/2007	102.8	95.1
188367-	1	MB	10/30/2007	107.9	95.2
188367-	2	LCS	10/31/2007	93.4	94.4
188367-	2	MB	10/31/2007	106.2	97.1
344439-	1	SB-1/MW-1 9-10'	10/30/2007	100.6	91.1
344439-	1	MS	10/30/2007	92.0	83.5
344439-	1	MSD	10/30/2007	110.2	100.2
344439-	2	SB-1/MW-1 19-20'	10/30/2007	94.1	83.1
344439-	3	SB-1/MW-1 29-30'	10/30/2007	109.0	96.9
344439-	4	SB-2 9-10'	10/30/2007	90.2	82.7
344439-	5	SB-2 19-20'	10/30/2007	103.7	94.9
344439-	6	SB-2 29-30'	10/30/2007	79.3	80.5
344439-	7	SB-3 9-10'	10/31/2007	111.1	107.7
344439-	8	SB-3 19-20'	10/31/2007	104.7	94.2
344439-	9	SB-3 29-30'	10/31/2007	87.8	87.9
344439-	10	SB-4 9-10'	10/31/2007	90.1	83.9
344439-	11	SB-4 19-20'	10/31/2007	94.6	88.0
344439-	12	SB-4 30-31'	10/31/2007	94.3	87.6
344439-	13	SB-5/MW-2 9-10'	10/31/2007	96.9	85.5
344439-	14	SB-5/MW-2 19-20'	10/31/2007	66.9	66.7
344439-	15	SB-5/MW-2 33-34'	10/31/2007	71.2	75.5
344439-	16	SB-6/MW-3 9-10'	10/31/2007	64.1	64.7
344439-	17	SB-6/MW-3 19-20'	10/31/2007	91.7	84.2
344439-	18	SB-6/MW-3 31-32'	10/31/2007	79.5	82.8
344439-	19	SB-7/MW-4 9-10'	10/31/2007	86.2	81.9
344439-	20	SB-7/MW-4 19-20'	10/31/2007	89.9	83.5
344439-	21	SB-7/MW-4 29-30'	10/31/2007	66.0	61.2
344439-	21 MS	SB-7/MW-4 29-30'	10/31/2007	106.2	95.3
344439-	21 MSD	SB-7/MW-4 29-30'	10/31/2007	107.3	94.4

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	50 - 150
BFB	BFB (Surrogate)	50 - 150

## SURROGATE RECOVERIES REPORT

Job Number.: 344439

Report Date.: 11/06/2007

CUSTOMER: 483648

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Method.....: GC Volatile Organics  
Batch(s).....: 188097Method Code...: 8021  
Test Matrix...: WaterPrep Batch....:  
Equipment Code: BTEX06

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB
188097- 1	LCS		10/29/2007	93.4	88.6	100.2	93.7
188097- 1	MB		10/29/2007	92.5	87.4	98.6	95.5
344439- 22		TRIP BLANK	10/29/2007	92.3	86.6	99.2	96.3
344492- 1	MS	LINE FILL	10/29/2007	91.7	84.1	99.4	92.4
344492- 1	MSD	LINE FILL	10/29/2007	93.6	91.0	100.5	93.2

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	70 - 135
ATFTB	a,a,a-Trifluorotoluene Column B	70 - 135
BFB	BFB (Surrogate)	64 - 136
BFBB	BFB (Surrogate) Column B	64 - 136

Method.....: GC Volatile Organics	Method Code...: 8021	Prep Batch....:
Batch(s).....: 188112 188386	Test Matrix...: Soil	Equipment Code: BTEX02

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB
188112- 1	LCS		10/29/2007	93.6	97.8	110.3	104.1
188112- 1	MB		10/29/2007	113.7	118.5	120.3	112.1
188386- 1	LCS		10/31/2007	88.1	92.4	105.9	105.2
188386- 1	MB		10/31/2007	107.8	112.2	114.5	106.6
344439- 1		SB-1/MW-1 9-10'	10/29/2007	90.9	93.0	97.9	103.4
344439- 1	MS	SB-1/MW-1 9-10'	10/29/2007	66.2	70.2	79.0	76.1
344439- 1	MSD	SB-1/MW-1 9-10'	10/29/2007	78.6	83.2	90.1	86.1
344439- 2		SB-1/MW-1 19-20'	10/31/2007	92.0	92.6	102.4	93.3
344439- 2	MS	SB-1/MW-1 19-20'	10/31/2007	111.2	114.4	121.1	113.6
344439- 2	MSD	SB-1/MW-1 19-20'	10/31/2007	106.2	110.6	115.5	110.1
344439- 3		SB-1/MW-1 29-30	10/31/2007	86.6	87.9	109.9	100.0
344439- 4		SB-2 9-10'	10/31/2007	86.1	87.2	99.0	89.4
344439- 5		SB-2 19-20'	10/31/2007	86.8	87.8	96.2	87.2
344439- 6		SB-2 29-30'	10/31/2007	71.3	72.2	94.9	86.4
344439- 7		SB-3 9-10'	10/31/2007	85.2	85.9	106.7	96.9
344439- 8		SB-3 19-20'	10/31/2007	87.1	89.6	96.5	88.5
344439- 9		SB-3 29-30'	10/29/2007	53.3	55.1	59.5	53.6
344439- 10		SB-4 9-10'	10/31/2007	92.6	94.3	102.2	94.6
344439- 11		SB-4 19-20'	10/31/2007	93.6	95.0	104.5	94.9
344439- 12		SB-4 30-31'	10/31/2007	95.8	97.1	106.4	96.9
344439- 13		SB-5/MW-2 9-10'	10/31/2007	100.3	101.6	108.2	98.1
344439- 14		SB-5/MW-2 19-20'	10/31/2007	88.4	89.9	97.6	88.7
344439- 15		SB-5/MW-2 33-34'	10/31/2007	87.2	88.7	103.6	94.6
344439- 16		SB-6/MW-3 9-10'	10/31/2007	89.1	90.1	99.4	90.9
344439- 17		SB-6/MW-3 19-20'	10/31/2007	88.5	89.3	98.7	90.3
344439- 18		SB-6/MW-3 31-32'	10/31/2007	80.5	81.3	101.2	91.2
344439- 19		SB-7/MW-4 9-10'	10/31/2007	85.0	86.1	96.7	88.6
344439- 20		SB-7/MW-4 19-20'	10/31/2007	85.7	87.3	97.3	88.8
344439- 21		SB-7/MW-4 29-30'	10/31/2007	81.4	82.2	90.6	82.2

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	50 - 150
ATFTB	a,a,a-Trifluorotoluene Column B	50 - 150
BFB	BFB (Surrogate)	50 - 150
BFBB	BFB (Surrogate) Column B	50 - 150

## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 11/06/2007

#### REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field,(e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.
- 4) For all USACE projects, the QC limits are based on "mean +/- 2 sigma", which are the warning limits.

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming diphenylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, multiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only correction required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reviewed.

#### Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.
- J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

#### Explanation of General QC Outliers:

- A - Matrix interference present in sample.
- a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b - Target analyte was found in the method blank.
- M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.
- G - Marginal outlier within 1% of acceptance criteria.
- r - RPD value is outside method acceptance criteria.
- C - Poor RPD values observed due to the non-homogenous nature of the sample.

## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 11/06/2007

- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits and was not detected in any associated samples in the analytical batch.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- q - See the subcontract final report for qualifier explanation.
- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

#### Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

#### Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- N - Spiked sample recovery is not within control limits.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.
- \* - Duplicate analysis is not within control limits.

#### Abbreviations:

- Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV - Continuing Calibration Verification
- CRA - Low level standard check - GFAA, Mercury
- CRI - Low level standard check - ICP
- Dil Fac - Dilution Factor - Secondary dilution analysis
- DLFac - Detection Limit Factor
- DU - Duplicate
- EB - Extraction Blank (TCLP, SPLP, etc.)
- ICAL - Initial Calibration

Q U A L I T Y   A S S U R A N C E   M E T H O D S

R E F E R E N C E S   A N D   N O T E S

Report Date: 11/06/2007

ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MQL	- Method Quantitation Limit (TRRP)
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected
PB	- Preparation Blank
PREPF	- Preparation Factor
RL	- Reporting Limit
RPD	- Relative Percent Difference
RRF	- Relative Response Factor
RT	- Retention Time
SQL	- Sample Quantitation Limit (TRRP)
TIC	- Tentatively Identified Compound

Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-94-111 Methods for the Determination of Metals in Environmental Samples, Supplement I, May 1994.
- (3) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1993; Update IIB, January 1995; Update III, December 1996, Update IVA January 1998, Update IVB November 2000.
- (4) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
- (5) HACH Water Analysis Handbook 3rd Edition (1997).
- (6) Federal Register, July 1, 1990 (40 CFR Part 136 Appendix A).
- (7) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (9) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

## LABORATORY CHRONICLE

Job Number: 344439

Date: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Lab ID: 344439-1 Client ID: SB-1/MW-1 9-10'

METHOD DESCRIPTION  
 SW-846 3550B Extraction (Ultrasonic) DRO  
 SW-846 8021B GC Volatile Organics  
 SW-846 9056 Ion Chromatography Analysis  
 SM-2540 G Mod. Moisture (Total + Fixed Solids, Ash)  
 SW-846 8015B Total Extractable Petroleum Hydrocarbons  
 SW-846 8015B Total Volatile Petroleum Hydrocarbons

Date Recvd: 10/26/2007 Sample Date: 10/22/2007  
 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
 1 188312 10/31/2007 1100  
 1 188112 10/29/2007 1051 1.0000  
 1 188474 11/03/2007 1655  
 1 187988 10/26/2007 1700  
 1 188490 188312 11/02/2007 0930 5  
 1 188367 10/30/2007 0848 1.0000

Lab ID: 344439-2 Client ID: SB-1/MW-1 19-20'

METHOD DESCRIPTION  
 SW-846 3550B Extraction (Ultrasonic) DRO  
 SW-846 8021B GC Volatile Organics  
 SW-846 9056 Ion Chromatography Analysis  
 SM-2540 G Mod. Moisture (Total + Fixed Solids, Ash)  
 SW-846 8015B Total Extractable Petroleum Hydrocarbons  
 SW-846 8015B Total Volatile Petroleum Hydrocarbons

Date Recvd: 10/26/2007 Sample Date: 10/22/2007  
 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
 1 188312 10/31/2007 1100  
 1 188386 10/31/2007 1137 1.0000  
 1 188474 11/03/2007 1742  
 1 187988 10/26/2007 1700  
 1 188490 188312 11/01/2007 1806  
 1 188367 10/30/2007 0932 1.0000

Lab ID: 344439-3 Client ID: SB-1/MW-1 29-30

METHOD DESCRIPTION  
 SW-846 3550B Extraction (Ultrasonic) DRO  
 SW-846 8021B GC Volatile Organics  
 SW-846 9056 Ion Chromatography Analysis  
 SM-2540 G Mod. Moisture (Total + Fixed Solids, Ash)  
 SW-846 8015B Total Extractable Petroleum Hydrocarbons  
 SW-846 8015B Total Volatile Petroleum Hydrocarbons

Date Recvd: 10/26/2007 Sample Date: 10/22/2007  
 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
 1 188312 10/31/2007 1100  
 1 188386 10/31/2007 1157 1.0000  
 1 188474 11/03/2007 1758  
 1 187988 10/26/2007 1700  
 1 188490 188312 11/01/2007 1849  
 1 188367 10/30/2007 0957 1.0000

Lab ID: 344439-4 Client ID: SB-2 9-10'

METHOD DESCRIPTION  
 SW-846 3550B Extraction (Ultrasonic) DRO  
 SW-846 8021B GC Volatile Organics  
 SW-846 9056 Ion Chromatography Analysis  
 SM-2540 G Mod. Moisture (Total + Fixed Solids, Ash)  
 SW-846 8015B Total Extractable Petroleum Hydrocarbons  
 SW-846 8015B Total Volatile Petroleum Hydrocarbons

Date Recvd: 10/26/2007 Sample Date: 10/23/2007  
 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
 1 188312 10/31/2007 1100  
 1 188386 10/31/2007 1217 1.0000  
 1 188474 11/03/2007 1814  
 1 187988 10/26/2007 1700  
 1 188490 188312 11/01/2007 1933  
 1 188367 10/30/2007 1021 1.0000

Lab ID: 344439-5 Client ID: SB-2 19-20'

METHOD DESCRIPTION  
 SW-846 3550B Extraction (Ultrasonic) DRO  
 SW-846 8021B GC Volatile Organics  
 SW-846 9056 Ion Chromatography Analysis  
 SM-2540 G Mod. Moisture (Total + Fixed Solids, Ash)  
 SW-846 8015B Total Extractable Petroleum Hydrocarbons  
 SW-846 8015B Total Volatile Petroleum Hydrocarbons

Date Recvd: 10/26/2007 Sample Date: 10/23/2007  
 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
 1 188312 10/31/2007 1100  
 1 188386 10/31/2007 1237 1.0000  
 1 188474 11/03/2007 1829  
 1 187988 10/26/2007 1700  
 1 188490 188312 11/01/2007 2143  
 1 188367 10/30/2007 1045 1.0000

Lab ID: 344439-6 Client ID: SB-2 29-30'

METHOD DESCRIPTION  
 SW-846 3550B Extraction (Ultrasonic) DRO  
 SW-846 8021B GC Volatile Organics  
 SW-846 9056 Ion Chromatography Analysis  
 SM-2540 G Mod. Moisture (Total + Fixed Solids, Ash)  
 SW-846 8015B Total Extractable Petroleum Hydrocarbons  
 SW-846 8015B Total Volatile Petroleum Hydrocarbons

Date Recvd: 10/26/2007 Sample Date: 10/23/2007  
 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
 1 188312 10/31/2007 1100  
 1 188386 10/31/2007 1310 1.0000  
 1 188474 11/03/2007 1916  
 1 187988 10/26/2007 1700  
 1 188490 188312 11/01/2007 2355  
 1 188367 10/30/2007 1109 1.0000

Lab ID: 344439-7 Client ID: SB-3 9-10'

METHOD DESCRIPTION  
 SW-846 3550B Extraction (Ultrasonic) DRO

Date Recvd: 10/26/2007 Sample Date: 10/23/2007  
 RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
 1 188312 10/31/2007 1100

## LABORATORY CHRONICLE

Job Number: 344439

Date: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Lab ID: 344439-7 Client ID: SB-3 9-10'

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	188386		10/31/2007 1330	1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474		11/03/2007 1932	
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988		10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312	11/02/2007 0039	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367		10/31/2007 0857	1.0000

Lab ID: 344439-8 Client ID: SB-3 19-20'

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312		10/31/2007 1100	
SW-846 8021B	GC Volatile Organics	1	188386		10/31/2007 1451	1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474		11/03/2007 1948	
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988		10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312	11/02/2007 0122	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367		10/31/2007 0921	1.0000

Lab ID: 344439-9 Client ID: SB-3 29-30'

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312		10/31/2007 1100	
SW-846 8021B	GC Volatile Organics	1	188112		10/29/2007 1507	1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474		11/03/2007 2003	
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988		10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312	11/01/2007 1556	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367		10/31/2007 0956	1.0000

Lab ID: 344439-10 Client ID: SB-4 9-10'

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312		10/31/2007 1100	
SW-846 8021B	GC Volatile Organics	1	188386		10/31/2007 1511	1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474		11/03/2007 2019	
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988		10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312	11/01/2007 1639	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367		10/31/2007 1020	1.0000

Lab ID: 344439-11 Client ID: SB-4 19-20'

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312		10/31/2007 1100	
SW-846 8021B	GC Volatile Organics	1	188386		10/31/2007 1531	1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474		11/03/2007 2035	
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988		10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312	11/01/2007 1723	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367		10/31/2007 1045	1.0000

Lab ID: 344439-12 Client ID: SB-4 30-31'

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312		10/31/2007 1100	
SW-846 8021B	GC Volatile Organics	1	188386		10/31/2007 1551	1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474		11/03/2007 2050	
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988		10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312	11/01/2007 1806	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367		10/31/2007 1109	1.0000

Lab ID: 344439-13 Client ID: SB-5/MW-2 9-10'

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312		10/31/2007 1100	
SW-846 8021B	GC Volatile Organics	1	188386		10/31/2007 1611	1.0000

## LABORATORY CHRONICLE

Job Number: 344439

Date: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Lab ID: 344439-13	Client ID: SB-5/MW-2 9-10'	Date Recvd: 10/26/2007	Sample Date: 10/23/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
SW-846 9056	Ion Chromatography Analysis	1	188474	11/03/2007 2106
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988	10/26/2007 1700
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312 11/01/2007 1849
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367	10/31/2007 1133 1.0000
Lab ID: 344439-14	Client ID: SB-5/MW-2 19-20'	Date Recvd: 10/26/2007	Sample Date: 10/23/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312	10/31/2007 1100
SW-846 8021B	GC Volatile Organics	1	188386	10/31/2007 1631 1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474	11/03/2007 2256
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988	10/26/2007 1700
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312 11/01/2007 1933
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367	10/31/2007 1158 1.0000
Lab ID: 344439-15	Client ID: SB-5/MW-2 33-34'	Date Recvd: 10/26/2007	Sample Date: 10/23/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312	10/31/2007 1100
SW-846 8021B	GC Volatile Organics	1	188386	10/31/2007 1651 1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474	11/03/2007 2311
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988	10/26/2007 1700
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312 11/02/2007 1013 20
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367	10/31/2007 1222 1.0000
Lab ID: 344439-16	Client ID: SB-6/MW-3 9-10'	Date Recvd: 10/26/2007	Sample Date: 10/24/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312	10/31/2007 1100
SW-846 8021B	GC Volatile Organics	1	188386	10/31/2007 1711 1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474	11/03/2007 2327
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988	10/26/2007 1700
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312 11/02/2007 0930
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367	10/31/2007 1246 1.0000
Lab ID: 344439-17	Client ID: SB-6/MW-3 19-20'	Date Recvd: 10/26/2007	Sample Date: 10/24/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312	10/31/2007 1100
SW-846 8021B	GC Volatile Organics	1	188386	10/31/2007 1731 1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474	11/03/2007 2342
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988	10/26/2007 1700
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312 11/01/2007 2143
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367	10/31/2007 1410 1.0000
Lab ID: 344439-18	Client ID: SB-6/MW-3 31-32'	Date Recvd: 10/26/2007	Sample Date: 10/24/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312	10/31/2007 1100
SW-846 8021B	GC Volatile Organics	1	188386	10/31/2007 1751 1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474	11/03/2007 2358
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1	187988	10/26/2007 1700
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188490	188312 11/02/2007 1013 5
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188367	10/31/2007 1434 1.0000
Lab ID: 344439-19	Client ID: SB-7/MW-4 9-10'	Date Recvd: 10/26/2007	Sample Date: 10/24/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)
SW-846 3550B	Extraction (Ultrasonic) DRO	1	188312	10/31/2007 1100
SW-846 8021B	GC Volatile Organics	1	188386	10/31/2007 1851 1.0000
SW-846 9056	Ion Chromatography Analysis	1	188474	11/04/2007 0014

## LABORATORY CHRONICLE

Job Number: 344439

Date: 11/06/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN '9

ATTN: Arthur Greetey

Lab ID: 344439-19 Client ID: SB-7/MW-4 9-10'

METHOD	DESCRIPTION	Date Recvd:	Sample Date:	
RUN#	BATCH#	PREP BT #(\$)	DATE/TIME ANALYZED	DILUTION
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1 187988	10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1 188490	11/02/2007 0039	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1 188367	10/31/2007 1458	1.0000

Lab ID: 344439-20 Client ID: SB-7/MW-4 19-20'

METHOD	DESCRIPTION	Date Recvd:	Sample Date:	
RUN#	BATCH#	PREP BT #(\$)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1 188312	10/31/2007 1100	
SW-846 8021B	GC Volatile Organics	1 188386	10/31/2007 1911	1.0000
SW-846 9056	Ion Chromatography Analysis	1 188474	11/04/2007 0116	10
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1 187988	10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1 188490	11/02/2007 0122	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1 188367	10/31/2007 1523	1.0000

Lab ID: 344439-21 Client ID: SB-7/MW-4 29-30'

METHOD	DESCRIPTION	Date Recvd:	Sample Date:	
RUN#	BATCH#	PREP BT #(\$)	DATE/TIME ANALYZED	DILUTION
SW-846 3550B	Extraction (Ultrasonic) DRO	1 188368	11/01/2007 1400	
SW-846 8021B	GC Volatile Organics	1 188386	10/31/2007 1931	1.0000
SW-846 9056	Ion Chromatography Analysis	1 188474	11/04/2007 0203	
SM-2540 G Mod.	Moisture (Total + Fixed Solids, Ash)	1 187988	10/26/2007 1700	
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1 188494	11/05/2007 1048	10
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1 188367	10/31/2007 1724	1.0000

Lab ID: 344439-22 Client ID: TRIP BLANK

METHOD	DESCRIPTION	Date Recvd:	Sample Date:	
RUN#	BATCH#	PREP BT #(\$)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1 188097	10/29/2007 1958	1.0000

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**CHAIN OF CUSTODY RECORD**

<b>CUSTOMER INFORMATION</b>		<b>PROJECT INFORMATION</b>			<b>REMARKS/PRECAUTIONS</b>	
COMPANY:	CRA Midland/Dallas	PROJECT NAME/NUMBER:	046121			
SEND REPORT TO:	T.Larson /A. Greeley	<b>BILLING INFORMATION</b>				
ADDRESS:	See below	BILL TO:	CRA Dallas			
		ADDRESS:	2270 Springlake Rd Ste. 800 Dallas, TX 75234			
PHONE:	432-686-0086	PHONE:				
FAX:	—	FAX:				
		PO NO:				
<b>NUMBER OF CONTAINERS</b>						
<b>ANALYSIS/METHOD</b>						
SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE MATRIX	CONTAINER	PRESERV.	
SB-1	MW-1 9-10'	10/22/01	1230	5	glass	
SB-1	MW-1 19-20'		1230	1		
SB-1	MW-1 29-30			1420		
SB-2	9-10'	10/23/01	840			
SB-2	19-20'		900			
SB-2	29-30'		920			
SB-3	9-10'			1030		
SB-3	19-20'			1050		
SB-3	29-30'			1120	V	
SAMPLER:	Carolyn	<b>SHIPMENT METHOD:</b>			AIRBILL NO.:	
REQUIRED TURNAROUND*	<input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS <input type="checkbox"/> ROUTINE <input type="checkbox"/> OTHER					
1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:		DATE	3. RELINQUISHED BY:	
SIGNATURE:		SIGNATURE:		SIGNATURE:		DATE
PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME	TIME
1. RECEIVED BY:	DATE	1. RECEIVED BY:		DATE	1. RECEIVED BY:	
SIGNATURE:		SIGNATURE:		SIGNATURE:		DATE
PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME	TIME

\*RUSH TURNAROUND MAY REQUIRE SURCHARGE

**STL Houston**  
6310 Rothway Drive  
Houston, TX 77040

STL8222H-600 (0803)

**STL**

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## CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION		PROJECT INFORMATION		NUMBER OF CONTAINERS ANALYSIS/METHOD 0015DRC 0656 CL- 0021 8015-GRC					
COMPANY:	PROJECT NAME/NUMBER:	BILLING INFORMATION							
SEND REPORT TO:		BILL TO:							
ADDRESS:		ADDRESS:							
PHONE:		PHONE:							
FAX:		FAX:	PO NO.:						
SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME		SAMPLE MATRIX	CONTAINER	PRESERV.		
SB-4	9-10'	10/23/01	1220		G	9les	ice		
SB-4	14-20'		1240				X		
SB-4	30-31'		1300						
SB-5/mw-2	9-10'		1500						
SB-5/mw-2	19-20'		1520						
SB-5/mw-2	33-34'		1550						
SB-6/mw-3	9-10'	10/24/01	840						
SB-6/mw-3	19-20'		900						
SB-6/mw-3	31-32'		940		✓	✓			
SAMPLER: <i>J. Brinkman</i>	SHIPMENT METHOD:						AIRBILL NO.:		
REQUIRED TURNAROUND*		<input type="checkbox"/> SAME DAY	<input type="checkbox"/> 24 HOURS	<input type="checkbox"/> 48 HOURS	<input type="checkbox"/> 72 HOURS	<input type="checkbox"/> 5 DAYS	<input type="checkbox"/> 10 DAYS	<input type="checkbox"/> ROUTINE	<input type="checkbox"/> OTHER
1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:		3. RELINQUISHED BY:		DATE	DATE		
SIGNATURE:		SIGNATURE:		SIGNATURE:					
PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:		PRINTED NAME/COMPANY:		TIME	TIME		
1. RECEIVED BY:	DATE	1. RECEIVED BY:		1. RECEIVED BY:		DATE	DATE		
SIGNATURE:		SIGNATURE:		SIGNATURE:					
PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:		PRINTED NAME/COMPANY:		TIME	TIME		

\*RUSH TURNAROUND MAY REQUIRE SURCHARGE

**STL Houston**  
6310 Rothway Drive  
Houston, TX 77040

STL 8522H-600 (0803)



Job Sample Receipt Checklist Report			V2
Job Number.: 344439	Location.: 57216	Check List Number.: 1	Description.:
Customer Job ID.....:		Job Check List Date.: 10/26/2007	Date of the Report..: 10/26/2007
Project Number.: 99007656	Project Description.: Mark Owen 9		Project Manager.....: sgk
Customer.....: Conestoga-Rovers and Associates		Contact.: Arthur Greeley	
Questions ?	(Y/N) Comments		
Chain of Custody Received?.....	Y		
...If "yes", completed properly?.....	Y		
Custody seal on shipping container?.....	N		
...If "yes", custody seal intact?.....	<i>10-26-07</i>		
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples chilled?.....	Y		
Temperature of cooler acceptable? (4 deg C +/- 2). Y	2.9		
...If "no", is sample an air matrix?(no temp req.)			
Thermometer ID.....	Y 463		
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Radioactivity at or below background levels?.....	Y		
Additional.....			
Comments.....			
Sample Custodian Signature/Date.....	Y MT		

STL

## ANALYTICAL REPORT

JOB NUMBER: 344828  
Project ID: MARK OWEN 9

Prepared For:

Conestoga-Rovers and Associates  
2270 Springlake Road  
Suite 800  
Dallas, TX 75234

Attention: Arthur Greeley

Date: 11/13/2007



Signature

11/13/07

Date

Name: Sachin G. Kudchadkar

TestAmerica Laboratories, Inc  
6310 Rothway Drive  
Houston, TX 77040

Title: Project Manager III

PHONE: 713-690-4444

E-Mail: sachin.kudchadkar@testamericainc.com

**STL**

11/13/2007

Arthur Greeley  
Conestoga-Rovers and Associates  
2270 Springlake Road  
Suite 800  
Dallas, TX 75234

Reference:

Project : MARK OWEN 9  
Project No. : 344828  
Date Received : 11/03/2007  
TestAmerica Job : 344828

Dear Arthur Greeley:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

1. MW1
2. MW2
3. MW3
4. MW4
5. DUP1
6. TRIP BLANK

All holding times were met for the tests performed on these samples.

Enclosed, please find the Quality Control Summary. All quality control results for the QC batch that are applicable to the sample(s) are acceptable except as noted in the QC batch reports.

The test results in this report meet all QC requirements for TestAmerica Houston's QC limits. Any exceptions to these QC requirements will be noted and included in a case narrative as a part of this report.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting TestAmerica to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

Sincerely,



Sachin G. Kudchadkar  
Project Manager

## SAMPLE INFORMATION

Date: 11/13/2007

Job Number.: 344828  
 Customer...: Conestoga-Rovers and Associates  
 Attn.....: Arthur Greeley

Project Number.....: 99007656  
 Customer Project ID....: MARK OWEN 9  
 Project Description....: Mark Owen 9

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
344828-1	MW1	Water	11/01/2007	12:20	11/03/2007	11:28
344828-2	MW2	Water	11/01/2007	13:00	11/03/2007	11:28
344828-3	MW3	Water	11/01/2007	13:18	11/03/2007	11:28
344828-4	MW4	Water	11/01/2007	13:50	11/03/2007	11:28
344828-5	DUP1	Water	11/01/2007	00:00	11/03/2007	11:28
344828-6	TRIP BLANK	Trip Blank	11/01/2007	00:00	11/03/2007	11:28

LABORATORY TEST RESULTS										Date: 11/13/2007					
CUSTOMER:		PROJECT: MARK ONE\9		ATTN: Arthur Greeley											
Customer Sample ID: MW1 Date Sampled.....: 11/01/2007 Time Sampled.....: 12:20 Sample Matrix.....: Water						Laboratory Sample ID: 344828-1 Date Received.....: 11/03/2007 Time Received.....: 11:28									
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME				
EPA 300.0	Ion Chromatography Analysis	321 84.4 1010			5.07 3.28 0.153	5.0 5.0 10	10 10 1	mg/L mg/L mg/L	188846 188846 188711	11/09/07 11/09/07 11/07/07	sur sur tws				
SW2540 C	Sulfate (SO4) Solids, Total Dissolved (TDS), Water														
EPA 310.1	Alkalinity, Total as CaCO3, Water	201			1.14	5.0	1	mg/L	188622	11/06/07	1600 enc				
SW-846 7470A	Mercury (Hg), Water	0.053	U		0.053	0.20	1	ug/L	188634	11/07/07	1351 dcl				
SW-846 3010A	Acid Digestion, Water			Complete			1		188939	11/12/07	1640 rim				
SW-846 8021B	GC Volatile Organics Benzene, Water	0.06	U		0.06	1.00	1.0000	ug/L	188673	11/07/07	0904 mht				
	Toluene, Water	0.10	U		0.10	1.00	1.0000	ug/L	188673	11/07/07	0904 mht				
	Ethylbenzene, Water	0.12	U		0.12	1.00	1.0000	ug/L	188673	11/07/07	0904 mht				
	Xylenes (total), Water	0.21	U		0.21	3.00	1.0000	ug/L	188673	11/07/07	0904 mht				
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Water	20.14	U	Complete	20.14	50.0	1.0000	ug/L	188571	11/05/07	0938 mht				
SW846 8015	Extraction (Sep Funnel) 8015 Diesel Separatory Funnel Liq/Liq Extraction, Water						1		188454	11/05/07	0900 mra				
SW-846 6010B	Metals Analysis (ICAP Trace)														
	Arsenic (As), Water	0.0144	B		0.00310	0.020	1	mg/L	188959	11/13/07	1137 twr				
	Barium (Ba), Water	0.0839			0.00160	0.020	1	mg/L	188959	11/13/07	1137 twr				
	Cadmium (Cd), Water	0.00073	U		0.00073	0.005	1	mg/L	188959	11/13/07	1137 twr				
	Chromium (Cr), Water	0.00155	U		0.00155	0.010	1	mg/L	188959	11/13/07	1137 twr				

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/13/2007					
CUSTOMER:		PROJECT:		ATTN:											
Customer Sample ID: MM1 Date Sampled.....: 11/01/2007 Time Sampled.....: 12:20 Sample Matrix....: Water						Laboratory Sample ID: 344828-1 Date Received.....: 11/03/2007 Time Received.....: 11:28									
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DR.	DATE/TIME	TECH				
SW-846 8015B	Lead (Pb), Water Selenium (Se), Water Silver (Ag), Water Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Water	0.00210 0.00752 0.00125  0.36	U B U  U	0.00210 0.00203 0.00125  0.36	0.010 0.040 0.010  1	mg/L mg/L mg/L  mg/L	188959 188959 188959  188669	11/13/07 11/13/07 11/13/07  11/05/07	1137 1137 1137  1819	jps					

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/13/2007					
CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK DREN 9		ATTN: Arthur Greetey											
Customer Sample ID: MW2 Date Sampled.....: 11/01/2007 Time Sampled.....: 13:00 Sample Matrix.....: Water						Laboratory Sample ID: 344828-2 Date Received.....: 11/03/2007 Time Received.....: 11:28									
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH				
EPA 300.0 SW2540 C	Ion Chromatography Analysis Chloride (SO4) Sulfate (SO4) Solids, Total Dissolved (TDS), Water	200 72.4 698		5.07 3.28 0.153	5.0 5.0 10	10	mg/L mg/L mg/L	188846 188846 188711	11/09/07 11/09/07 11/07/07	2212 2212 tws					
EPA 310.1	Alkalinity, Total as CaCO3, Water	187		1.14	5.0	1	mg/L	CaCO	188622	11/06/07	1600 enc				
SW-846 7470A SW-846 3010A	Mercury (Hg), Water Acid Digestion, Water	0.053	U	0.053	0.20	1	ug/L		188634	11/07/07	1358 dcl				
SW-846 8021B	GC Volatile Organics Benzene, Water Toluene, Water Ethylbenzene, Water Xylenes (total), Water	0.06 0.35 0.12 0.21	U J U U	0.06 0.10 0.12 0.21	1.00 1.00 1.00 3.00	1	ug/L		188939	11/12/07	1640 rim				
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Water	20.14	U	20.14	50.0	1.0000	ug/L		188673	11/07/07	0924 mht				
SW-846 8015	Extraction (Sep Funnel) 8015 Diesel Separatory Funnel Liq/Liq Extraction, Water		Complete				ug/L		188673	11/07/07	0924 mht				
SW-846 6010B	Metals Analysis (ICAP Trace) Arsenic (As), Water Barium (Ba), Water Cadmium (Cd), Water Chromium (Cr), Water	0.0123 0.0979 0.00073 0.00155	B U U U	0.00310 0.00160 0.00073 0.00155	0.020 0.020 0.005 0.010	1 1 1 1	mg/L mg/L mg/L mg/L		188959 188959 188959 188959	11/13/07 11/13/07 11/13/07 11/13/07	1141 twr 1141 twr 1141 twr 1141 twr				

\* In Description = Dry Wgt.

L A B O R A T O R Y   T E S T   R E S U L T S		Date:11/13/2007									
CUSTOMER:	Conestoga-Rovers and Associates	ATTN: Arthur Greeley									
Customer Sample ID:	MW2	PROJECT: MARK OPEN P									
Date Sampled.....:	11/01/2007	Laboratory Sample ID: 344828-2									
Time Sampled.....:	13:00	Date Received.....: 11/03/2007									
Sample Matrix....:	Water	Time Received.....: 11:28									
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DIUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SH-846 8015B	Lead (Pb), Water Selenium (Se), Water Silver (Ag), Water Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Water	0.00210 0.00403 0.00125	U B U	0.00210 0.00203 0.00125	0.010 0.040 0.010	1	mg/L mg/L mg/L	188959 188959 188959	11/13/07 11/13/07 11/13/07	1141 1141 1141	TWR TWR TWR
		1.8		0.36	1		mg/L	188669	11/05/07	1609	JPS

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date:11/13/2007		
CUSTOMER: Corestoga Rogers and Associates		PROJECT: MARK OWN 9		ATTN: Arthur Greeley								
Customer Sample ID: MW3 Date Sampled.....: 11/01/2007 Time Sampled.....: 13:38 Sample Matrix.....: Water						Laboratory Sample ID: 344-828-3 Date Received.....: 11/03/2007 Time Received.....: 11:28						
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE	RESULT	% FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
EPA 300.0	Ion Chromatography Analysis		77.0		5.07	5.0	10	mg/L	188846	11/09/07 2244	sur	
SM2540 C	Chloride (SO4) Sulfate (SO4) Solids, Total Dissolved (TDS), Water	476	40.6 0.328 0.153	0.50 10	0.50	1		mg/L	188846	11/09/07 2228	sur	
EPA 310.1	Alkalinity, Total as CaCO3, Water	212	1.14		5.0	1		mg/L CaCO	188622	11/06/07 1600	enc	
SW-846 7470A	Mercury (Hg), Water	U	0.053	0.20	0.20	1		ug/L	188634	11/07/07 1400	dcl	
SW-846 3010A	Acid Digestion, Water	Complete				1			188939	11/12/07 1640	rim	
SW-846 8021B	GC Volatile Organics		0.06	U	0.06	1.00	1.0000	ug/L	188673	11/07/07 0944	mht	
	Benzene, Water		0.50	J	0.10	1.00	1.0000	ug/L	188673	11/07/07 0944	mht	
	Toluene, Water		0.12	J	0.12	1.00	1.0000	ug/L	188673	11/07/07 0944	mht	
	Ethylbenzene, Water		0.21	J	0.21	3.00	1.0000	ug/L	188673	11/07/07 0944	mht	
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Water	U	20.14	U	50.0	1.0000		ug/L	188571	11/05/07 1031	mht	
SW846 8015	Extraction (Sep Funnel) 8015 Diesel Separatory Funnel Liq/Liq Extraction, Water	Complete			1				188454	11/05/07 0900	mra	
SW-846 6010B	Metals Analysis (ICAP Trace)		0.0185	B	0.00310	0.020	1	mg/L	188959	11/13/07 1145	twr	
	Arsenic (As), Water		0.102	U	0.00160	0.020	1	mg/L	188959	11/13/07 1145	twr	
	Barium (Ba), Water		0.00073	U	0.00073	0.005	1	mg/L	188959	11/13/07 1145	twr	
	Cadmium (Cd), Water		0.00155	U	0.00155	0.010	1	mg/L	188959	11/13/07 1145	twr	

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/13/2007					
CUSTOMER:		PROJECT:		ATTN:											
Customer Sample ID: MW3 Date Sampled.....: 11/01/2007 Time Sampled.....: 13:18 Sample Matrix.....: Water						Laboratory Sample ID: 344828-3 Date Received.....: 11/03/2007 Time Received.....: 11:28									
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	NDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH				
SW-846 8015B	Lead (Pb), Water Selenium (Se), Water Silver (Ag), Water Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Water	0.00210 0.00282 0.00125 0.36	U B U U	0.00210 0.00203 0.00125 0.36	0.010 0.040 0.010 1	mg/L mg/L mg/L mg/L	188959 188959 188959 188669	11/13/07 1145 11/13/07 1145 11/13/07 1145 11/05/07 1652	tur tur tur Ips						

\* In Description = Dry wgt.

LABORATORY TEST RESULTS										Date:11/13/2007					
CUSTOMER: Conestoga Rovers and Associates		PROJECT: MARK-GHEN 9		ATTN: Arthur Greeley											
Customer Sample ID: MW4 Date Sampled.....: 11/01/2007 Time Sampled.....: 13:50 Sample Matrix.....: Water						Laboratory Sample ID: 3444828-4 Date Received.....: 11/03/2007 Time Received.....: 11:28									
TEST/METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE	RESULT	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME				
EPA 300.0	Ion Chromatography Analysis		6360 180 1200		507 3.28 0.153	500 5.0 40	1000 10 1	mg/L mg/L mg/L	188846 188846 188711	11/10/07 11/09/07 11/07/07	0002 2259 sur tws				
SM2540 C	Sulfate (SO4) Solids, Total Dissolved (TDS), Water														
EPA 310.1	Alkalinity, Total as CaCO3, Water	193			1.14	5.0	1	mg/L	188622	11/06/07	1600 enc				
SW-846 7470A	Mercury (Hg), Water		0.053	U	0.053	0.20	1	ug/L	188634	11/07/07	1405 dcl				
SW-846 3010A	Acid Digestion, Water			Complete			1		188939	11/12/07	1640 rim				
SW-846 8021B	GC Volatile Organics Benzene, Water		0.06 0.52 0.12 0.21	U J U U	0.06 0.10 0.12 0.21	1.00 1.00 1.00 3.00	1.0000 1.0000 1.0000 1.0000	ug/L ug/L ug/L ug/L	188673 188673 188673 188673	11/07/07 11/07/07 11/07/07 11/07/07	1004 mht 1004 mht 1004 mht 1004 mht				
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Water		20.14	U	20.14	50.0	1.0000	ug/L	188571	11/05/07	1057 mht				
SW846 8015	Extraction (Sep Funnel) 8015 Diesel Separatory Funnel Liq/Liq Extraction, Water			Complete			1		188454	11/05/07	0900 mra				
SW-846 6010B	Metals Analysis (ICAP Trace)		0.0203 0.117 0.00073 0.00205	U B	0.00310 0.00160 0.00073 0.00155	0.020 0.020 0.005 0.010	1 1 1 1	mg/L mg/L mg/L mg/L	188959 188959 188959 188959	11/13/07 11/13/07 11/13/07 11/13/07	1148 twr 1148 twr 1148 twr 1148 twr				

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS								Date: 11/13/2007
CUSTOMER: Conestoga Powers and Associates		PROJECT: MARK OWN 9		ATTN: Arthur Greeley				
Customer Sample ID: MW4		Laboratory Sample ID: 344828-4						
Date Sampled.....: 11/01/2007		Date Received.....: 11/03/2007						
Time Sampled.....: 13:50		Time Received.....: 11:28						
Sample Matrix.....: Water								
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAGS	MD	RL	DILUTION	UNITS	BATCH
SH-846 8015B	Lead (Pb), Water Selenium (Se), Water Silver (Ag), Water Total Extractable Petroleum Hydrocarbons TEPH - as Diesel, Water	0.00210 0.00425 0.00125  0.36	U B U  U	0.00210 0.00203 0.00125  0.36	0.010 0.040 0.010  1	1 1 1  1	mg/L mg/L mg/L  mg/L	188959 188959 188959  188669
								11/13/07 1148 11/13/07 1148 11/13/07 1148  11/05/07 1736 JPS

\* In Description = dry wgt.

LABORATORY TEST RESULTS										Date:11/13/2007
CUSTOMER:		PROJECT:		ATTN:		TEST				
Customer Sample ID: DUP1 Date Sampled.....: 11/01/2007 Time Sampled.....: 00:00 Sample Matrix.....: Water		MARK CHEN 9		Arthur Greeley						
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME TECH
EPA 300.0	Ion Chromatography Analysis	6170 189 12800		507 3.28 0.153	500 5.0 100	1000 10 1	mg/L mg/L mg/L	188846 188846 188711	11/10/07 0049 11/10/07 0017 11/07/07 1830	sur sur tws
SM2540 C	Sulfate (SO4) Solids, Total Dissolved (TDS), Water									
EPA 310.1	Alkalinity, Total as CaCO3, Water	193		1.14	5.0	1	mg/L	188622	11/06/07 1600	enc
SW-846 7470A	Mercury (Hg), Water	0.053	U	0.053	0.20	1	ug/L	188634	11/07/07 1407	dcl
SW-846 3010A	Acid Digestion, Water		Complete			1		188939	11/12/07 1640	rim
SW-846 8021B	GC Volatile Organics	0.06 0.54 0.12 0.21	U J U U	0.06 0.10 0.12 0.21	1.00 1.00 1.00 3.00	1.0000 1.0000 1.0000 1.0000	ug/L ug/L ug/L ug/L	188673 188673 188673 188673	11/07/07 1024 11/07/07 1024 11/07/07 1024 11/07/07 1024	mht mht mht mht
SW-846 8015B	Total Volatile Petroleum Hydrocarbons TVPH as GRO, Water	20.14	U	20.14	50.0	1.0000	ug/L	188571	11/05/07 1124	mht
SW846 8015	Extraction (Sep Funnel) 8015 Diesel Separatory Funnel Liq/Liq Extraction, Water		Complete			1		188454	11/05/07 0900	mra
SW-846 6010B	Metals Analysis (ICAP Trace)	0.0176 0.00310 0.00160 0.00073 0.00155	B B B U U	0.0176 0.00310 0.00160 0.00073 0.00155	0.020 0.020 0.020 0.005 0.010	1 1 1 1 1	mg/L mg/L mg/L mg/L mg/L	188959 188959 188959 188959 188959	11/13/07 1152 11/13/07 1152 11/13/07 1152 11/13/07 1152 11/13/07 1152	twr twr twr twr twr

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS										Date: 11/13/2007	
CUSTOMER: Conestoga Rovers and Associates		PROJECT: MARK ONE# 9		ATTN: Arthur Greeley							
Customer Sample ID: DUP1 Date Sampled.....: 11/01/2007 Time Sampled.....: 00:00 Sample Matrix.....: Water	Laboratory Sample ID: 344828-5 Date Received.....: 11/03/2007 Time Received.....: 11:28										
SW-846 8015B	TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	NDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME
		Lead (Pb), Water	0.00210	U		0.0010	1	mg/L	188959		11/13/07 1152
		Selenium (Se), Water	0.00246	B		0.040	1	mg/L	188959		11/13/07 1152
		Silver (Ag), Water	0.00125	U		0.010	1	mg/L	188959		11/13/07 1152
		Total Extractable Petroleum Hydrocarbons									
		TEPH - as Diesel, Water	0.36	U		0.36	1	mg/L	188659		11/05/07 1819 Jps

\* In Description = Dry Wgt.

LABORATORY TEST RESULTS							Date:11/13/2007				
CUSTOMER:		PROJECT: MARK OPEN 9		ATTN: Arthur Greeley							
Customer Sample ID: TRIP BLANK		Laboratory Sample ID: 344828-6									
Date Sampled.....: 11/01/2007		Date Received.....: 11/03/2007									
Time Sampled.....: 00:00		Time Received.....: 11:28									
Sample Matrix.....: Trip Blank											
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	C FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 8021B	GC Volatile Organics Benzene, Water Toluene, Water Ethylbenzene, Water Xylenes (total), Water	0.06 0.10 0.12 0.21	U U U U	0.06 0.10 0.12 0.21	1.00 1.00 1.00 3.00	1.0000 1.0000 1.0000 1.0000	ug/L ug/L ug/L ug/L	188673 188673 188673 188673	11/07/07 11/07/07 11/07/07 11/07/07	1044 1044 1044 1044	mht mht mht mht

\* In Description = Dry Wgt.

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Test Method.....: EPA 310.1  
 Method Description.: Alkalinity  
 Parameter.....: Alkalinity, Total as CaCO<sub>3</sub>

Units.....: mg/L CaCO<sub>3</sub>  
 Batch(s)....: 188622

Analyst...: enc  
 Test Code.: ALK

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MS	344828-5	WC3916	426.54		250.000000	193.19	93.3	75-125		11/06/2007	1600
DU	344828-5		195.10			193.19	1.0	20		11/06/2007	1600
LCS	188622--21	WC3900A	956.37		1000.0		95.6	90.0-110.		11/06/2007	1600
DU	344709-1		256.31			254.40	0.7	20		11/06/2007	1600
MB	188622--21		1.91							11/06/2007	1600
MS	344709-1	WC3916	489.66		250.000000	254.40	94.1	75-125		11/06/2007	1600

Test Method.....: EPA 310.1  
 Method Description.: Alkalinity  
 Parameter.....: Bicarbonate (HCO<sub>3</sub>)

Units.....: mg/L CaCO<sub>3</sub>  
 Batch(s)....: 188622

Analyst...: enc  
 Test Code.: HCO3

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MB	188622--21		1.91							11/06/2007	1600

Test Method.....: EPA 310.1  
 Method Description.: Alkalinity  
 Parameter.....: Carbonate (CO<sub>3</sub>)

Units.....: mg/L CaCO<sub>3</sub>  
 Batch(s)....: 188622

Analyst...: enc  
 Test Code.: CO3

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MB	188622--21		0							11/06/2007	1600

Test Method.....: SM2540 C  
 Method Description.: Solids, Total Dissolved (TDS)  
 Parameter.....: Solids, Total Dissolved (TDS)

Units.....: mg/L  
 Batch(s)....: 188711

Analyst...: tws  
 Test Code.: TDS

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MB	188711--21		-1.00							11/07/2007	1830
DU	344828-1		998.00			1009.00	1.1	10.0		11/07/2007	1830
LCS	188711--21	WCS46891	1783.00		1800		99.1	90.0-110.		11/07/2007	1830

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK CHEN 9

ATTN: Arthur Greeley

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Method Description.: GC Volatile Organics

Units.....: ug/L

Batch(s)....: 188673

Analyst...: mht

LCS	Laboratory Control Sample	BXS110607B	188673-1			11/07/2007 0804
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	46.9595		50.000000		93.9		72-134	
Toluene, Water	46.8792		50.000000		93.8		76-131	
Ethylbenzene, Water	48.2431		50.000000		96.5		75-131	
m,p-Xylene, Water	97.7331		100.000000		97.7		75-130	
o-Xylene, Water	48.4981		50.000000		97.0		74-129	
Xylenes (total), Water	146.2312		150.000000		97.5		70-130	
Total BTEX, Water	288.3130		300.000000		96.1		70-130	
Benzene Column B, Water	44.9047		50.000000		89.8		72-134	
Toluene Column B, Water	46.6658		50.000000		93.3		76-131	
Ethylbenzene Column B, Water	47.4742		50.000000		94.9		75-131	
m,p-Xylene Column B, Water	95.9085		100.000000		95.9		75-130	
o-Xylene Column B, Water	48.2651		50.000000		96.5		74-129	

MB	Method Blank		188673-1			11/07/2007 0844
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND							
Toluene, Water	ND							
Ethylbenzene, Water	ND							
m,p-Xylene, Water	ND							
o-Xylene, Water	ND							
Xylenes (total), Water	0.0000							
Total BTEX, Water	0.0000							
Benzene Column B, Water	ND							
Toluene Column B, Water	ND							
Ethylbenzene Column B, Water	ND							
m,p-Xylene Column B, Water	ND							
o-Xylene Column B, Water	ND							

MS	Matrix Spike	BXS110607A	344828-2			11/07/2007 1105
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	49.1937		50.000000	ND	98		70-130	
Toluene, Water	50.6914		50.000000	0.32147	101		70-130	
Ethylbenzene, Water	53.5711		50.000000	ND	107		70-130	
m,p-Xylene, Water	107.658		100.000000	ND	108		70-130	
o-Xylene, Water	53.1615		50.000000	ND	106		70-130	
Xylenes (total), Water	161.3460		150.000000	0.0000	108		70-130	
Total BTEX, Water	315.2869		300.000000	0.3502	105		70-130	
Benzene Column B, Water	47.2556		50.000000	ND	95		70-130	
Toluene Column B, Water	51.1761		50.000000	0.35024	102		70-130	
Ethylbenzene Column B, Water	53.0992		50.000000	ND	106		70-130	
m,p-Xylene Column B, Water	106.220		100.000000	ND	106		70-130	
o-Xylene Column B, Water	53.6880		50.000000	ND	107		70-130	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	BXS110607A	344828-2		11/07/2007	1125
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Benzene, Water	47.2497	49.1937	50.000000	ND	94	70-130
Toluene, Water	48.7136	50.6914	50.000000	0.32147	97	20.0
Ethylbenzene, Water	51.2420	53.5711	50.000000	ND	102	70-130
m,p-Xylene, Water	103.354	107.658	100.000000	ND	103	4.4
p-Xylene, Water	51.1503	53.1615	50.000000	ND	102	70-130
Xylenes (total), Water	154.5043	161.3460	150.000000	0.0000	103	20.0
Total BTEX, Water	301.7096	315.2869	300.000000	0.3502	100	70-130
Benzene Column B, Water	45.1450	47.2556	50.000000	ND	90	4.4
Toluene Column B, Water	48.5462	51.1761	50.000000	0.35024	96	70-130
Ethylbenzene Column B, Water	50.5485	53.0992	50.000000	ND	101	5.3
m,p-Xylene Column B, Water	100.697	106.220	100.000000	ND	101	4.9
p-Xylene Column B, Water	51.1243	53.6880	50.000000	ND	102	70-130

Test Method.....: SW-846 8015B

Method Description.: Total Volatile Petroleum Hydrocarbons

Units.....: ug/L

Batch(s)....: 188571

Analyst...: mht

LCS	Laboratory Control Sample	BXS110507F	188571-1		11/05/2007	0845		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Water	230.510		250.000000		92.2		78-140	
MB	Method Blank		188571-1				11/05/2007	0911
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Water	ND							
MS	Matrix Spike	BX091307A	344828-1				11/05/2007	1150
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TVPH as GRO, Water	273.695		250.000000	ND	109		70-130	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MSD	Matrix Spike Duplicate	BX091307A	344828-1		11/05/2007	1219
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
TVPH as GRO, Water	278.768	273.695	250.000000	ND	112 1.8	70-130 30.0	

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Batch(s)....: 188846

Analyst...: sur

CCB	Continuing Calibration Blank					11/09/2007	1730
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	0						
Chloride	0						
Fluoride (F)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrite as N (NO2-N)	0						

CCB	Continuing Calibration Blank					11/09/2007	2038
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	0						
Chloride	0						
Fluoride (F)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrite as N (NO2-N)	0						

CCB	Continuing Calibration Blank					11/09/2007	2346
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	0						
Chloride	0						
Fluoride (F)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrite as N (NO2-N)	0						

CCB	Continuing Calibration Blank					11/10/2007	0254
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	0						
Chloride	0						
Fluoride (F)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrite as N (NO2-N)	0						

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				11/10/2007	0341
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCV	Continuing Calibration Verification	WCS46864A			11/09/2007	1715
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	18.628		20.00		93.1		90.0-110.0	
Chloride	19.136		20.00		95.7		90.0-110.0	
Fluoride (F)	10.289		10.00		102.9		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.4669		10.0		94.7		90.0-110.0	
Sulfate (SO4)	19.493		20.00		97.5		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.150		10.0		101.5		90.0-110.0	

CCV	Continuing Calibration Verification	WCS46864A			11/09/2007	2023
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	18.552		20.00		92.8		90.0-110.0	
Chloride	19.054		20.00		95.3		90.0-110.0	
Fluoride (F)	10.281		10.00		102.8		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.4660		10.0		94.7		90.0-110.0	
Sulfate (SO4)	19.487		20.00		97.4		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.124		10.0		101.2		90.0-110.0	

CCV	Continuing Calibration Verification	WCS46864A			11/09/2007	2331
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	18.561		20.00		92.8		90.0-110.0	
Chloride	19.106		20.00		95.5		90.0-110.0	
Fluoride (F)	10.184		10.00		101.8		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.4508		10.0		94.5		90.0-110.0	
Sulfate (SO4)	19.458		20.00		97.3		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.125		10.0		101.2		90.0-110.0	

CCV	Continuing Calibration Verification	WCS46864A			11/10/2007	0238
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	18.535		20.00		92.7		90.0-110.0	
Chloride	19.052		20.00		95.3		90.0-110.0	
Fluoride (F)	9.9544		10.00		99.5		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.43		10.0		94.3		90.0-110.0	
Sulfate (SO4)	19.400		20.00		97.0		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.086		10.0		100.9		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCV	Continuing Calibration Verification	WCS46864A			11/10/2007	0325
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	18.663		20.00		93.3		90.0-110.0	
Chloride	19.215		20.00		96.1		90.0-110.0	
Fluoride (F)	10.139		10.00		101.4		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.46		10.0		94.6		90.0-110.0	
Sulfate (SO4)	19.455		20.00		97.3		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.144		10.0		101.4		90.0-110.0	

DU	Method: Duplicate		344828-1	10	11/09/2007	2125
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0.1832			0.1790	0.0042		0.6000	
Chloride	32.050			32.068	0.1		20	
Fluoride (F)	0.4174			0.4140	0.0034		0.3000	
Nitrogen, Nitrate as N (NO3-N)	0.1921			0.1885	0.0036		0.2500	
Sulfate (SO4)	8.4231			8.4402	0.2		20	
Nitrogen, Nitrite as N (NO2-N)	0			0	0		0	

DU	Method: Duplicate		345086-1	10	11/10/2007	0223
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	0			0	0		1	
Chloride, Water	2.8098			2.8492	1.4		20	
Fluoride (F), Water	0			0	0		0	
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0		0	
Sulfate (SO4), Water	1.3199			1.3024	0.0175		0.5000	
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0		0	

ICB	Initial Calibration Blank				11/09/2007	1438
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0			0	0		1	
Chloride	0			2.8492	1.4		20	
Fluoride (F)	0			0	0		0	
Nitrogen, Nitrate as N (NO3-N)	0			0	0		0	
Sulfate (SO4)	0			1.3024	0.0175		0.5000	
Nitrogen, Nitrite as N (NO2-N)	0			0	0		0	

ICV	Initial Calibration Verification		WCS46864A		11/09/2007	1423
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	18.879		20.00		94.4		90.0-110.0	
Chloride	19.455		20.00		97.3		90.0-110.0	
Fluoride (F)	10.308		10.00		103.1		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.5850		10.0		95.8		90.0-110.0	
Sulfate (SO4)	19.709		20.00		98.5		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.360		10.0		103.6		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCS	Laboratory Control Sample	WCS46864A			11/09/2007	1510
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	18.713		20.00		93.6		90.0-110.0	
Chloride	19.321		20.00		96.6		90.0-110.0	
Fluoride (F)	10.119		10.00		101.2		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.6336		10.0		96.3		90.0-110.0	
Sulfate (SO4)	19.552		20.00		97.8		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.205		10.0		102.0		90.0-110.0	

MB	Method Blank				11/09/2007	1454
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

MS	Matrix Spike	WCS47050	344828-1	10	11/09/2007	2141
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	9.3823		10.000000	0.1790	92.0		90-110	
Chloride	40.482		10.000000	32.068	84.1		90-110	A
Fluoride (F)	2.2118		2.000000	0.4140	89.9		90-110	A
Nitrogen, Nitrate as N (NO3-N)	1.9422		2.000000	0.1885	87.7		90-110	A
Sulfate (SO4)	18.288		10.000000	8.4402	98.5		90-110	
Nitrogen, Nitrite as N (NO2-N)	1.9549		2.000000	0	97.7		90-110	

MS	Matrix Spike	WCS47050	345086-1	10	11/10/2007	0310
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.4436		10.000000	0	94.4		90-110	
Chloride, Water	12.310		10.000000	2.8492	94.6		90-110	
Fluoride (F), Water	1.8678		2.000000	0	93.4		90-110	
Nitrogen, Nitrate as N (NO3-N), Water	1.8697		2.000000	0	93.5		90-110	
Sulfate (SO4), Water	11.228		10.000000	1.3024	99.3		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8917		2.000000	0	94.6		90-110	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 7470A                          Units.....: ug/L                          Analyst...: dcl  
 Method Description.: Mercury (CVAA)                      Batch(s)...: 188634

CCB	Continuing Calibration Blank						11/07/2007	1346
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	-0.03539552							

CCB	Continuing Calibration Blank						11/07/2007	1403
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	-0.04824262							

CCB	Continuing Calibration Blank						11/07/2007	1422
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	-0.08701711							

CCB	Continuing Calibration Blank						11/07/2007	1441
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	-0.06512589							

CCB	Continuing Calibration Blank						11/07/2007	1500
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	-0.02734587							

CCB	Continuing Calibration Blank						11/07/2007	1506
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	-0.08550538							

CCB	Continuing Calibration Blank						11/07/2007	1512
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	0.0221608858							

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates		PROJECT: MARK OWEN 9		ATTN:			
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
CCV	Continuing Calibration Verification	MSHGICV2			11/07/2007	1344	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.911261133		3.00		97.0	80.0-120.0	
CCV	Continuing Calibration Verification	MSHGICV2			11/07/2007	1401	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.940853013		3.00		98.0	80.0-120.0	
CCV	Continuing Calibration Verification	MSHGICV2			11/07/2007	1420	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.877067188		3.00		95.9	80.0-120.0	
CCV	Continuing Calibration Verification	MSHGICV2			11/07/2007	1439	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.791906726		3.00		93.1	80.0-120.0	
CCV	Continuing Calibration Verification	MSHGICV2			11/07/2007	1459	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.861108644		3.00		95.4	80.0-120.0	
CCV	Continuing Calibration Verification	MSHGICV2			11/07/2007	1504	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.878628726		3.00		96.0	80.0-120.0	
CCV	Continuing Calibration Verification	MSHGICV2			11/07/2007	1511	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.737669434		3.00		91.3	80.0-120.0	
CRA	Contract Required Detection Limit	MSHGCRA			11/07/2007	1342	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	0.184380497		0.200		92.2	50.0-150.0	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK-DWEN-9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
EB	Extraction Blank		188605		11/07/2007	1408

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg), Filt.	-0.08536877						

EB	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Extraction Blank			188515-1				11/07/2007	1418

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg), TCLP	-0.02266007						

EB	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Extraction Blank			188590-1				11/07/2007	1425

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg), TCLP	-0.06609139						

ICB	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Initial Calibration Blank			188590-1				11/07/2007	1341

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	-0.00670464						

ICV	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Initial Calibration Verification	MSHGICV2						11/07/2007	1339

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	2.795374568		3.00		93.2		90.0-110.0

LCS	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Laboratory Control Sample	MSHGICV2	188605					11/07/2007	1349

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg), Water	2.969500648		3.00		99.0		80.0-120.0

MD	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Method Duplicate		344828-1					11/07/2007	1353

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg), Water	-0.08824776	-0.06512031		-0.06512031	0.02312745		0.20000000

MD	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Method Duplicate		344750-3					11/07/2007	1412

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg), TCLP	0.555541723	0.4665200839		0.4665200839	0.0890216391		0.20000000

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK CHEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time		
MD Method Duplicate			344828-1		11/07/2007	1444		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), TCLP	0.1355059938	0.129205229		0.129205229	0.0063007648		0.20000000	
MS Matrix Spike	MSHG1CV2	344828-1					11/07/2007	1354
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), Water	2.704370824		3.00	-0.06512031	92.3		75-125	
MS Matrix Spike	MSHG1CV2	344750-3					11/07/2007	1413
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), TCLP	3.264266993		3.00	0.4665200839	93.3		75-125	
MS Matrix Spike	MSHG1CV2	344828-1					11/07/2007	1446
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), TCLP	3.010017451		3.00	0.129205229	96.0		75-125	
MSD Matrix Spike Duplicate	MSHG1CV2	344828-1					11/07/2007	1356
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), Water	2.727702165	2.704370824	3.00	-0.06512031	93.1		75-125	
MSD Matrix Spike Duplicate	MSHG1CV2	344750-3					11/07/2007	1416
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), TCLP	3.186978645	3.264266993	3.00	0.4665200839	90.7		75-125	
MSD Matrix Spike Duplicate	MSHG1CV2	344828-1					11/07/2007	1449
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), TCLP	3.020331241	3.010017451	3.00	0.129205229	96.4		75-125	
				0.4			20	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
PB	Prep. Blank		188605		11/07/2007	1348

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), Water	-0.03963533							

PDS	Description	MSHGICV2	344838-1			11/07/2007	1456	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Mercury (Hg), TCLP	3.696044131		3.00	0.129205229	118.9		75-125	
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S0	Description					11/07/2007	1325	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Mercury (Hg)	0							
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S0.2	Description					11/07/2007	1327	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Mercury (Hg)	0							
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S0.5	Description					11/07/2007	1329	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Mercury (Hg)	0							
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S1.0	Description					11/07/2007	1330	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Mercury (Hg)	0							
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S10.0	Description					11/07/2007	1336	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Mercury (Hg)	0							
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S2.0	Description					11/07/2007	1332	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Mercury (Hg)	0							
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## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SS-0	Calibration Standard				11/07/2007	1334

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg)	0							
SD	Serial Dilution		344838-1	5			11/07/2007	1502

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Mercury (Hg), TCLP	-0.00184564		0.129205229	107.1				

Test Method.....: SW-846 6010B	Units.....: mg/L	Analyst...: twr
Method Description.: Metals Analysis (ICAP Trace)	Batch(s)...: 188959 188973	

CCB	Continuing Calibration Blank						11/13/2007	0833
Arsenic (As)	0.00154							
Barium (Ba)	-0.00006							
Cadmium (Cd)	-0.00024							
Chromium (Cr)	-0.00000							
Lead (Pb)	-0.00067							
Selenium (Se)	0.00293							
Silver (Ag)	-0.00057							

CCB	Continuing Calibration Blank						11/13/2007	0953
Arsenic (As)	0.00155							
Barium (Ba)	-0.00000							
Cadmium (Cd)	-0.00013							
Chromium (Cr)	-0.00030							
Lead (Pb)	-0.00068							
Selenium (Se)	0.00163							
Silver (Ag)	-0.00062							

CCB	Continuing Calibration Blank						11/13/2007	1042
Arsenic (As)	0.00011							
Barium (Ba)	0.00005							
Cadmium (Cd)	-0.00016							
Chromium (Cr)	-0.00001							
Lead (Pb)	-0.00038							
Selenium (Se)	0.00263							
Silver (Ag)	-0.00035							

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN '9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				11/13/2007	1126

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00154							
Barium (Ba)	0.00004							
Cadmium (Cd)	0.00005							
Chromium (Cr)	0.00001							
Lead (Pb)	-0.00044							
Selenium (Se)	0.00214							
Silver (Ag)	0.00039							

CCB	Continuing Calibration Blank				11/13/2007	1207
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00176							
Barium (Ba)	-0.00008							
Cadmium (Cd)	-0.00017							
Chromium (Cr)	-0.00039							
Lead (Pb)	-0.00064							
Selenium (Se)	0.00256							
Silver (Ag)	-0.00061							

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	0829
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50529		0.500		101.1		90.0-110.0	
Barium (Ba)	0.49593		0.500		99.2		90.0-110.0	
Cadmium (Cd)	0.51014		0.500		102.0		90.0-110.0	
Chromium (Cr)	0.50282		0.500		100.6		90.0-110.0	
Lead (Pb)	0.50301		0.500		100.6		90.0-110.0	
Selenium (Se)	0.50490		0.500		101.0		90.0-110.0	
Silver (Ag)	0.24627		0.25		98.5		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	0950
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50593		0.500		101.2		90.0-110.0	
Barium (Ba)	0.49774		0.500		99.5		90.0-110.0	
Cadmium (Cd)	0.51526		0.500		103.1		90.0-110.0	
Chromium (Cr)	0.49994		0.500		100.0		90.0-110.0	
Lead (Pb)	0.50268		0.500		100.5		90.0-110.0	
Selenium (Se)	0.49887		0.500		99.8		90.0-110.0	
Silver (Ag)	0.24634		0.25		98.5		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1039
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50778		0.500		101.6		90.0-110.0	
Barium (Ba)	0.50220		0.500		100.4		90.0-110.0	
Cadmium (Cd)	0.51733		0.500		103.5		90.0-110.0	
Chromium (Cr)	0.49903		0.500		99.8		90.0-110.0	
Lead (Pb)	0.50089		0.500		100.2		90.0-110.0	
Selenium (Se)	0.49936		0.500		99.9		90.0-110.0	
Silver (Ag)	0.24760		0.25		99.0		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1123
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.51016		0.500		102.0		90.0-110.0	
Barium (Ba)	0.50246		0.500		100.5		90.0-110.0	
Cadmium (Cd)	0.52485		0.500		105.0		90.0-110.0	
Chromium (Cr)	0.50048		0.500		100.1		90.0-110.0	
Lead (Pb)	0.50305		0.500		100.6		90.0-110.0	
Selenium (Se)	0.49676		0.500		99.4		90.0-110.0	
Silver (Ag)	0.24735		0.25		98.9		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1203
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50336		0.500		100.7		90.0-110.0	
Barium (Ba)	0.50219		0.500		100.4		90.0-110.0	
Cadmium (Cd)	0.51965		0.500		103.9		90.0-110.0	
Chromium (Cr)	0.49517		0.500		99.0		90.0-110.0	
Lead (Pb)	0.49741		0.500		99.5		90.0-110.0	
Selenium (Se)	0.49505		0.500		99.0		90.0-110.0	
Silver (Ag)	0.24551		0.25		98.2		90.0-110.0	

CH1	Calibration check standard 1	MS10310711			11/13/2007	0818
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.01083		0.0100		108.3		50.0-150.0	
Barium (Ba)	0.00987		0.0100		98.7		50.0-150.0	
Cadmium (Cd)	0.00497		0.00500		99.4		50.0-150.0	
Chromium (Cr)	0.01030		0.0100		103.0		50.0-150.0	
Lead (Pb)	0.00831		0.0100		83.1		50.0-150.0	
Selenium (Se)	0.01076		0.0100		107.6		50.0-150.0	
Silver (Ag)	0.00462		0.00500		92.4		50.0-150.0	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CH3	Standard check for ICAP	MS110207T3			11/13/2007	0807
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	2.00863		2.00		100.4		95.0-105.0	
Barium (Ba)	2.01578		2.00		100.8		95.0-105.0	
Cadmium (Cd)	1.00818		1.00		100.8		95.0-105.0	
Chromium (Cr)	2.01166		2.00		100.6		95.0-105.0	
Lead (Pb)	2.01005		2.00		100.5		95.0-105.0	
Selenium (Se)	2.02298		2.00		101.1		95.0-105.0	
Silver (Ag)	1.00213		1.00		100.2		95.0-105.0	

ICB	Initial Calibration Blank				11/13/2007	0815
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00164							
Barium (Ba)	-0.00013							
Cadmium (Cd)	-0.00012							
Chromium (Cr)	-0.00059							
Lead (Pb)	-0.00089							
Selenium (Se)	0.00480							
Silver (Ag)	-0.00037							

ICV	Initial Calibration Verification	MS110807CC			11/13/2007	0811
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50313		0.500		100.6		90.0-110.0	
Barium (Ba)	0.49773		0.500		99.5		90.0-110.0	
Cadmium (Cd)	0.50517		0.500		101.0		90.0-110.0	
Chromium (Cr)	0.50206		0.500		100.4		90.0-110.0	
Lead (Pb)	0.49954		0.500		99.9		90.0-110.0	
Selenium (Se)	0.50809		0.500		101.6		90.0-110.0	
Silver (Ag)	0.24708		0.25		98.8		90.0-110.0	

ISA	Interference Check Sample A	MS110207IA			11/13/2007	0822
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00372		0.0					
Barium (Ba)	0.00113		0.0					
Cadmium (Cd)	-0.00279		0.0					
Chromium (Cr)	0.00115		0.0					
Lead (Pb)	-0.01050		0.0					
Selenium (Se)	0.01681		0.0					
Silver (Ag)	-0.00110		0.0					

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
ISB	Interference Check Sample-B	MS1102071B			11/13/2007	0826

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	1.04857		1.00		104.9		80.0-120.0	
Barium (Ba)	1.04889		1.00		104.9		80.0-120.0	
Cadmium (Cd)	0.48521		0.500		97.0		80.0-120.0	
Chromium (Cr)	0.99859		1.00		99.9		80.0-120.0	
Lead (Pb)	0.98769		1.00		98.8		80.0-120.0	
Selenium (Se)	1.05744		1.00		105.7		80.0-120.0	
Silver (Ag)	0.54959		0.500		109.9		80.0-120.0	

LCS	Laboratory Control Sample	MSPJKE3	188939		11/13/2007	1006
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.09357		1.00		109.4		80.0-120.0	
Barium (Ba), Water	1.08677		1.00		108.7		80.0-120.0	
Cadmium (Cd), Water	0.55362		0.500		110.7		80.0-120.0	
Chromium (Cr), Water	1.08249		1.00		108.2		80.0-120.0	
Lead (Pb), Water	1.08250		1.00		108.2		80.0-120.0	
Selenium (Se), Water	1.07283		1.00		107.3		80.0-120.0	
Silver (Ag), Water	0.53627		0.500		107.3		80.0-120.0	

MD	Method Duplicate		344647-4		11/13/2007	1024
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00075	0.00058		0.00058	0.00017		0.02000	
Barium (Ba), Water	0.06649	0.06869		0.06869	0.00220		0.02000	
Cadmium (Cd), Water	-0.00013	-0.00007		-0.00007	0.00006		0.00500	
Chromium (Cr), Water	-0.00019	-0.00022		-0.00022	0.00003		0.01000	
Lead (Pb), Water	-0.00071	-0.00105		-0.00105	0.00034		0.01000	
Selenium (Se), Water	0.00153	0.00193		0.00193	0.00040		0.04000	
Silver (Ag), Water	-0.00054	-0.00107		-0.00107	0.00053		0.01000	

MD	Method Duplicate		344647-16		11/13/2007	1119
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00166	0.00119		0.00119	0.00047		0.02000	
Barium (Ba), Water	0.03933	0.04049		0.04049	0.00116		0.02000	
Cadmium (Cd), Water	0.00007	-0.00012		-0.00012	0.00019		0.00500	
Chromium (Cr), Water	-0.00020	-0.00080		-0.00080	0.00060		0.01000	
Lead (Pb), Water	-0.00076	-0.00093		-0.00093	0.00017		0.01000	
Selenium (Se), Water	0.00033	0.00093		0.00093	0.00060		0.04000	
Silver (Ag), Water	0.00049	-0.00087		-0.00087	0.00136		0.01000	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	MSPIKEW	344647-4		11/13/2007	1028
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.06882		1.00	0.00058	106.8		75-125	
Barium (Ba), Water	1.08566		1.00	0.06869	101.7		75-125	
Cadmium (Cd), Water	0.50516		0.500	-0.00007	101.0		75-125	
Chromium (Cr), Water	1.00155		1.00	-0.00022	100.2		75-125	
Lead (Pb), Water	1.01068		1.00	-0.00105	101.2		75-125	
Selenium (Se), Water	1.04418		1.00	0.00193	104.2		75-125	
Silver (Ag), Water	0.50804		0.500	-0.00107	101.8		75-125	

MS	Matrix Spike	MSPIKEW	344647-16		11/13/2007	1130
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.11244		1.00	0.00119	111.1		75-125	
Barium (Ba), Water	1.10126		1.00	0.04049	106.1		75-125	
Cadmium (Cd), Water	0.53576		0.500	-0.00012	107.2		75-125	
Chromium (Cr), Water	1.04622		1.00	-0.00080	104.7		75-125	
Lead (Pb), Water	1.05694		1.00	-0.00093	105.8		75-125	
Selenium (Se), Water	1.08218		1.00	0.00093	108.1		75-125	
Silver (Ag), Water	0.46418		0.500	-0.00087	93.0		75-125	

MSD	Matrix Spike Duplicate	MSPIKEW	344647-4		11/13/2007	1031
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.99975	1.06882	1.00	0.00058	99.9		75-125	
Barium (Ba), Water	1.02533	1.08566	1.00	0.06869	95.7		20	
Cadmium (Cd), Water	0.47238	0.50516	0.500	-0.00007	94.5		75-125	
Chromium (Cr), Water	0.93752	1.00155	1.00	-0.00022	93.8		75-125	
Lead (Pb), Water	0.94681	1.01068	1.00	-0.00105	94.8		75-125	
Selenium (Se), Water	0.98003	1.04418	1.00	0.00193	97.8		75-125	
Silver (Ag), Water	0.48128	0.50804	0.500	-0.00107	96.5		75-125	
					5.3		20	

MSD	Matrix Spike Duplicate	MSPIKEW	344647-16		11/13/2007	1134
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.05444	1.11244	1.00	0.00119	105.3		75-125	
Barium (Ba), Water	1.04396	1.10126	1.00	0.04049	100.3		20	
Cadmium (Cd), Water	0.50757	0.53576	0.500	-0.00012	101.5		75-125	
Chromium (Cr), Water	0.99290	1.04622	1.00	-0.00080	99.4		75-125	
					5.2		20	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MSD	Matrix Spike Duplicate	MSPIKEW	344647-16		11/13/2007	1134
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Lead (Pb), Water	1.00565	1.05694	1.00	-0.00093	100.7	4.9	75-125	20
Selenium (Se), Water	1.02978	1.08218	1.00	0.00093	102.9	4.9	75-125	20
Silver (Ag), Water	0.46430	0.46418	0.500	-0.00087	93.0	0.0	75-125	20

PB	Prep. Blank		188939		11/13/2007	1002
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00012							
Barium (Ba), Water	-0.00001							
Cadmium (Cd), Water	-0.00019							
Chromium (Cr), Water	-0.00027							
Lead (Pb), Water	-0.00079							
Selenium (Se), Water	-0.00073							
Silver (Ag), Water	-0.00068							

PDS	Post Digestion Spike	MSPIKE3	344647-4		11/13/2007	1156
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.04019		1.00	0.00058	104.0		75-125	
Barium (Ba), Water	1.07851		1.00	0.06869	101.0		75-125	
Cadmium (Cd), Water	0.49810		0.500	-0.00007	99.6		75-125	
Chromium (Cr), Water	0.97225		1.00	-0.00022	97.2		75-125	
Lead (Pb), Water	0.98475		1.00	-0.00105	98.6		75-125	
Selenium (Se), Water	1.02137		1.00	0.00193	101.9		75-125	
Silver (Ag), Water	0.51241		0.500	-0.00107	102.7		75-125	

SO	Calibration Blank				11/13/2007	0758
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00082							
Barium (Ba)	0.00055							
Cadmium (Cd)	0.00237							
Chromium (Cr)	0.00065							
Silver (Ag)	-0.00005							

SD	Serial Dilution		344647-4	5	11/13/2007	1159
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00162			0.00058				
Barium (Ba), Water	0.01386			0.06869		0.9		
Cadmium (Cd), Water	-0.00014			-0.00007				
Chromium (Cr), Water	-0.00027			-0.00022				
Lead (Pb), Water	-0.00055			-0.00105				

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SD	Serial Dilution		344647-4	5	11/13/2007	1159

Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Selenium (Se), Water		0.00029			0.00193				
Silver (Ag), Water		-0.00003			-0.00107				

STD	Spiked Blank Duplicate							11/13/2007	0801
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)		1.24715							
Barium (Ba)		11.51546							
Cadmium (Cd)		11.97110							
Chromium (Cr)		1.92273							
Silver (Ag)		0.66508							

CCB	Continuing Calibration Blank							11/13/2007	0833
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)		0.00154							
Barium (Ba)		-0.00006							
Cadmium (Cd)		-0.00024							
Chromium (Cr)		-0.00000							
Lead (Pb)		-0.00067							
Selenium (Se)		0.00293							
Silver (Ag)		-0.00057							

CCB	Continuing Calibration Blank							11/13/2007	0953
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)		0.00155							
Barium (Ba)		-0.00000							
Cadmium (Cd)		-0.00013							
Chromium (Cr)		-0.00030							
Lead (Pb)		-0.00068							
Selenium (Se)		0.00163							
Silver (Ag)		-0.00062							

CCB	Continuing Calibration Blank							11/13/2007	1042
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)		0.00011							
Barium (Ba)		0.00005							
Cadmium (Cd)		-0.00016							
Chromium (Cr)		-0.00001							
Lead (Pb)		-0.00038							
Selenium (Se)		0.00263							
Silver (Ag)		-0.00035							

## QUALITY CONTROL RESULTS

Job Number.: 344828

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CUSTOMER: Conestoga-Rovers and Associates

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ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				11/13/2007	1126
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00154							
Barium (Ba)	0.00004							
Cadmium (Cd)	0.00005							
Chromium (Cr)	0.00001							
Lead (Pb)	-0.00044							
Selenium (Se)	0.00214							
Silver (Ag)	0.00039							

CCB	Continuing Calibration Blank				11/13/2007	1207
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00176							
Barium (Ba)	-0.00008							
Cadmium (Cd)	-0.00017							
Chromium (Cr)	-0.00039							
Lead (Pb)	-0.00064							
Selenium (Se)	0.00256							
Silver (Ag)	-0.00061							

CCB	Continuing Calibration Blank				11/13/2007	1432
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00237							
Barium (Ba)	0.00013							
Cadmium (Cd)	0.00008							
Chromium (Cr)	0.00050							
Lead (Pb)	-0.00109							
Selenium (Se)	0.00334							
Silver (Ag)	0.00124							

CCB	Continuing Calibration Blank				11/13/2007	1454
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00070							
Barium (Ba)	-0.00005							
Cadmium (Cd)	-0.00005							
Chromium (Cr)	-0.00042							
Lead (Pb)	-0.00112							
Selenium (Se)	0.00411							
Silver (Ag)	0.00051							

## QUALITY CONTROL RESULTS

Job Number.: 344828

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CUSTOMER: Conestoga-Rovers and Associates

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	0829
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50529		0.500		101.1		90.0-110.0	
Barium (Ba)	0.49593		0.500		99.2		90.0-110.0	
Cadmium (Cd)	0.51014		0.500		102.0		90.0-110.0	
Chromium (Cr)	0.50282		0.500		100.6		90.0-110.0	
Lead (Pb)	0.50301		0.500		100.6		90.0-110.0	
Selenium (Se)	0.50490		0.500		101.0		90.0-110.0	
Silver (Ag)	0.24627		0.25		98.5		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	0950
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50593		0.500		101.2		90.0-110.0	
Barium (Ba)	0.49774		0.500		99.5		90.0-110.0	
Cadmium (Cd)	0.51526		0.500		103.1		90.0-110.0	
Chromium (Cr)	0.49994		0.500		100.0		90.0-110.0	
Lead (Pb)	0.50268		0.500		100.5		90.0-110.0	
Selenium (Se)	0.49887		0.500		99.8		90.0-110.0	
Silver (Ag)	0.24634		0.25		98.5		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1039
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50778		0.500		101.6		90.0-110.0	
Barium (Ba)	0.50220		0.500		100.4		90.0-110.0	
Cadmium (Cd)	0.51733		0.500		103.5		90.0-110.0	
Chromium (Cr)	0.49903		0.500		99.8		90.0-110.0	
Lead (Pb)	0.50089		0.500		100.2		90.0-110.0	
Selenium (Se)	0.49936		0.500		99.9		90.0-110.0	
Silver (Ag)	0.24760		0.25		99.0		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1123
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.51016		0.500		102.0		90.0-110.0	
Barium (Ba)	0.50246		0.500		100.5		90.0-110.0	
Cadmium (Cd)	0.52485		0.500		105.0		90.0-110.0	
Chromium (Cr)	0.50048		0.500		100.1		90.0-110.0	
Lead (Pb)	0.50305		0.500		100.6		90.0-110.0	
Selenium (Se)	0.49676		0.500		99.4		90.0-110.0	
Silver (Ag)	0.24735		0.25		98.9		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1203

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50336		0.500		100.7		90.0-110.0	
Barium (Ba)	0.50219		0.500		100.4		90.0-110.0	
Cadmium (Cd)	0.51945		0.500		103.9		90.0-110.0	
Chromium (Cr)	0.49517		0.500		99.0		90.0-110.0	
Lead (Pb)	0.49741		0.500		99.5		90.0-110.0	
Selenium (Se)	0.49505		0.500		99.0		90.0-110.0	
Silver (Ag)	0.24551		0.25		98.2		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1428
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.48839		0.500		97.7		90.0-110.0	
Barium (Ba)	0.48731		0.500		97.5		90.0-110.0	
Cadmium (Cd)	0.50272		0.500		100.5		90.0-110.0	
Chromium (Cr)	0.47824		0.500		95.6		90.0-110.0	
Lead (Pb)	0.48083		0.500		96.2		90.0-110.0	
Selenium (Se)	0.48355		0.500		96.7		90.0-110.0	
Silver (Ag)	0.23900		0.25		95.6		90.0-110.0	

CCV	Continuing Calibration Verification	MS110807CC			11/13/2007	1450
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.48664		0.500		97.3		90.0-110.0	
Barium (Ba)	0.48908		0.500		97.8		90.0-110.0	
Cadmium (Cd)	0.50222		0.500		100.4		90.0-110.0	
Chromium (Cr)	0.47818		0.500		95.6		90.0-110.0	
Lead (Pb)	0.48126		0.500		96.3		90.0-110.0	
Selenium (Se)	0.48115		0.500		96.2		90.0-110.0	
Silver (Ag)	0.23895		0.25		95.6		90.0-110.0	

CH1	Calibration check standard 1	MS103107T1			11/13/2007	0818
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.01083		0.0100		108.3		50.0-150.0	
Barium (Ba)	0.00987		0.0100		98.7		50.0-150.0	
Cadmium (Cd)	0.00497		0.00500		99.4		50.0-150.0	
Chromium (Cr)	0.01030		0.0100		103.0		50.0-150.0	
Lead (Pb)	0.00831		0.0100		83.1		50.0-150.0	
Selenium (Se)	0.01076		0.0100		107.6		50.0-150.0	
Silver (Ag)	0.00462		0.00500		92.4		50.0-150.0	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CH3	Standard check for ICAP	MS110207T3			11/13/2007	0807

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	2.00863		2.00		100.4		95.0-105.0	
Barium (Ba)	2.01578		2.00		100.8		95.0-105.0	
Cadmium (Cd)	1.00818		1.00		100.8		95.0-105.0	
Chromium (Cr)	2.01166		2.00		100.6		95.0-105.0	
Lead (Pb)	2.01005		2.00		100.5		95.0-105.0	
Selenium (Se)	2.02298		2.00		101.1		95.0-105.0	
Silver (Ag)	1.00213		1.00		100.2		95.0-105.0	

ICB	Initial Calibration Blank						11/13/2007	0815
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00164							
Barium (Ba)	-0.00013							
Cadmium (Cd)	-0.00012							
Chromium (Cr)	-0.00059							
Lead (Pb)	-0.00089							
Selenium (Se)	0.00480							
Silver (Ag)	-0.00037							

ICV	Initial Calibration Verification	MS110807CC					11/13/2007	0811
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.50313		0.500		100.6		90.0-110.0	
Barium (Ba)	0.49773		0.500		99.5		90.0-110.0	
Cadmium (Cd)	0.50517		0.500		101.0		90.0-110.0	
Chromium (Cr)	0.50206		0.500		100.4		90.0-110.0	
Lead (Pb)	0.49954		0.500		99.9		90.0-110.0	
Selenium (Se)	0.50809		0.500		101.6		90.0-110.0	
Silver (Ag)	0.24708		0.25		98.8		90.0-110.0	

ISA	Interference Check Sample A	MS110207IA					11/13/2007	0822
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00372		0.0					
Barium (Ba)	0.00113		0.0					
Cadmium (Cd)	-0.00279		0.0					
Chromium (Cr)	0.00115		0.0					
Lead (Pb)	-0.01050		0.0					
Selenium (Se)	0.01681		0.0					
Silver (Ag)	-0.00110		0.0					

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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ISB	Interference Check Sample-B	MS110207IB			11/13/2007	0826
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	1.04857		1.00		104.9		80.0-120.0	
Barium (Ba)	1.04889		1.00		104.9		80.0-120.0	
Cadmium (Cd)	0.48521		0.500		97.0		80.0-120.0	
Chromium (Cr)	0.99859		1.00		99.9		80.0-120.0	
Lead (Pb)	0.98769		1.00		98.8		80.0-120.0	
Selenium (Se)	1.05744		1.00		105.7		80.0-120.0	
Silver (Ag)	0.54959		0.500		109.9		80.0-120.0	

LCS	Laboratory Control Sample	MSPIKE3	188939		11/13/2007	1006
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.09357		1.00		109.4		80.0-120.0	
Barium (Ba), Water	1.08677		1.00		108.7		80.0-120.0	
Cadmium (Cd), Water	0.55362		0.500		110.7		80.0-120.0	
Chromium (Cr), Water	1.08249		1.00		108.2		80.0-120.0	
Lead (Pb), Water	1.08250		1.00		108.2		80.0-120.0	
Selenium (Se), Water	1.07283		1.00		107.3		80.0-120.0	
Silver (Ag), Water	0.53627		0.500		107.3		80.0-120.0	

MD	Method Duplicate		344647-4		11/13/2007	1024
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00075	0.00058		0.00058	0.00017		0.02000	
Barium (Ba), Water	0.06649	0.06869		0.06869	0.00220		0.02000	
Cadmium (Cd), Water	-0.00013	-0.00007		-0.00007	0.00006		0.00500	
Chromium (Cr), Water	-0.00019	-0.00022		-0.00022	0.00003		0.01000	
Lead (Pb), Water	-0.00071	-0.00105		-0.00105	0.00034		0.01000	
Selenium (Se), Water	0.00153	0.00193		0.00193	0.00040		0.04000	
Silver (Ag), Water	-0.00054	-0.00107		-0.00107	0.00053		0.01000	

MD	Method Duplicate		344647-16		11/13/2007	1119
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00166	0.00119		0.00119	0.00047		0.02000	
Barium (Ba), Water	0.03933	0.04049		0.04049	0.00116		0.02000	
Cadmium (Cd), Water	0.00007	-0.00012		-0.00012	0.00019		0.00500	
Chromium (Cr), Water	-0.00020	-0.00080		-0.00080	0.00060		0.01000	
Lead (Pb), Water	-0.00076	-0.00093		-0.00093	0.00017		0.01000	
Selenium (Se), Water	0.00033	0.00093		0.00093	0.00060		0.04000	
Silver (Ag), Water	0.00049	-0.00087		-0.00087	0.00136		0.01000	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	MSPIKEW	344647-4		11/13/2007	1028

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.06882		1.00	0.00058	106.8		75-125	
Barium (Ba), Water	1.08566		1.00	0.06869	101.7		75-125	
Cadmium (Cd), Water	0.50516		0.500	-0.00007	101.0		75-125	
Chromium (Cr), Water	1.00155		1.00	-0.00022	100.2		75-125	
Lead (Pb), Water	1.01068		1.00	-0.00105	101.2		75-125	
Selenium (Se), Water	1.04418		1.00	0.00193	104.2		75-125	
Silver (Ag), Water	0.50804		0.500	-0.00107	101.8		75-125	

MS	Matrix Spike	MSPIKEW	344647-16		11/13/2007	1130		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.11244		1.00	0.00119	111.1		75-125	
Barium (Ba), Water	1.10126		1.00	0.04049	106.1		75-125	
Cadmium (Cd), Water	0.53576		0.500	-0.00012	107.2		75-125	
Chromium (Cr), Water	1.04622		1.00	-0.00080	104.7		75-125	
Lead (Pb), Water	1.05694		1.00	-0.00093	105.8		75-125	
Selenium (Se), Water	1.08218		1.00	0.00093	108.1		75-125	
Silver (Ag), Water	0.46418		0.500	-0.00087	93.0		75-125	

MSD	Matrix Spike Duplicate	MSPIKEW	344647-4		11/13/2007	1031		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.99975	1.06882	1.00	0.00058	99.9		75-125	
Barium (Ba), Water	1.02533	1.08566	1.00	0.06869	95.7	6.7	20	
Cadmium (Cd), Water	0.47238	0.50516	0.500	-0.00007	94.5	6.1	20	
Chromium (Cr), Water	0.93752	1.00155	1.00	-0.00022	93.8	6.6	20	
Lead (Pb), Water	0.94681	1.01068	1.00	-0.00105	94.8	6.6	20	
Selenium (Se), Water	0.98003	1.04418	1.00	0.00193	97.8	6.5	20	
Silver (Ag), Water	0.48128	0.50804	0.500	-0.00107	96.5	6.3	20	
						5.3	20	

MSD	Matrix Spike Duplicate	MSPIKEW	344647-16		11/13/2007	1134		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.05444	1.11244	1.00	0.00119	105.3		75-125	
Barium (Ba), Water	1.04396	1.10126	1.00	0.04049	100.3	5.4	20	
Cadmium (Cd), Water	0.50757	0.53576	0.500	-0.00012	101.5	5.6	20	
Chromium (Cr), Water	0.99290	1.04622	1.00	-0.00080	99.4	5.5	20	
						5.2	20	

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	MSPIKEW	344647-16		11/13/2007	1134

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Lead (Pb), Water	1.00565	1.05694	1.00	-0.00093	100.7		75-125	
					4.9		20	
Selenium (Se), Water	1.02978	1.08218	1.00	0.00093	102.9		75-125	
					4.9		20	
Silver (Ag), Water	0.46430	0.46418	0.500	-0.00087	93.0		75-125	
					0.0		20	

PB	Prep. Blank		188939		11/13/2007	1002
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00012							
Barium (Ba), Water	-0.00001							
Cadmium (Cd), Water	-0.00019							
Chromium (Cr), Water	-0.00027							
Lead (Pb), Water	-0.00079							
Selenium (Se), Water	-0.00073							
Silver (Ag), Water	-0.00068							

PDS	Post Digestion Spike	MSPIKE3	344647-4		11/13/2007	1156
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	1.04019		1.00	0.00058	104.0		75-125	
Barium (Ba), Water	1.07851		1.00	0.06869	101.0		75-125	
Cadmium (Cd), Water	0.49810		0.500	-0.00007	99.6		75-125	
Chromium (Cr), Water	0.97225		1.00	-0.00022	97.2		75-125	
Lead (Pb), Water	0.98475		1.00	-0.00105	98.6		75-125	
Selenium (Se), Water	1.02137		1.00	0.00193	101.9		75-125	
Silver (Ag), Water	0.51241		0.500	-0.00107	102.7		75-125	

SO	Calibration Blank				11/13/2007	0758
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	-0.00082							
Barium (Ba)	0.00055							
Cadmium (Cd)	0.00237							
Chromium (Cr)	0.00065							
Silver (Ag)	-0.00005							

SD	Serial Dilution		344647-4	5	11/13/2007	1159
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.00162			0.00058				
Barium (Ba), Water	0.01386			0.06869		0.9		
Cadmium (Cd), Water	-0.00014			-0.00007				
Chromium (Cr), Water	-0.00027			-0.00022				
Lead (Pb), Water	-0.00055			-0.00105				

## QUALITY CONTROL RESULTS

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SD	Serial Dilution		344647-4	5	11/13/2007	1159

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Selenium (Se), Water	0.00029			0.00193				
Silver (Ag), Water	-0.00003			-0.00107				

STD	Spiked Blank Duplicate						11/13/2007	0801
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	1.24715							
Barium (Ba)	11.51546							
Cadmium (Cd)	11.97110							
Chromium (Cr)	1.92273							
Silver (Ag)	0.66508							

Test Method.....: SW-846 8015B                          Units.....: mg/L  
 Method Description.: Total Extractable Petroleum Hydrocarbons Batch(s)...: 188669                          Analyst...: jps

LCID	Laboratory Control Sample Duplicate	GC101207	188454			11/05/2007	1736	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TEPH - as Diesel, Water	1020.47	931.31	1000.000000	ND	102.0		69-118	
					9.1		20	

LCS	Laboratory Control Sample	GC101207	188454			11/05/2007	1652	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TEPH - as Diesel, Water	931.31		1000.000000	ND	93.1		69-118	

MB	Method Blank	GC091507	188454			11/05/2007	1609	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
TEPH - as Diesel, Water	ND							

## SURROGATE RECOVERIES REPORT

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greetey

Method.....: Total Extractable Petroleum Hydrocarbons  
Batch(s)....: 188669Method Code...: 8015D  
Test Matrix...: WaterPrep Batch....: 188454  
Equipment Code: EXTGC00

Lab ID	DT	Sample ID	Date	OTERPH
344828- 1		MW1	11/05/2007	116
344828- 2		MW2	11/05/2007	103
344828- 3		MW3	11/05/2007	110
344828- 4		MW4	11/05/2007	97
344828- 5		DUP1	11/05/2007	114
188454--21 LCD			11/05/2007	107
188454--21 LCS			11/05/2007	106
188454--21 MB			11/05/2007	102

Test	Test Description	Limits
OTERPH	o-Terphenyl	60 - 140

## S U R R O G A T E   R E C O V E R I E S   R E P O R T

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: 483648

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Method.....: Total Volatile Petroleum Hydrocarbons  
 Batch(s)....: 188571

Method Code...: 8015G  
 Test Matrix...: Water

Prep Batch....:  
 Equipment Code: BTEX04

Lab ID	DT	Sample ID	Date	ATFT	BFB
188571-	1	LCS	11/05/2007	91.9	120.2
188571-	1	MB	11/05/2007	93.2	121.4
344828-	1	MW1	11/05/2007	89.3	119.4
344828-	1	MS	11/05/2007	92.1	118.5
344828-	1	MSD	11/05/2007	92.5	118.6
344828-	2	MW2	11/05/2007	87.6	119.6
344828-	3	MW3	11/05/2007	87.8	122.1
344828-	4	MW4	11/05/2007	93.5	122.5
344828-	5	DUP1	11/05/2007	94.7	124.1

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	68 - 143
BFB	BFB (Surrogate)	70 - 139

## SURROGATE RECOVERIES REPORT

Job Number.: 344828

Report Date.: 11/13/2007

CUSTOMER: 483648

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Method.....: GC Volatile Organics  
Batch(s)....: 188673Method Code...: 8021  
Test Matrix...: WaterPrep Batch....:  
Equipment Code: BTEX02

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB
188673-	1	LCS	11/07/2007	106.0	110.4	111.8	110.1
188673-	1	MB	11/07/2007	106.9	111.3	114.4	108.7
344828-	1	MW1	11/07/2007	108.4	112.6	115.7	110.2
344828-	2	MW2	11/07/2007	108.1	111.6	114.9	109.6
344828-	2	MS	11/07/2007	104.4	110.1	111.8	109.7
344828-	2	MSD	11/07/2007	105.7	110.3	112.1	108.7
344828-	3	MW3	11/07/2007	108.8	111.9	115.2	108.8
344828-	4	MW4	11/07/2007	108.9	111.7	115.7	109.9
344828-	5	DUP1	11/07/2007	108.2	111.3	114.9	108.6
344828-	6	TRIP BLANK	11/07/2007	106.8	110.6	114.0	108.0

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	70 - 135
ATFTB	a,a,a-Trifluorotoluene Column B	70 - 135
BFB	BFB (Surrogate)	64 - 136
BFBB	BFB (Surrogate) Column B	64 - 136

## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 11/13/2007

### REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field,(e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.
- 4) For all USACE projects, the QC limits are based on "mean +/- 2 sigma", which are the warning limits.

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming diphenylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, multiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only correction required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reviewed.

#### Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.  
J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.  
B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.  
N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

#### Explanation of General QC Outliers:

- A - Matrix interference present in sample.  
a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.  
b - Target analyte was found in the method blank.  
M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.  
L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.  
G - Marginal outlier within 1% of acceptance criteria.  
r - RPD value is outside method acceptance criteria.  
C - Poor RPD values observed due to the non-homogenous nature of the sample.

## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 11/13/2007

- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits and was not detected in any associated samples in the analytical batch.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- q - See the subcontract final report for qualifier explanation.
- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

#### Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

#### Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- N - Spiked sample recovery is not within control limits.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.
- \* - Duplicate analysis is not within control limits.

#### Abbreviations:

Batch	- Designation given to identify a specific extraction, digestion, preparation, or analysis set.
CCV	- Continuing Calibration Verification
CRA	- Low level standard check - GFAA, Mercury
CRI	- Low level standard check - ICP
Dil Fac	- Dilution Factor - Secondary dilution analysis
DLFac	- Detection Limit Factor
DU	- Duplicate
EB	- Extraction Blank (TCLP, SPLP, etc.)
ICAL	- Initial Calibration

## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 11/13/2007

ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MQL	- Method Quantitation Limit (TRRP)
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected
PB	- Preparation Blank
PREPF	- Preparation Factor
RL	- Reporting Limit
RPD	- Relative Percent Difference
RRF	- Relative Response Factor
RT	- Retention Time
SQL	- Sample Quantitation Limit (TRRP)
TIC	- Tentatively Identified Compound

#### Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-94-111 Methods for the Determination of Metals in Environmental Samples, Supplement I, May 1994.
- (3) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994; Update IIA August 1993; Update IIB, January 1995; Update III, December 1996; Update IVA January 1998; Update IVB November 2000.
- (4) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
- (5) HACH Water Analysis Handbook 3rd Edition (1997).
- (6) Federal Register, July 1, 1990 (40 CFR Part 136 Appendix A).
- (7) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (9) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

## LABORATORY CHRONICLE

Job Number: 344828

Date: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Lab ID:	Client ID:	Method	Description	Date Recvd:	Sample RUN#	Batch#	Prep BT #(S)	Date: 11/03/2007	Time Analyzed	Dilution
344828-1	MW1	SW-846 3010A	Acid Digestion Aqueous/Extracts	FLAA/ICP	1	188939		11/12/2007	1640	
		EPA 310.1	Alkalinity		1	188622		11/06/2007	1600	
		SW-846 8015	Extraction (Sep Funnel)	8015 Diesel	1	188454		11/05/2007	0900	
		SW-846 8021B	GC Volatile Organics		1	188673		11/07/2007	0904	1.0000
		EPA 300.0	Ion Chromatography Analysis		1	188846		11/09/2007	2110	10
		SW-846 7470A	Mercury (CVAA)		1	188634	188605	11/07/2007	1351	
		SW-846 7470A	Mercury Preparation (CVAA)		1	188605		11/07/2007	0920	
		SW-846 6010B	Metals Analysis (ICAP Trace)		1	188959	188939	11/13/2007	1137	
		SM2540 C	Solids, Total Dissolved (TDS)		1	188711		11/07/2007	1830	
		SW-846 8015B	Total Extractable Petroleum Hydrocarbons		1	188669	188454	11/05/2007	1819	
		SW-846 8015B	Total Volatile Petroleum Hydrocarbons		1	188571		11/05/2007	0938	1.0000
344828-2	MW2	SW-846 3010A	Acid Digestion Aqueous/Extracts	FLAA/ICP	1	188939		11/12/2007	1640	
		EPA 310.1	Alkalinity		1	188622		11/06/2007	1600	
		SW-846 8015	Extraction (Sep Funnel)	8015 Diesel	1	188454		11/05/2007	0900	
		SW-846 8021B	GC Volatile Organics		1	188673		11/07/2007	0924	1.0000
		EPA 300.0	Ion Chromatography Analysis		1	188846		11/09/2007	2212	10
		SW-846 7470A	Mercury (CVAA)		1	188634	188605	11/07/2007	1358	
		SW-846 7470A	Mercury Preparation (CVAA)		1	188605		11/07/2007	0920	
		SW-846 6010B	Metals Analysis (ICAP Trace)		1	188959	188939	11/13/2007	1141	
		SM2540 C	Solids, Total Dissolved (TDS)		1	188711		11/07/2007	1830	
		SW-846 8015B	Total Extractable Petroleum Hydrocarbons		1	188669	188454	11/05/2007	1609	
		SW-846 8015B	Total Volatile Petroleum Hydrocarbons		1	188571		11/05/2007	1004	1.0000
344828-3	MW3	SW-846 3010A	Acid Digestion Aqueous/Extracts	FLAA/ICP	1	188939		11/12/2007	1640	
		EPA 310.1	Alkalinity		1	188622		11/06/2007	1600	
		SW-846 8015	Extraction (Sep Funnel)	8015 Diesel	1	188454		11/05/2007	0900	
		SW-846 8021B	GC Volatile Organics		1	188673		11/07/2007	0944	1.0000
		EPA 300.0	Ion Chromatography Analysis		1	188846		11/09/2007	2228	
		EPA 300.0	Ion Chromatography Analysis		1	188846		11/09/2007	2244	10
		SW-846 7470A	Mercury (CVAA)		1	188634	188605	11/07/2007	1400	
		SW-846 7470A	Mercury Preparation (CVAA)		1	188605		11/07/2007	0920	
		SW-846 6010B	Metals Analysis (ICAP Trace)		1	188959	188939	11/13/2007	1145	
		SM2540 C	Solids, Total Dissolved (TDS)		1	188711		11/07/2007	1830	
		SW-846 8015B	Total Extractable Petroleum Hydrocarbons		1	188669	188454	11/05/2007	1652	
		SW-846 8015B	Total Volatile Petroleum Hydrocarbons		1	188571		11/05/2007	1031	1.0000
344828-4	MW4	SW-846 3010A	Acid Digestion Aqueous/Extracts	FLAA/ICP	1	188939		11/12/2007	1640	
		EPA 310.1	Alkalinity		1	188622		11/06/2007	1600	
		SW-846 8015	Extraction (Sep Funnel)	8015 Diesel	1	188454		11/05/2007	0900	
		SW-846 8021B	GC Volatile Organics		1	188673		11/07/2007	1004	1.0000
		EPA 300.0	Ion Chromatography Analysis		1	188846		11/09/2007	2259	10
		EPA 300.0	Ion Chromatography Analysis		1	188846		11/10/2007	0002	1000
		SW-846 7470A	Mercury (CVAA)		1	188634	188605	11/07/2007	1405	
		SW-846 7470A	Mercury Preparation (CVAA)		1	188605		11/07/2007	0920	
		SW-846 6010B	Metals Analysis (ICAP Trace)		1	188959	188939	11/13/2007	1148	
		SM2540 C	Solids, Total Dissolved (TDS)		1	188711		11/07/2007	1830	
		SW-846 8015B	Total Extractable Petroleum Hydrocarbons		1	188669	188454	11/05/2007	1736	
		SW-846 8015B	Total Volatile Petroleum Hydrocarbons		1	188571		11/05/2007	1057	1.0000

## LABORATORY CHRONICLE

Job Number: 344828

Date: 11/13/2007

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: MARK OWEN 9

ATTN: Arthur Greeley

Lab ID: 344828-5	Client ID: DUP1	Date Recvd:	11/03/2007	Sample Date:	11/01/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(\$)	DATE/TIME ANALYZED	DILUTION
SW-846 3010A	Acid Digestion Aqueous/Extracts FLAA/ICP	1	188939		11/12/2007	1640
EPA 310.1	Alkalinity	1	188622		11/06/2007	1600
SW846 8015	Extraction (Sep Funnel) 8015 Diesel	1	188454		11/05/2007	0900
SW-846 8021B	GC Volatile Organics	1	188673		11/07/2007	1024
EPA 300.0	Ion Chromatography Analysis	1	188846		11/10/2007	0017
EPA 300.0	Ion Chromatography Analysis	1	188846		11/10/2007	0049
SW-846 7470A	Mercury (CVAA)	1	188634	188605	11/07/2007	1407
SW-846 7470A	Mercury Preparation (CVAA)	1	188605		11/07/2007	0920
SW-846 6010B	Metals Analysis (ICAP Trace)	1	188959	188939	11/13/2007	1152
SM2540 C	Solids, Total Dissolved (TDS)	1	188711		11/07/2007	1830
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	1	188669	188454	11/05/2007	1819
SW-846 8015B	Total Volatile Petroleum Hydrocarbons	1	188571		11/05/2007	1124
<hr/>						
Lab ID: 344828-6	Client ID: TRIP BLANK	Date Recvd:	11/03/2007	Sample Date:	11/01/2007	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(\$)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	188673		11/07/2007	1044
<hr/>						

**SEVERN TREATMENT**

**CHAIN OF CUSTODY RECORD**

CUSTOMER INFORMATION		PROJECT INFORMATION		NUMBER OF CONTAINERS ANALYSIS REQUEST				
COMPANY: <i>CERC/CR</i>	SEND REPORT TO: <i>Tom Larson</i>	PROJECT NAME/NUMBER: <i>046121</i>	BILLING INFORMATION					
ADDRESS: <i>2135 S Loop 250 W</i>	ADDRESS: <i>Midland, TX 79703</i>	BILL TO:	REMARKS/PRECAUTIONS					
PHONE: <i>432-686-0086</i>	PHONE: <i>432-686-0186</i>	FAX: <i>432-686-0186</i>	PO NO: <i>6010</i>					
SAMPLE NO.		SAMPLE DESCRIPTION	SAMPLE DATE		SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.
<i>MW1</i>		<i>11-1-7</i>	<i>1320</i>		<i>W</i>			
<i>MW2</i>		<i>11-1-7</i>	<i>1300</i>		<i>W</i>			
<i>MW3</i>		<i>11-1-7</i>	<i>1318</i>		<i>W</i>			
<i>MW4</i>		<i>11-1-7</i>	<i>1350</i>		<i>W</i>			
<i>Dup1</i>								
SAMPLER: <i>WBDE</i>		SHIPMENT METHOD: <i>Fed Ex</i>		AIRBILL NO.: <i>✓</i>				
REQUIRED TURNAROUND * <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 72 HOURS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS <input checked="" type="checkbox"/> ROUTINE <input type="checkbox"/> OTHER								
1. RELINQUISHED BY:		DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE		
SIGNATURE: <i>Bill Oyer CR</i>		<i>11-2-7</i>	SIGNATURE: <i>✓</i>	<i>11-2-7</i>	SIGNATURE: <i>✓</i>	<i>11-2-7</i>		
PRINTED NAME/COMPANY: <i>CERC</i>		<i>11-2-7</i>	PRINTED NAME/COMPANY: <i>✓</i>	<i>11-2-7</i>	PRINTED NAME/COMPANY: <i>✓</i>	<i>11-2-7</i>		
4. RECEIVED BY:		DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE		
SIGNATURE: <i>✓</i>		<i>11-2-7</i>	SIGNATURE: <i>✓</i>	<i>11-2-7</i>	SIGNATURE: <i>✓</i>	<i>11-2-7</i>		
PRINTED NAME/COMPANY:		TIME	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME		

RUSH TURNAROUND MAY REQUIRE SURCHARGE

STL8222560 (12/02)

**SEVERN TREAT LABORATORIES, INC.**

1733 N. Padre Island Drive  
Corpus Christi, TX 78408

Phone: (361) 289-2673 / Fax: (361) 289-2471

rpjsckt	Job Sample Receipt Checklist Report			V2
Job Number.: 344828	Location.: 57216	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.:			Date of the Report..: 11/03/2007
Project Number.: 99007656	Project Description.: Mark Owen 9			Project Manager.....: sgk
Customer.....: Conestoga-Rovers and Associates	Contact.: Arthur Greeley			
Questions ?	(Y/N) Comments			
Chain of Custody Received?.....	Y			
...If "yes", completed properly?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2). N	1.3;1.8			
...If "no", is sample an air matrix?(no temp req.)				
Thermometer ID.....	Y 439			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	Y			
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Radioactivity at or below background levels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature/Date.....	Y EHC			

*GAR*  
11-3-7

Page 1

## **APPENDIX C**

# SOIL BORING LOG

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-1/MW-1

**File No.:** 46121  
**Date:** 10/22/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY

LABORATORY TEST DATA						FIELD DATA			BORING DATA	
Results Reported in mg/kg						Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level Screen Interval	Start Time: 1215 Finish Time: 1500
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides					
										Silty Sand: Buff, tan, with indurated hard calcium carbonate seams 10-50% dry.
0.00248	0.00683	0.00592	0.001819	220.324	74.4	18.4	6.8 spl	5		
								10		Sand: Light reddish brown, very fine grained, loose, dry.
0.00254	0.00699	0.00607	0.001869	1.642	302	3.6	2.8 spl	15		
								20		
0.00229	0.0063	0.00547	0.0168	1.447	168	3.6	2.8 spl	25		
								30		Sand: Light reddish brown, very fine grained, wet @ 31'
								35		
								40		



Sampling Interval



Water First Noted

Stratification is Inferred And May Not be Exact.  
Soil Classification Based on Visual-Manual Procedure



Analyzed Sample



# SOIL BORING LOG

<b>Project:</b> OWEN #9 ASSESSMENT EUNICE, NEW MEXICO					No. SB-1/MW-1 CONT'D		File No.: 46121 Date: 10/22/2007 <b>Drilling Co.:</b> WHITE DRILLING <b>Supervisor:</b> J. WHITE <b>Type Rig:</b> INGERSOL AIR ROTARY T3W <b>Logged by:</b> TOM LARSON				
<b>Client:</b> CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY											
LABORATORY TEST DATA					FIELD DATA			BORING DATA			
Results Reported in mg/kg					Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval		
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)							
							45			Start Time: 1215	Finish Time: 1500
							50			Clay: Red brown, saturated, soft.	
							55			BORING TERMINATED AT 51'	
							60				
							65				
							70				
							75				
							80				
Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure											
											

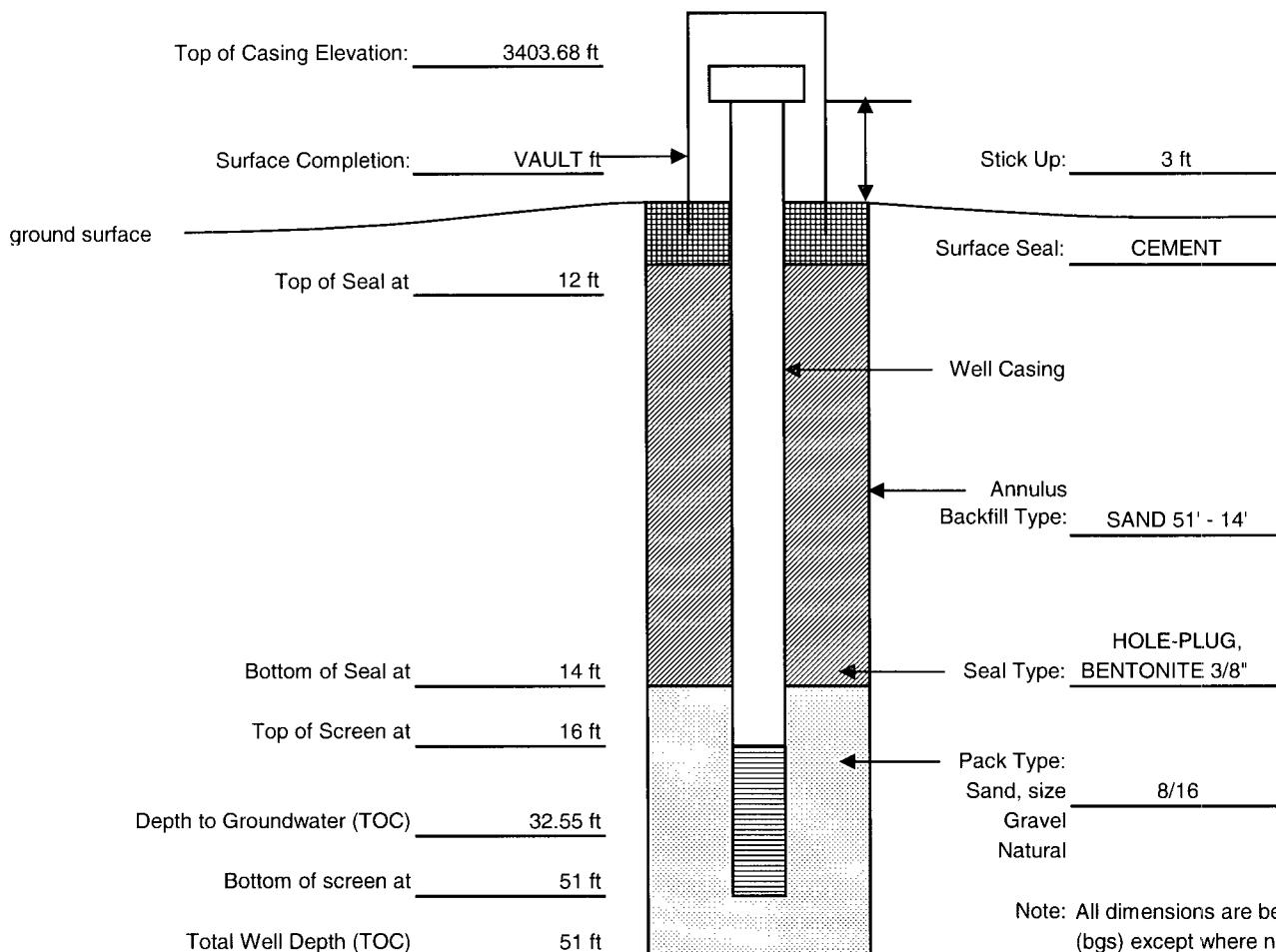
## MONITORING WELL CONSTRUCTION DETAIL

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-1/MW-1

**File No.:** 46121  
**Date:** 10/22/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY



Screen Type:  slotted  perforated other: \_\_\_\_\_

Screen Material:  stainless steel  PVC other: \_\_\_\_\_

Screen Length: 35 feet Screen Diameter: 4 inches Screen Slot Size: 0.020 inches

Well Casing Material: PVC Well Casing Diameter: 4 inches

Development - Method: Bailed 50 gallons Hole Diameter: 8 inches

Duration/Volume: 1 hour to clean



## SOIL BORING LOG

Project: OWEN #9 ASSESSMENT EUNICE, NEW MEXICO							No.	SB-2	File No.:	46121
Client: CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY							Date:	10/23/2007	Drilling Co.:	WHITE DRILLING
							Supervisor:	J. WHITE	Type Rig:	INGERSOL AIR ROTARY T3W
							Logged by:	TOM LARSON		
LABORATORY TEST DATA							FIELD DATA		BORING DATA	
Results Reported in mg/kg										
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level Screen Interval	
0.00241	0.00663	0.00575	0.01766	1.589	20.1	0.9		5		Start Time: 830
0.00238	0.00656	0.00569	0.01747	1.603	22.7	1.9		10		Finish Time: 920
0.00247	0.00681	0.00591	0.01815	1.581	46.4	2.1		15		Fill Material: Caliche and gravel.
						2.2		20		Silty Sand: Buff, tan, very fine grained with indurated calcium carbonate stringers (10 - 40%) hard, dry.
						1.9		25		Sand: Light red-brown, very fine grained, primarily loose, dry becoming slightly damp to damp at base of unit.
						2.2		30		
										TOTAL DEPTH OF BORING = 30'
								35		
								40		
 Sampling Interval							Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure			
							 Analyzed Sample			

## SOIL BORING LOG

Project: OWEN #9 ASSESSMENT EUNICE, NEW MEXICO							No. SB-3	File No.: 46121 Date: 10/23/2007 Drilling Co.: WHITE DRILLING Supervisor: J. WHITE Type Rig: INGERSOL AIR ROTARY T3W Logged by: TOM LARSON	
LABORATORY TEST DATA Results Reported in mg/kg						FIELD DATA		BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling Interval	Depth (feet)	Water Level Screen Interval
0.00216	0.00594	0.00515	0.01582	78.397	21.3	1.9	5		Start Time: 1010
0.00215	0.00592	0.0101	0.0201	1.366	17.1	9.8	10		Finish Time: 1120
0.00258	0.00717	0.00616	0.0189	16.314	30.3	3.5	15		Fill material: Caliche and gravel
						3.7	20		Silty sand: White, buff, firm to dense with indurated calcium carbonate, hard seams (10-40%) dry
						3.4	25		Sand: Light red-brown, very fine grained slightly damp at 24-25' hard sandstone seam 28-29', damp 29-30'
						3.8	30		Hard streak 28-29'
									TOTAL DEPTH OF BORING = 30'
 Sampling Interval  Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure  Analyzed Sample									

# SOIL BORING LOG

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-4

**File No.:** 46121  
**Date:** 10/23/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY

LABORATORY TEST DATA						FIELD DATA			BORING DATA		
Results Reported in mg/kg						Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 1210
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides						
0.00223	0.00613	0.00532	0.01634	13.372	26.7	2.7	○ 3.2	5			Sand: Brown, loose, dry
0.00255	0.00704	0.0061	0.01874	1.594	25.2	3.6	○ 3.6	10			Silty Sand: Very fine grained, loose, then white to tan, very fine grained, firm to dense with hard, indurated calcium carbonate (10-40%) dry.
0.00239	0.00659	0.00828	0.01755	1.534	29.8	4.0	○ 3.6	15			Sand: Light red-brown, very fine grained, soft to firm, dry becoming damp at base of unit.
								20			
								25			
								30			
								35			
								40			



Sampling Interval



Analyzed Sample

Stratification is Inferred And May Not be Exact.  
Soil Classification Based on Visual-Manual Procedure



## SOIL BORING LOG

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-5/MW-2

**File No.:** 46121  
**Date:** 10/23/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY

LABORATORY TEST DATA							FIELD DATA			BORING DATA		
Results Reported in mg/kg							Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Description
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides							
0.00229	0.00631	0.00547	0.0168	1.498	12		3.0					Start Time: 1450
							9.8	☒	5			Finish Time: 1620
							7.2	☒	10			Sand: Brown, loose, dry
							3.6	☒	15			Silty Sand: Dry then buff, very fine grain, firm to dense, indurated with hard calcium carbonate (10-40%) dry.
0.0025	0.00689	0.00598	0.01836	1.571	20.9		3.6	☒	20			Silty Sand: Buff, light tan, very fine grain, primarily loose to firm, dry with hard indurated calcium carbonate stringers (10-20%) dry.
							3.6	☒	25			Sand: Light tan, very fine grained, loose, dry to damp.
							7.5	☒	30			Sandstone: Light tan, red-brown, very fine grain, dense, damp
0.00216	0.00596	0.00517	0.01589	320.33	35		6.1	☒	35	☒		Sand: Light tan, red-brown, loose to firm, very damp to saturated
									40			



Sampling Interval

Stratification is Inferred And May Not be Exact.  
Soil Classification Based on Visual-Manual Procedure



Water First Noted

Analyzed Sample



# SOIL BORING LOG

<b>Project:</b> OWEN #9 ASSESSMENT EUNICE, NEW MEXICO					No. SB-5/MW-2 CONT'D			File No.: 46121 Date: 10/22/2007 Drilling Co.: WHITE DRILLING Supervisor: J. WHITE Type Rig: INGERSOL AIR ROTARY T3W Logged by: TOM LARSON		
<b>Client:</b> CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY										
<b>LABORATORY TEST DATA</b> Results Reported in mg/kg					<b>FIELD DATA</b>			<b>BORING DATA</b>		
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level Screen	Interval	
										Start Time: 1450      Finish Time: 1620
										Clay: Red-brown, soft, saturated TOTAL DEPTH OF BORING = 57'
										Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure
										

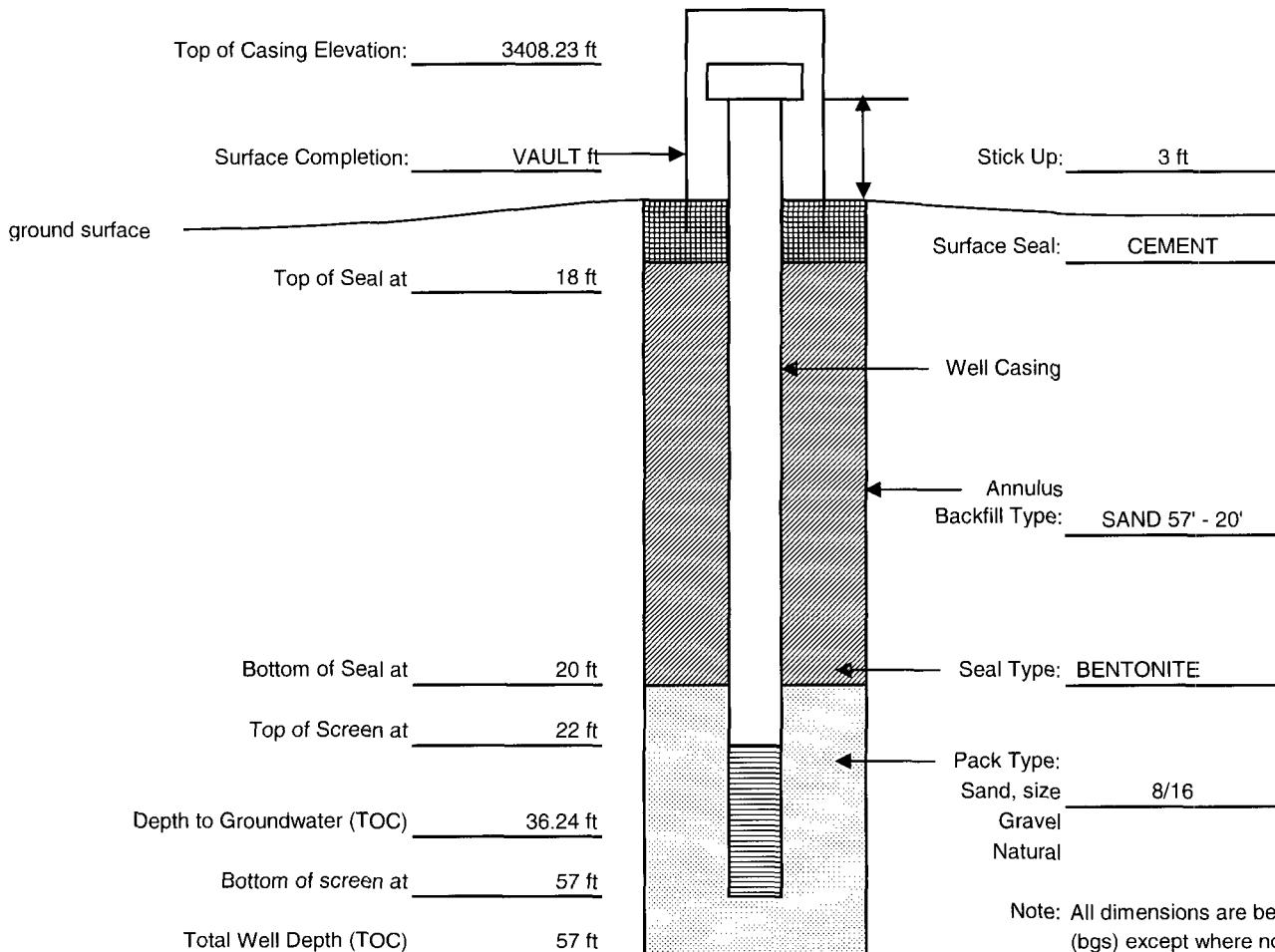
## MONITORING WELL CONSTRUCTION DETAIL

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-5/MW-2

**File No.:** 46121  
**Date:** 10/23/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY



Screen Type:	<input checked="" type="checkbox"/> slotted	<input type="checkbox"/> perforated	other: _____
Screen Material:	<input type="checkbox"/> stainless steel	<input checked="" type="checkbox"/> PVC	other: _____
Screen Length:	35 feet	Screen Diameter:	4 inches
Well Casing Material:	4" PVC		Screen Slot Size: 0.020 inches
Development - Method:	Bailed 50 gallons		Well Casing Diameter: 4 inches
Duration/Volume:	1 hour to clean		Hole Diameter: 8 inches



## SOIL BORING LOG

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-6/MW-3

**File No.:** 46121  
**Date:** 10/24/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY

LABORATORY TEST DATA						FIELD DATA			BORING DATA		
Results Reported in mg/kg						Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level Screen Interval	Start Time: 830 Finish Time: 1030	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides						
0.00222	0.00612	0.00531	0.01631	1.341	20.5	6.0	☒	5		Sand: Brown, very fine grain, loose, dry. Silty Sand: Buff, light tan, firm to dense, indurated calcium carbonate hard seams (10-40%) dry.	
0.00209	0.00574	0.00498	0.01531	1.345	14.1	3.8	☒	10		Sand: Light tan, very fine grained, primarily loose with firm streaks, dry.	
0.00253	0.00697	0.00604	0.01856	250.33	43.1	1.3	☒	15		Sandstone: Tan, very fine grained, dense, damp.	
						3.7	☒	20		Sand: Light tan, light red-brown, loose to firm, very fine grained, very damp to saturated.	
						1.5	☒	25			
							☒	30			
							☒	35	▽		
								40			
 Sampling Interval						Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure					
						 Water First Noted  Analyzed Sample					
											

## SOIL BORING LOG

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-6/MW-3  
CONT'D

**File No.:** 46121  
**Date:** 10/24/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY

LABORATORY TEST DATA					FIELD DATA			BORING DATA		
Results Reported in mg/kg					Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level Screen Interval		
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)					Start Time: 830	Finish Time: 1030
							45			
							50			
							55			
							60			
							65			
							70			
							75			
							80			

Stratification is Inferred And May Not be Exact.  
Soil Classification Based on Visual-Manual Procedure



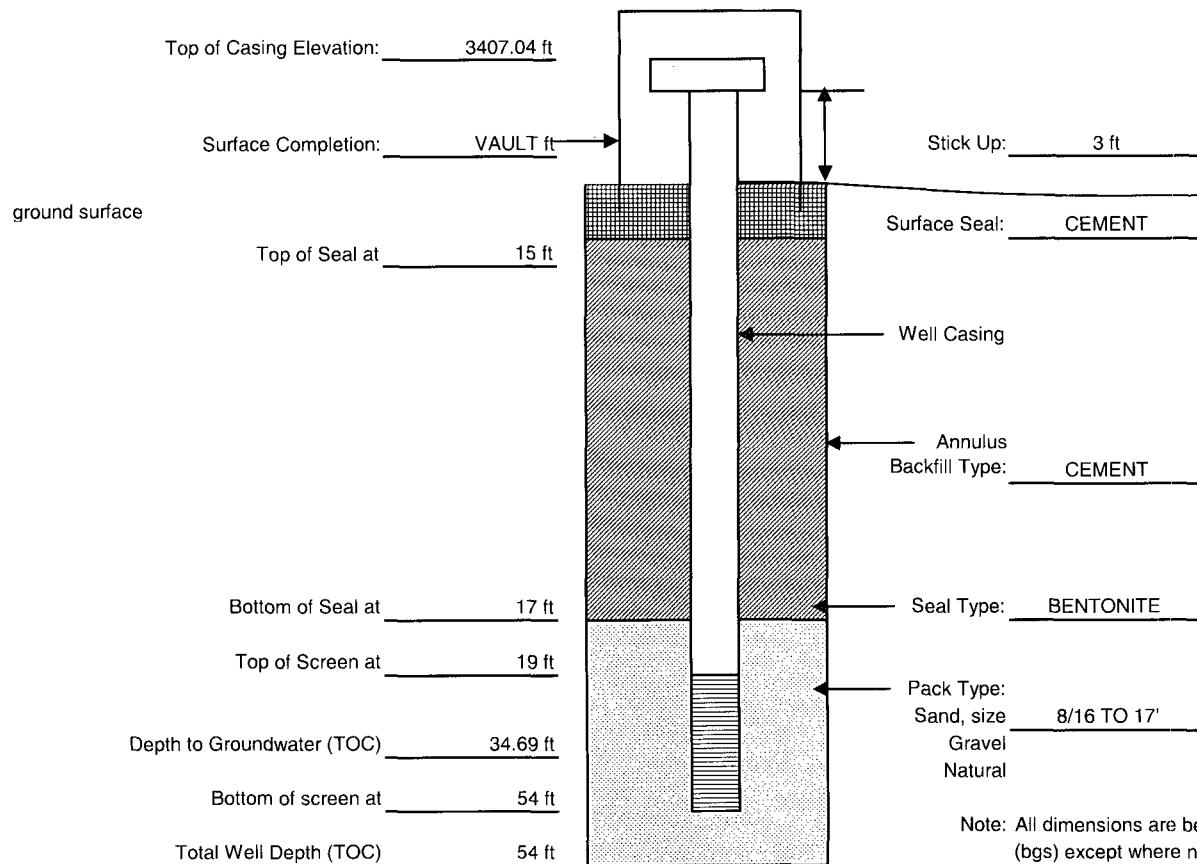
## MONITORING WELL CONSTRUCTION DETAIL

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-6/MW-3

File No.: 46121  
Date: 10/24/2007  
Drilling Co.: WHITE DRILLING  
Supervisor: J. WHITE  
Type Rig: INGERSOL AIR ROTARY T3W  
Logged by: TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY



Screen Type:	<input checked="" type="checkbox"/> slotted	<input type="checkbox"/> perforated	other: <u>0.020 SLOT PVC</u>		
Screen Material:	<input type="checkbox"/> stainless steel	<input checked="" type="checkbox"/> PVC	other: _____		
Screen Length:	<u>35 feet</u>	Screen Diameter:	<u>4 inches</u>	Screen Slot Size:	<u>0.020 inches</u>
Well Casing Material:	<u>PVC</u>			Well Casing Diameter:	<u>4 inches</u>
Development - Method:	<u>Bailed 50 gallons</u>			Hole Diameter:	<u>8 inches</u>
Duration/Volume:	<u>1 hour</u>				



## SOIL BORING LOG

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-7/MW-4

**File No.:** 46121  
**Date:** 10/24/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY

LABORATORY TEST DATA						FIELD DATA			BORING DATA	
Results Reported in mg/kg						Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level Screen Interval	Start Time: 1230 Finish Time: 1400
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides					
0.00258	0.00711	0.00617	0.01895	26.352	24.2	3.4	☒	5		Sand: Brown, very fine grain, loose, dry
0.00206	0.00569	0.00493	0.01516	15.358	1080	2.8	☒	10		Silty Sand: Buff, light tan, very fine grained, firm to dense, indurated with calcium carbonate (10-40%), dry
0.00263	0.00726	0.00629	0.01933	410.389	217	2.2	☒	15		Sand: Light tan, very fine grained, primarily loose with <1' hard lenses, slightly damp to dry
						2.6	☒	20		Sandstone: Light tan, light red-brown, very fine grained, hard, dry
							☒	25		Sand: Light tan, very fine grained, loose, dry at top of unit, damp at 31', saturated at 33'
							☒	30		
								35		
								40		



Sampling Interval



Water First Noted

Stratification is Inferred And May Not be Exact.  
Soil Classification Based on Visual-Manual Procedure



Analyzed Sample



## SOIL BORING LOG

<b>Project:</b> OWEN #9 ASSESSMENT EUNICE, NEW MEXICO					No. SB-7/MW-4 CONT'D			File No.: 46121 Date: 10/24/2007 Drilling Co.: WHITE DRILLING Supervisor: J. WHITE Type Rig: INGERSOL AIR ROTARY T3W Logged by: TOM LARSON		
<b>Client:</b> CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY										
<b>LABORATORY TEST DATA</b> Results Reported in mg/kg					<b>FIELD DATA</b>			<b>BORING DATA</b>		
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level Screen Interval		
									Start Time: 12:30	Finish Time: 14:00
									Clay: Red brown, soft, minor sand, saturated TOTAL DEPTH OF BORING = 51"	
										
Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure										

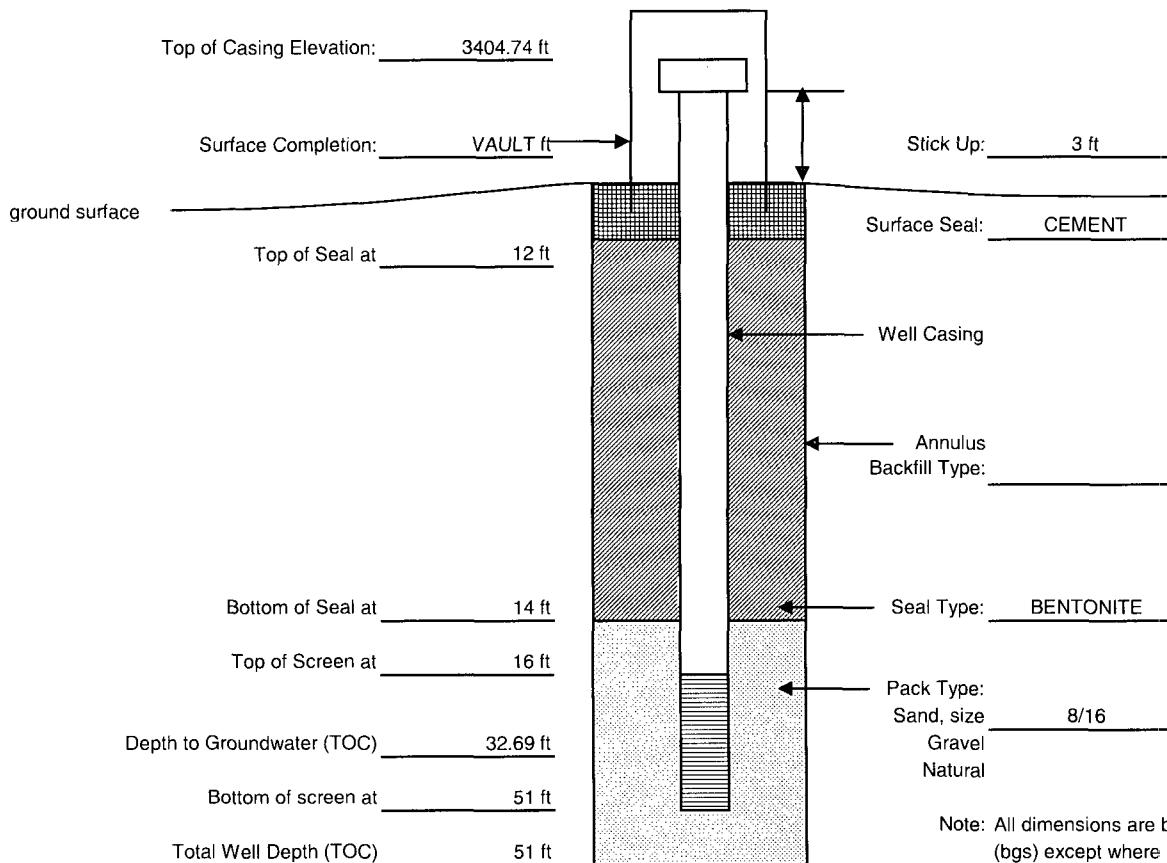
## MONITORING WELL CONSTRUCTION DETAIL

**Project:** OWEN #9 ASSESSMENT  
EUNICE, NEW MEXICO

No. SB-7/MW-4

**File No.:** 46121  
**Date:** 10/24/2007  
**Drilling Co.:** WHITE DRILLING  
**Supervisor:** J. WHITE  
**Type Rig:** INGERSOL AIR ROTARY T3W  
**Logged by:** TOM LARSON

**Client:** CHEVRON ENVIRONMENTAL  
MANAGEMENT COMPANY



Screen Type:  slotted  perforated other: \_\_\_\_\_

Screen Material:  stainless steel  PVC other: \_\_\_\_\_

Screen Length: 35 feet Screen Diameter: 4 inches Screen Slot Size: 0.020 inches

Well Casing Material: PVC Well Casing Diameter: 4 inches

Development - Method: Bailed 50 gallons Hole Diameter: 8 inches

Duration/Volume: 1 hour to clean



## **APPENDIX D**

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Chevron Environment Management Co. Work Phone: \_\_\_\_\_  
Contact: Matt Hudson Home Phone: \_\_\_\_\_  
Address: 1400 Smith St., HDU 140/1900-1A  
  
City: Houston State: TX Zip: 77002

2. LOCATION OF WELL(A,B,C,or D required,E or F if known)

A. 1/4 1/4 1/4 Section: 34 Township: 21S Range: 37E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 32 d 25 m 51.0 s Longitude: 103 d 08 m 44.0 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the  
Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): William Stephens

3. DRILLING CONTRACTOR

License Number: WD-1456  
Name: White Drilling Company, Inc. Work Phone: 325-893-2950  
Agent: John W. White Home Phone: 325-893-2950  
Mailing Address: P.O. Box 906  
  
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mark Owen #9 MW/SB-1

Drilling began: 10/22/07; Completed: 10/22/07; Type tools: Air Rotary;  
Size of hole: 7 7/8 in.; Total depth of well: 51.0 ft.;

Completed well is: shallow (shallow, artesian);

Depth to water upon completion of well: 32.55 ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA:Mark Owen #9 MW/SB-1

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
27.0	34.0	7.0	Tight packed tan sand w/sandstone	
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0	Sch. 40	4.0	0.0	16.0	16.0			
4.0	Sch. 40	4.0	16.0	51.0	35.0		16.0	51.0
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
51.0	14.0	7 7/8	26.0		8/16 Sand
14.0	12.0	7 7/8	1.0		Bentonite Pellets
12.0	0.0	7 7/8	19.0	2.7336	Cement
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_

Address: \_\_\_\_\_

Plugging Method: \_\_\_\_\_

Date Well Plugged: \_\_\_\_\_

Plugging approved by: \_\_\_\_\_

State Engineer Representative

No.	Depth in Feet Top	Cubic Feet of Cement Bottom
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 2 of 4



File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:Mark Owen #9 MW/SB-1

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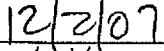
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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

  
Driller

  
(mm/dd/year)

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FOR STATE ENGINEER USE ONLY

Quad \_\_\_\_ ; FWL \_\_\_\_ ; FSL \_\_\_\_ ; Use \_\_\_\_ ; Location No. \_\_\_\_\_

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 4 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Chevron Environment Management Co. Work Phone: \_\_\_\_\_  
Contact: Matt Hudson Home Phone: \_\_\_\_\_  
Address: 1400 Smith St., HDU 140/1900-1A  
  
City: Houston State: TX Zip: 77002

2. LOCATION OF WELL(A,B,C,or D required,E or F if known)

A. 1/4 1/4 1/4 Section: 34 Township: 21S Range: 37E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 32 d 25 m 57.4 s      Longitude: 103 d 08 m 47.2 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the  
Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): William Stephens

3. DRILLING CONTRACTOR

License Number: WD-1456  
Name: White Drilling Company, Inc. Work Phone: 325-893-2950  
Agent: John W. White Home Phone: 325-893-2950  
Mailing Address: P.O. Box 906  
  
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mark Owen #9 SB-2

Drilling began: 10/23/07; Completed: 10/23/07; Type tools: Air Rotary;  
Size of hole: 7 7/8 in.; Total depth of well: 30.0 ft.;  
Completed well is: shallow (shallow, artesian);  
Depth to water upon completion of well: Dry ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA:Mark Owen #9 SB-2

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
30.0	10.0	7 7/8	16.0		Bentonite Pellets
10.0	0.0	7 7/8	5.0	2.278	Cement

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_  
Address: \_\_\_\_\_  
Plugging Method: \_\_\_\_\_  
Date Well Plugged: \_\_\_\_\_  
  
Plugging approved by: \_\_\_\_\_ State Engineer Representative \_\_\_\_\_

No.	Depth in Feet Top	Cubic Feet of Cement Bottom
1		
2		
3		
4		
5		

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 2 of 4



File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:Mark Owen #9 SB-2

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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

  
\_\_\_\_\_  
Driller

12/2/07  
\_\_\_\_\_  
(mm/dd/year)

=====  
FOR STATE ENGINEER USE ONLY

Quad \_\_\_\_ ; FWL \_\_\_\_ ; FSL \_\_\_\_ ; Use \_\_\_\_ ; Location No. \_\_\_\_\_

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 4 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Chevron Environment Management Co. Work Phone: \_\_\_\_\_  
Contact: Matt Hudson Home Phone: \_\_\_\_\_  
Address: 1400 Smith St., HDU 140/1900-1A

City: Houston State: TX Zip: 77002

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. 1/4 1/4 1/4 Section: 34 Township: 21S Range: 37E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 32 d 25 m 57.7 s Longitude: 103 d 08 m 48.6 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract . \_\_\_\_\_ of the  
Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): William Stephens

3. DRILLING CONTRACTOR

License Number: WD-1456

Name: <u>White Drilling Company, Inc.</u>	Work Phone: <u>325-893-2950</u>
Agent: <u>John W. White</u>	Home Phone: <u>325-893-2950</u>
Mailing Address: <u>P.O. Box 906</u>	

City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mark Owen #9 SB-3

Drilling began: 10/23/07; Completed: 10/23/07; Type tools: Air Rotary;  
Size of hole: 7 7/8 in.; Total depth of well: 30.0 ft.;  
Completed well is: shallow (shallow, artesian);  
Depth to water upon completion of well: Dry ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA: Mark Owen #9 SB-3

Depth in Feet From	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
30.0	10.0	7 7/8	16.0	Bentonite Pellets
10.0	0.0	7 7/8	5.0	Cement

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_  
Address: \_\_\_\_\_  
Plugging Method: \_\_\_\_\_  
Date Well Plugged: \_\_\_\_\_  
  
Plugging approved by: \_\_\_\_\_  
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 2 of 4



File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:Mark Owen #9 SB-3

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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.



Driller

12/2/07

(mm/dd/year)

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FOR STATE ENGINEER USE ONLY

Quad \_\_\_\_\_; FWL \_\_\_\_\_; FSL \_\_\_\_\_; Use \_\_\_\_\_; Location No. \_\_\_\_\_

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 4 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Chevron Environment Management Co. Work Phone: \_\_\_\_\_  
Contact: Matt Hudson Home Phone: \_\_\_\_\_  
Address: 1400 Smith St., HDU 140/1900-1A  
  
City: Houston State: TX Zip: 77002

2. LOCATION OF WELL(A,B,C,or D required,E or F if known)

A. 1/4 1/4 1/4 Section: 34 Township: 21S Range: 37E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 32 d 25 m 55.5 s Longitude: 103 d 08 m 49.5 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the  
Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): William Stephens

3. DRILLING CONTRACTOR

License Number: WD-1456  
Name: White Drilling Company, Inc. Work Phone: 325-893-2950  
Agent: John W. White Home Phone: 325-893-2950  
Mailing Address: P.O. Box 906  
  
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mark Owen #9 SB-4

Drilling began: 10/23/07; Completed: 10/23/07; Type tools: Air Rotary;  
Size of hole: 7 7/8 in.; Total depth of well: 31.0 ft.;  
Completed well is: shallow (shallow, artesian);  
Depth to water upon completion of well: Dry ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA:Mark Owen #9 SB-4

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
31.0	10.0	7 7/8	16.0		Bentonite Pellets
10.0	0.0	7 7/8	5.0	2.278	Cement

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_  
Address: \_\_\_\_\_  
Plugging Method: \_\_\_\_\_  
Date Well Plugged: \_\_\_\_\_  
  
Plugging approved by: \_\_\_\_\_  
State Engineer Representative \_\_\_\_\_

No.	Depth in Feet Top	Cubic Feet of Cement Bottom
1		
2		
3		
4		
5		

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 2 of 4



File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:Mark Owen #9 SB-4

[A large area for writing, consisting of approximately 20 horizontal lines.]

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.



Driller

12/2/07

(mm/dd/year)

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FOR STATE ENGINEER USE ONLY

Quad \_\_\_\_ ;FWL \_\_\_\_ ;FSL \_\_\_\_ ;Use \_\_\_\_ ;Location No. \_\_\_\_

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 4 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Chevron Environment Management Co. Work Phone: \_\_\_\_\_  
Contact: Matt Hudson Home Phone: \_\_\_\_\_  
Address: 1400 Smith St., HDU 140/1900-1A  
City: Houston State: TX Zip: 77002

2. LOCATION OF WELL(A,B,C,or D required,E or F if known)

A. 1/4 1/4 1/4 Section: 34 Township: 21S Range: 37E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 32 d 25 m 58.0 s Longitude: 103 d 08 m 49.4 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the  
Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): William Stephens

3. DRILLING CONTRACTOR

License Number: WD-1456  
Name: White Drilling Company, Inc. Work Phone: 325-893-2950  
Agent: John W. White Home Phone: 325-893-2950  
Mailing Address: P.O. Box 906  
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mark Owen #9 MW-2/SB-5

Drilling began: 10/23/07; Completed: 10/24/07; Type tools: Air Rotary;  
Size of hole: 7 7/8 in.; Total depth of well: 57.0 ft.;  
Completed well is: shallow (shallow, artesian);  
Depth to water upon completion of well: 36.18 ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA:Mark Owen #9 MW-2/SB-5

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
<u>33.0</u>	<u>37.0</u>	<u>4.0</u>	<u>Reddish brown sand.</u>	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Length (feet)	Type of Shoe	Perforations From To
<u>4.0</u>	<u>Sch. 40</u>	<u>4.0</u>	<u>0.0</u>	<u>22.0</u>	<u>22.0</u>	
<u>4.0</u>	<u>Sch. 40</u>	<u>4.0</u>	<u>22.0</u>	<u>57.0</u>	<u>35.0</u>	

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>57.0</u>	<u>20.0</u>	<u>7 7/8</u>	<u>30.0</u>		<u>8/16 sand</u>
<u>20.0</u>	<u>18.0</u>	<u>7 7/8</u>	<u>2.0</u>		<u>Bentonite Pellets</u>
<u>18.0</u>	<u>0.0</u>	<u>7 7/8</u>	<u>27.0</u>	<u>4.1004</u>	<u>Cement</u>

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_

Address: \_\_\_\_\_

Plugging Method: \_\_\_\_\_

Date Well Plugged: \_\_\_\_\_

Plugging approved by: \_\_\_\_\_

State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement
1			
2			
3			
4			
5			



File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:Mark Owen #9 MW-2/SB-5

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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.



Driller

12/2/07  
(mm/dd/year)

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FOR STATE ENGINEER USE ONLY

Quad \_\_\_\_\_; FWL \_\_\_\_\_; FSL \_\_\_\_\_; Use \_\_\_\_\_; Location No. \_\_\_\_\_

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 4 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Chevron Environment Management Co. Work Phone: \_\_\_\_\_  
Contact: Matt Hudson Home Phone: \_\_\_\_\_  
Address: 1400 Smith St., HDU 140/1900-1A

City: Houston State: TX Zip: 77002

2. LOCATION OF WELL (A,B,C, or D required, E or F if known)

A. 1/4 1/4 1/4 Section: 34 Township: 21S Range: 37E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 32 d 25 m 58.8 s Longitude: 103 d 08 m 49.0 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the \_\_\_\_\_  
Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): William Stephens

3. DRILLING CONTRACTOR

License Number: WD-1456  
Name: White Drilling Company, Inc. Work Phone: 325-893-2950  
Agent: John W. White Home Phone: 325-893-2950  
Mailing Address: P.O. Box 906

City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mark Owen #9 MW-3/SB-6

Drilling began: 10/24/07; Completed: 10/24/07; Type tools: Air Rotary;  
Size of hole: 7 7/8 in.; Total depth of well: 54.0 ft.;  
Completed well is: shallow (shallow, artesian);  
Depth to water upon completion of well: 34.67 ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA:Mark Owen #9 MW-3/SB-6

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
<u>34.5</u>	<u>54.0</u>	<u>19.5</u>	<u>Reddish brown sand.</u>	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
<u>4.0</u>	<u>Sch. 40</u>	<u>4.0</u>	<u>0.0</u>	<u>19.0</u>	<u>19.0</u>			
<u>4.0</u>	<u>Sch. 40</u>	<u>4.0</u>	<u>19.0</u>	<u>54.0</u>	<u>35.0</u>			

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>54.0</u>	<u>17.0</u>	<u>7 7/8</u>	<u>25.0</u>		<u>8/16 sand</u>
<u>17.0</u>	<u>15.0</u>	<u>7 7/8</u>	<u>4.0</u>		<u>Bentonite Pellets</u>
<u>15.0</u>	<u>0.0</u>	<u>7 7/8</u>	<u>22.0</u>	<u>3.417</u>	<u>Cement</u>

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_

Address: \_\_\_\_\_

Plugging Method: \_\_\_\_\_

Date Well Plugged: \_\_\_\_\_

Plugging approved by: \_\_\_\_\_

State Engineer Representative

No.	Depth in Feet Top	Cubic Feet of Cement Bottom
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 2 of 4



File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:Mark Owen #9 MW-3/SB-6

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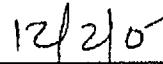
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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

  
Drifler

  
(mm/dd/year)

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FOR STATE ENGINEER USE ONLY

Quad \_\_\_\_\_; FWL \_\_\_\_\_; FSL \_\_\_\_\_; Use \_\_\_\_\_; Location No. \_\_\_\_\_

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 4 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

1. OWNER OF WELL

Name: Chevron Environment Management Co. Work Phone: \_\_\_\_\_  
Contact: Matt Hudson Home Phone: \_\_\_\_\_  
Address: 1400 Smith St., HDU 140/1900-1A  
  
City: Houston State: TX Zip: 77002

2. LOCATION OF WELL(A,B,C, or D required,E or F if known)

A. 1/4 1/4 1/4 Section: 34 Township: 21S Range: 37E N.M.P.M.  
in Lea County.

B. X = \_\_\_\_\_ feet, Y = \_\_\_\_\_ feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

C. Latitude: 32 d 25 m 58.9 s      Longitude: 103 d 08 m 47.8 s

D. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

E. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

F. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the  
Subdivision recorded in \_\_\_\_\_ County.

G. Other: \_\_\_\_\_

H. Give State Engineer File Number if existing well: \_\_\_\_\_

I. On land owned by (required): William Stephens

3. DRILLING CONTRACTOR

License Number: WD-1456  
Name: White Drilling Company, Inc. Work Phone: 325-893-2950  
Agent: John W. White Home Phone: 325-893-2950  
Mailing Address: P.O. Box 906  
  
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mark Owen #9 MW-4/SB-7

Drilling began: 10/24/07; Completed: 10/24/07; Type tools: Air Rotary;  
Size of hole: 7 7/8 in.; Total depth of well: 51.0 ft.;  
Completed well is: shallow (shallow, artesian);  
Depth to water upon completion of well: 32.7 ft.

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 1 of 4

File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA:Mark Owen #9 MW-4/SB-7

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
<u>32.7</u>	<u>51.0</u>	<u>18.3</u>	<b>Reddish brown sand.</b>	_____

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Length (feet)	Type of Shoe	Perforations From To
<u>4.0</u>	<u>Sch. 40</u>	<u>4.0</u>	<u>0.0</u>	<u>16.0</u>	<u>16.0</u>	_____
<u>4.0</u>	<u>Sch. 40</u>	<u>4.0</u>	<u>16.0</u>	<u>51.0</u>	<u>35.0</u>	_____

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>51.0</u>	<u>14.0</u>	<u>7 7/8</u>	<u>25.0</u>	_____	<b>8/16 sand</b>
<u>14.0</u>	<u>12.0</u>	<u>7 7/8</u>	<u>2.0</u>	_____	<b>Bentonite Pellets</b>
<u>12.0</u>	<u>0.0</u>	<u>7 7/8</u>	<u>19.0</u>	<u>2.7336</u>	<b>Cement</b>

8. PLUGGING RECORD

Plugging Contractor: \_\_\_\_\_  
Address: \_\_\_\_\_  
Plugging Method: \_\_\_\_\_  
Date Well Plugged: \_\_\_\_\_  
  
Plugging approved by: \_\_\_\_\_  
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 2 of 4



File Number: \_\_\_\_\_

NEW MEXICO OFFICE OF THE STATE ENGINEER  
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:Mark Owen #9 MW-4/SB-7

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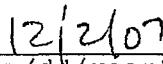
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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

  
Driller

  
(mm/dd/year)

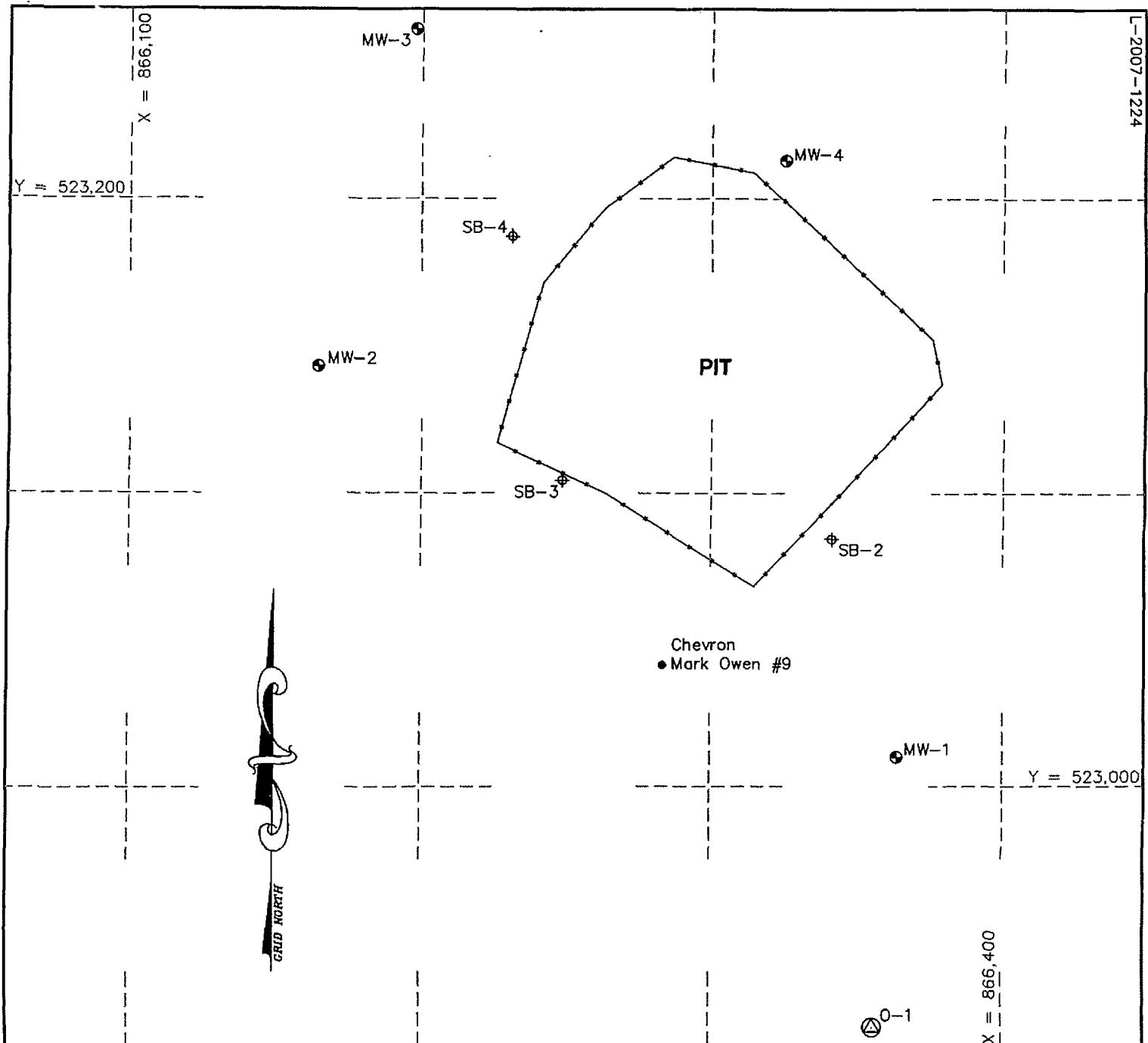
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FOR STATE ENGINEER USE ONLY

Quad \_\_\_\_ ; FWL \_\_\_\_ ; FSL \_\_\_\_ ; Use \_\_\_\_ ; Location No. \_\_\_\_

File Number: \_\_\_\_\_ Trn Number: \_\_\_\_\_  
Form: wr-20 page 4 of 4

## **APPENDIX E**

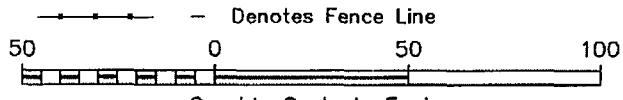


DESCRIPTION	NORTHING (Y)	EASTING (X)	LATITUDE	LONGITUDE	ELEVATION TOP OF CASING	ELEVATION CONCRETE PAD	ELEVATION NATURAL GROUND
MW-1	523,010.0	866,363.8	32°25'56.17" N	103°08'45.33" W	3,403.68	3,401.18	3,400.9
MW-2	523,142.9	866,164.8	32°25'57.51" N	103°08'47.64" W	3,408.23	3,405.66	3,405.5
MW-3	523,257.6	866,197.8	32°25'58.64" N	103°08'47.24" W	3,407.04	3,404.51	3,404.0
MW-4	523,213.0	866,325.2	32°25'58.19" N	103°08'45.76" W	3,404.74	3,401.94	3,401.5
SB-2	523,084.4	866,341.3	32°25'56.91" N	103°08'45.59" W			3,400.6
SB-3	523,104.3	866,248.6	32°25'57.12" N	103°08'46.67" W			3,401.5
SB-4	523,187.0	866,231.1	32°25'57.94" N	103°08'46.86" W			3,403.2
O-1	522,918.4	866,355.8	32°25'55.27" N	103°08'45.44" W			3,400.0

Date Surveyed: December 3, 2007  
Weather: Cool & Breezy

#### LEGEND

- - Denotes Producing Well Location
- - Denotes Monitor Well
- ◆ - Denotes Soil Bore Location
- (O) - Denotes Static GPS Control Station



#### NOTE:

- 1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927.
- 2) Elevations shown hereon reference the National Geodetic Vertical Datum of 1929.
- 3) Geodetic Coordinates shown hereon references the North American Datum of 1927, (Clarke Spheroid of 1866). Reference Stations - "ODESSA RRP2" - CORS (DF5393), "ROSWELL" - and "ROSWELL" - CORS (DG6517) and "LUBBOCK RRP2" - CORS (DF5391).

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FROM NOTES TAKEN IN THE FIELD IN A BONA FIDE SURVEY MADE UNDER MY SUPERVISION.

12185

MACON McDONALD NEW MEXICO P.L.S. No. 12185

**WEST COMPANY**  
of Midland, Inc.

110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX

**CONESTOGA-ROVERS & ASSOCIATES**

#### Topographic Survey of **MONITOR WELLS AND SOIL BORE LOCATIONS**

Located Around the  
Chevron Mark Owen #9 Reserve Pit  
Section 34, T-21-S, R-37-E, N.M.P.M.  
Lea County, New Mexico

Drawn By: LVA	Date: December 10, 2007
Scale: 1"=50'	Field Book: 376 / 25-28
Revision Date:	Quadrangles: Eunice
W.O. No: 2007-1224	Dwg. No.: L-2007-1224